NASA/TM–2015-218770

NASA DOEPOD NDE Capabilities Data Book

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NASA DOEPOD NDE Capabilities Data Book

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Overview

This data book contains the Directed Design of Experiments for Validating Probability of Detection (POD) Capability of NDE Systems (DOEPOD) analyses of the nondestructive inspection data presented in the NTIAC, Nondestructive Evaluation (NDE) Capabilities Data Book [1]. DOEPOD is designed as a decision support system to validate inspection system, personnel, and protocol demonstrating 0.90 POD with 95% confidence at critical flaw sizes, a90/95. Although 0.90 POD with 95% confidence at critical flaw sizes is often stated as an inspection requirement in inspection documents, including NASA Standards [2], NASA critical aerospace applications have historically only accepted 0.978 POD or better with a 95% one-sided lower confidence bound exceeding 0.90 at critical flaw sizes, a90/95. (see Figure 11 of [3]).

The test methodology used in DOEPOD is based on the field of statistical sequential analysis founded by Abraham Wald,

“Sequential analysis is a method of statistical inference whose characteristic feature is that the number of observations required by the procedure is not determined in advance of the experiment. The decision to terminate the experiment depends, at each stage, on the results of the observations previously made. A merit of the sequential method, as applied to testing statistical hypotheses, is that test procedures can be constructed which require, on average, a substantially smaller number of observations than equally reliable test procedures based on a predetermined number of observations.” A. Wald [4]


The critical importance of validating methodologies used for establishing POD have been highlighted [3] and this data book provides the DOEPOD validation of POD capabilities for NDE systems, materials, structures, and flaw types presented in the NTIAC, Nondestructive Evaluation (NDE) Capabilities Data Book [1].

The maximum likelihood estimation (MLE) method used in DOEPOD to estimate the probability of detection using a two parameter logit model (MLE-Logit) are identical to that used in NTIAC [1]. This MLE method was chosen as a verification of data integrity so that the MLE POD plots in NTIAC [1] and this data book are identical except where this data book provides a correction to NTIAC [1] analysis. Corrections to NTIAC [1] are indicated in the Errata listed at the end of this document. Other MLE-Logit methods may be used, and a simple grid search for maximizing parameters has been demonstrated [3] to be effective. The POD analysis methods of NTIAC [1] and a military handbook [8] use a predetermined number of observations.
It is noted here that the MLE-Logit POD curve fit plots shown in this data book and NTIAC [1] are not validated for implementation [3]. Internal and external validation of MLE-Logit POD estimates is required prior to implementation and initial guidance on validation procedures is provide elsewhere [3]. In contrast, if CASE 1, CASE 1+, CASE 1# identifications are identified by DOEPOD analyses of test data, then the system, personnel, and inspection protocol maybe considered for acceptance by engineering authority for implementation application on relevant systems.

437 NTIAC data sets are analyzed by DOEPOD to yield a CASE identification for each data set. Possible CASE identifications are listed in Table 1. The reader is referred to the DOEPOD manual [5] for definitions of the parameters in Table 1, and for design of experiment instructions on how to proceed to validate systems and personnel inspection capability. The DOEPOD analysis highlights 72 NTIAC data sets has CASE 1, CASE 1+, or CASE 1# data sets all exhibit 0.978 POD or better with a 95% one-sided lower confidence bound exceeding 0.90 at critical flaw sizes and meet the historical NASA acceptance criteria when actions in Table 1 are addressed.

DOEPOD acronyms are defined at the end of this overview.
### Table 1

<table>
<thead>
<tr>
<th>CASE</th>
<th>Is 90/95 POD at $X_{pod}$ reached? (i.e., lower confidence bound, $X_{lower LCL}$ is equal to or greater than 0.9)</th>
<th>DOEPOD Analysis Summary and Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>CASE 1</td>
<td>90/95 POD at $X_{pod}$ has been reached. Actions: Address any false call warnings.</td>
<td></td>
</tr>
<tr>
<td>CASE 1+</td>
<td>90/95 POD at $X_{pod}$ has been reached. Actions: Missing above $X_{pod}$ need to be explained and resolved. Address any false call warnings.</td>
<td></td>
</tr>
<tr>
<td>CASE 1#</td>
<td>90/95 POD at $X_{pod}$ has been reached. Actions: Further validation at flaw sizes greater than $X_{pod}$ is required. Add large flaws. Address any false call warnings.</td>
<td></td>
</tr>
<tr>
<td>CASE 1*</td>
<td>90/95 POD at $X_{pod}$ has been reached. Actions: Further validation at flaw sizes greater than $X_{pod}$ is required. Add large flaws. Missing above $X_{pod}$ need to be explained and resolved. Address any false call warnings.</td>
<td></td>
</tr>
<tr>
<td>CASE 2</td>
<td>90/95 POD at $X_{pod}$ has been reached, however, there are an excessive number Missing above $X_{pod}$. Actions: Additional validation at identified flaw sizes is required. Add flaws per instructions.</td>
<td></td>
</tr>
<tr>
<td>CASE 4</td>
<td>90/95 POD at $X_{pod}$ has not been reached. Actions: Increase number of flaws at $X_{POH}$ or $X_{lower LCL}$.</td>
<td></td>
</tr>
<tr>
<td>CASE 5</td>
<td>90/95 POD at $X_{pod}$ has not been reached and there are Missing above $X_{lower LCL}$. Actions: Increase the number of flaws at $X_{POH}$.</td>
<td></td>
</tr>
<tr>
<td>CASE 6</td>
<td>90/95 POD at $X_{pod}$ has not been reached. The POH is fluctuating above $X_{lower LCL}$ and $X_{pod}$ is greater than $X/3$. The inspection system is unstable for the flaw size range analyzed. Actions: Increase the flaw size range by a factor of two.</td>
<td></td>
</tr>
<tr>
<td>CASE 7</td>
<td>90/95 POD at $X_{pod}$ has not been reached. The inspection system is unstable for the entire flaw size range analyzed. Actions: The inspection system may not be appropriate or increase the flaw size range by a factor of two.</td>
<td></td>
</tr>
<tr>
<td>SURVEY CASES</td>
<td>The optimized class width exceeds 1/3 XL and $X_{pod}$ has not been reached. The class width optimization has determined that there is a class width for which the smallest $X_{pod}=1$ class length is identified. Actions: Add flaws at Survey/Optimum $X_{POH}$.</td>
<td></td>
</tr>
</tbody>
</table>

= YES  = NO
Figure 1. Logit-ML Estimated POD at critical flaw size, a90/95, from NTIAC (1997). Open diamonds refer to data sets each having 325 samples. The horizontal dashed line is the NASA minimum binomial estimated POD (0.978) accepted in practice at a flaw size, Xpod, for failure critical applications. DOEPOD analyses identified 72 (red disk) data NTIAC data sets that are classified as CASE 1+, or CASE 1# having estimated POD exceeding 0.978 at a flaw size, Xpod. Note that Xpod and a90/95 are flaw size inspection capability labelling designations for DOEPOD and NTIAC Data Books, respectively. Xpod and a90/95 do not necessarily refer to the same flaw size for the same data sets.

A top level summary of the DOEPOD analyses of the nondestructive inspection data presented in the NTIAC Data Book [1] is provide in Table 2. CASE 1+, CASE 1#, CASE 1*, and CASE 2 all exhibit at least one singular point where the one-sided lower 95% confidence bound on POD exceeds 0.90 at a critical flaw size and additional actions are needed per Table 2 instructions to complete the validation over a range of larger flaw sizes. CASE 4 data sets represent data sets that are similar to CASE 2 data sets, however additional data at selected flaws sizes is needed to move a CASE 4 data set to a CASE 2 data set. The CASE 5 data sets have excessive false negatives in the flaw size range tested, therefore data for larger flaw sizes is needed. CASE 6 data sets exhibit local instability over a portion of the flaw sizes tested, therefore, therefore data for larger flaw sizes is needed or the inspection system is inappropriate for the inspection required. CASE 7 data sets exhibit instability over the entire the flaw size range tested, therefore, therefore data for larger flaw sizes is needed or the inspection system is inappropriate for the
A summary of the output of parameter values from the DOEPOD analysis of nondestructive inspection data and methods presented in the NTIAC Data Book [1] is listed in Table 3. The descriptions of the parameters in Table 3 are detailed in reference [5]. The data file name is in column 3 of Table 3 and is used to identify the companion DOEPOD analysis output file. The printouts of the DOEPOD analysis output files follow in alphabetic in order to facilitate location. The electronic DOEPOD analysis output files and a searchable summary of parameter values from the DOEPOD analysis (Table 3) are available in the companion CD-ROM entitled “NASA DOEPOD Nondestructive Evaluation (NDE) Capabilities Data Book” which may be obtained upon request from the publisher.

DOEPOD software is available from NASA by contacting Kathy A. Dezern, phone: 757.864.5704, email: kathy.a.dezern@nasa.gov
As an illustrative example we examine the first data set A1001AL. The multi-parameter maximum likelihood analysis in the NTIAC NDE Capabilities Data Book indicates the inspection system to have a 0.94 POD with lower single-sided 95% confidence bound that exceeds 0.9 at 0.27" flaw size (column labeled "NTIAC 90/95 occurs at POD (inch)"). In contrast, the NASA DOEPOD point estimate based method (no curve fitting) indicates that the acceptable capability of this inspection system is at or above the 0.61" flaws size (column labeled Xpod CLASSLENGTH) where 1.0 POD is estimated (column labeled POH or POD @Xpod) with a single-sided lower 95% confidence bound that exceeds 0.9 at 0.61" flaw size.

Examining the data analyses for A1001AL (page 20). There are five Misses (Xs) for the 72 flaws larger than the 0.27" flaw size yielding a 0.93 point estimate of POD for these grouped larger flaws with a single-sided lower 95% confidence bound of 0.83. The multi-parameter POD curve fit does not highlight these Misses as important. DOEPOD indicates that the POD capability for this system and for fracture critical inspections is at or above the 0.61" flaw size. Even then, DOEPOD analysis indicates [RED notes in chart] that additional large flaw data is needed to complete the validation before accepting the 0.61" flaw size capability of this inspection system, and that false call analysis is also required.

Accepting the 0.27" flaw size identified by multi-parameter maximum likelihood method as the detection capability of this inspection system for fracture critical inspections adds known risk as highlighted by the 0.93 point estimate of POD with a single-sided lower bound of 0.83 for the largest flaws. DOEPOD analysis indicates that the POD capability for this system and for fracture critical inspections is at or above the 0.61" flaw size.
DOEPOD DEFINITIONS

C_L  Class length, e.g., inspection parameter (length, depth, area, etc.)

C_W  Class width (width of the moving class; all flaws within the range C_L to C_L - C_W, inclusively, are group together )

Hit  Flaw is detected

Miss Flaw is not detected


Need Add new samples to the existing specimen set in order to reach the number of samples required at the class length. Note that a single specimen may contain more than one flaw, so that “add samples” refers to “add flaws”.

LCL  Lower confidence bound (value) of POH @ 95% confidence

Opt. X_{POH} Optimum X_{POH} is identified for non-survey data sets. Optimum X_{POH} is the smallest class length and largest class width at which the minimum X_{POH} = 1 occurs. Optimum X_{POH} may be more aggressive than optional, X_{PODopt}, or X_{Best LCL}, when the class width is constrained to the companion Optimum X_{POH} class width listed. DOEPOD does not force use of Optimum X_{POH} over X_{PODopt} or X_{Best LCL}. Stability has not been demonstrated at Optimum X_{POH}, therefore there is an additional risk that Optimum X_{POH} can not be satisfied to reach X_{POD}

POH Estimate of Probability of Hit (Number of Hits in Class Length/Total Number of Trials in Class Length)

POD  Probability of Detection (the true POD obtained if an infinite number of samples are used)

Signal Amplitude Scalar amplitude output of NDE inspection system
Survey Data Sets are data sets that have a sparse or disperse collection of samples. The moving class width optimization has identified this data set as having limited applications where the classwidth has exceeded \( X_L/3 \) and \( X_{POD} \) has not been reached. An alternate optimization of \( X_{POH} \) is used to provide guidance. The Survey Set is the recommended initial set for DOEPOD.

Survey \( X_{POH} \) is only identified for data sets determined to be Survey Data Sets. Survey \( X_{POH} \) is the smallest class length and largest class width at which the minimum \( X_{POH} = 1 \) class length occurs. Survey \( X_{POH} \) is the minimum class length at which \( X_{POD} \) may be achieved when the class width is constrained to the companion survey class width listed. Survey \( X_{POH} \) is utilized in all cases in which a Survey Set is identified by DOEPOD.

\( X_{Best\ LCL} \) is the best class length exhibiting the maximum or “best” \( LCL \). The best class length is determined by increasing the moving class width until a maximum \( LCL \) is obtained.

\( X_i \) is the class length \( X \) at point “\( i \)”.

\( X_L \) is the largest class length in the entire data set.

\( X_m \) is the class length near the mid-point between the largest and the smallest class lengths having no misses.

\( X_P \) is the class length where 90/95 POD or greater is achieved, by grouping numbers of specimens, for the range \( X_P \) to \( X_L \). \( X_P \) is only provided when \( X_{POD} \) has been identified.

For inspector qualification, \( X_P \) cannot be less than the largest flaw missed. The class width of flaw set used for inspector qualification is listed as Inspector Classwidth @ \( X_P \) in the charts. The flaw sizes used for inspector qualification range from \( X_P \) to \( (X_P - \text{Classwidth } @ X_P) \).

\( X_{POD} \) is the class length at which the lower confidence bound (value) is 0.90 (90/95 POD) @ 95% confidence.

\( X_{POH=1}, X_{POH} \) is the class length where there are no misses above this class length, and POH = 1 above this class length.

\( X_{PODopt} \) is an optional existing smaller class length where \( X_{POD} \) may also be achieved if additional samples are added and Hits are identified.

\( X_S \) is the smallest class length in the data set.

\( UCL \) is the upper confidence bound (value) of the false call rate @ 95% confidence.
**Validated 90/95 POD has been reached at a classlength, X_{POD}. In order to achieve 90/95 POD for the class length range between X_{POD} and the largest class length in the data set, X_L, inclusively, validation at a classlength near the mid-point and largest classlength is required. If, in addition, there exists a class length, X_P, where 90/95 POD or greater exits for all class lengths in the range X_P to X_L, and X_P = X_{POD}, and there is a sufficient number and adequate range and distribution of classlengths greater than X_{POD}, then the validation extends from X_{POD} to X_L. When this occurs, validation at a classlength near the mid-point and largest classlength is satisfied.**

**WARNING:** There are inspection systems that exhibit an oscillating or non-uniform POD. For example when the flaws are greater than the eddy current footprint, when large flaws are loaded to closure, or when the physics of the inspection processes changes modes over the flaw size range of interest. If flaws in these ranges or conditions are to be detected with a 90/95 POD, then samples in these ranges need to be included. When multiple base parameters are combined, e.g., (length)x(width) = area, and the combine parameter (e.g., area) is used as the class length, then 90/95 POD is only valid if the inspection technology has been validated to quantitatively measure each of the base parameters, or if the inspection technology is validated to quantitatively measure the new combine parameter. When all CASE 1 or CASE 1+ requirements are met, and the above warnings have been evaluated and the upper confidence bound of the false call rate is not excessive, then the inspection system is validated between X_{POD} and the largest class length X_L for the flaw types, materials, and structure of the test specimen set. Validated is defined here to be: “This confidence bound procedure has a probability of at least 0.95 to give a lower bound for the 90% POD point that exceeds true (unknown) 90% POD point. This is referred to as 90/95 POD, and for larger flaws in the evaluation range 90/95 POD is met or exceeded. DOEPOD SOFTWARE AND ANY ACCOMPANYING DOCUMENTATION IS RELEASED "AS IS". THE U.S. GOVERNMENT MAKES NO WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT WILL THE U.S. GOVERNMENT BE LIABLE FOR ANY DAMAGES, INCLUDING ANY LOST PROFITS, LOST SAVINGS, OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE, OR INABILITY TO USE THIS SOFTWARE OR ANY ACCOMPANYING DOCUMENTATION, EVEN IF INFORMED IN ADVANCE OF THE POSSIBILITY OF SUCH DAMAGES. THIS SOFTWARE MAY NOT BE MODIFIED, DISTRIBUTED, OR REPRODUCED.
Bibliography


DOEPOD CAPABILITIES DATA BOOK - SUMMARY
TABLE 3*
MATERIAL

STRUCTURE

FILE NAME

Analysis
Date/Time

Xpod
Xpod
CLASS- CLASSCASE ID LENGTH WIDTH

LCL

Best_LCL Best_LCL
CLASSBest_LC CLASSLENGTH XL
WIDTH
L

2219 Al T-87

plate

A1001AL.xls

6/4/15 5:14 PM CASE 1#

0.6100

0.2000

0.9050

0.9790

2219 Al T-87

plate

A1001BL.XLS

6/4/15 5:16 PM CASE 2

0.3130

0.2000

0.9040

0.9790

2219 Al T-87

plate

A1001CL.XLS

6/4/15 5:19 PM CASE 1*

0.3360

0.0570

0.9001

XL # Xm

Xm # Xs

Xs #

Xlcl

Xlcl #

Xpoh

Xpoh # 2XL

2XL # Xss

0.9790

Length or Area
False Call False Call per Inspection False Call
Opportunities False Calls False Call Flag
Length (in) Area (in^2) (in or in^2) =

MLE flag

NTIAC 90% NTIAC 90/95
POD occurs occurs at
POD (inch)
at (inch)

POH or
POD @
Xpod

XP

0.2

0.27

Warning: No false call
analysis.

0.185

0.25

0.5430

Warning: No false call
analysis.

0.3

0.41

0.4890

Warning: No false call
analysis.

0.2

0.285

Warning: No false call
analysis.

0.075

0.095

0.131

0.6460

0.5890

29

29

0.496

METHO
D

1.000

ET

0.961

ET

1.000

ET

1.000

ET

0.967

ET

plate

A1002AL.XLS

6/4/15 5:21 PM CASE 2

0.2980

0.0510

0.9001

0.9790

2219 Al T-87

plate

A1002BL.XLS

6/4/15 5:22 PM CASE 1*

0.1080

0.0310

0.9001

0.9790

0.3360

2219 Al T-87

plate

A1002CL.XLS

6/4/15 5:25 PM CASE 1#

0.1530

0.0360

0.9001

0.9790

0.5230

0.275

0.41

0.153

1.000

ET

2219 Al T-87

plate

A1003AL.XLS

6/4/15 5:27 PM CASE 1*

0.0760

0.0090

0.9077

0.6100

0.2620

Warning: No false call
analysis.

MLE Divergence
Warning: Initial results
listed.

0.055

0.065

0.096

1.000

ET

2219 Al T-87

plate

A1003BL.XLS

6/4/15 5:30 PM CASE 1*

0.0830

0.0080

0.9001

0.6100

0.2620

Warning: No false call
analysis.

MLE Divergence
Warning: Initial results
listed.

0.04

0.05

0.086

1.000

ET

2219 Al T-87

plate

A1003CL.XLS

6/4/15 5:34 PM CASE 1*

0.0830

0.0080

0.9001

0.6100

0.2620

0.115

0.108

1.000

ET

2219 Al T-87

plate

A2002AL.XLS

6/4/15 5:36 PM CASE 7

2219 Al T-87

plate

A2002BL.XLS

6/4/15 5:38 PM CASE 7

2219 Al T-87

plate

A2002CL.XLS

6/4/15 5:39 PM CASE 1*

Ti 6Al4V

plate

A3001AL.XLS

6/4/15 5:40 PM CASE 1#

0.4740
0.2250

0.2000
0.0400

0.2000

0.5100

0.8609

0.2000

0.3720

0.9001

0.5500

0.9001

0.4070

Ti 6Al4V

plate

A3001BL.XLS

6/4/15 5:41 PM CASE 2

0.2650

0.0800

0.9001

0.4070

Ti 6Al4V

plate

A3001CL.XLS

6/4/15 5:43 PM CASE 1#

0.2420

0.0420

0.9001

0.4070

Ti 6Al4V

plate

A3003AL.XLS

6/4/15 5:43 PM CASE 7

Ti 6Al4V

plate

A3003BL.XLS

0.8719

6/4/15 5:45 PM CASE 7

0.7411

0.0270
0.0220

plate

A3003CL.XLS

6/4/15 5:46 PM CASE 7

0.7942

0.0310

0.2470

hole

A400011.XLS

6/4/15 5:48 PM CASE 6

0.8190

0.0750

0.1752

SS AMS 355

hole

A400013.XLS

6/4/15 5:49 PM CASE 1#

0.9001

Warning: No false call
analysis.

29

Warning: No false call
analysis.

0.49

0.2575

24

6/4/15 5:50 PM CASE 6

0.6518

0.0070

0.0559

0.2575

28

0.1559

28

0.5493

0.0030

0.0579

0.2575

28

0.0663

27

A400016.XLS

6/4/15 5:52 PM CASE 1#

hole

A500011.XLS

6/4/15 5:53 PM CASE 4

0.8855

0.0230

0.0902

0.0902

4

SS AMS 355

hole

A500013.XLS

6/4/15 5:55 PM CASE 6

0.7360

0.0050

0.0204

0.0461

28

6/4/15 5:56 PM CASE 1#

0.0591

0.0180

0.2575

0.9001

0.0902

29

Warning: No false call
analysis.

0.585

Warning: No false call
analysis.

0.12

0.185

Warning: No false call
analysis.

0.04

0.065

Warning: No false call
analysis.

0.095

0.205

Warning: No false call
analysis.

0.035

0.065

Warning: No false call
analysis.

0.5150

29

ET
ET
ET
0.10314

1.000

ET
ET
ET

0.025

0.045

29

Warning: No false call
analysis.

0.075

0.085

0.0921

29

Warning: No false call
analysis.

0.03

0.06

Warning: No false call
analysis.

0.03

0.035

Warning: No false call
analysis.

0.035

0.065

Warning: No false call
analysis.

0.03

0.04

0.06102

1.000

ET

Warning: No false call
analysis.

0.09

0.1

0.114

1.000

ET

0.0579

2

2

1.000

ET
ET
ET

0.05905

1.000

ET
ET

A500015.XLS

6/4/15 5:57 PM CASE 5

A500016.XLS

6/4/15 5:58 PM CASE 1#

0.0610

0.0250

0.9001

0.0815

0.0681

lap splice

A6001A.XLS

6/4/15 5:59 PM CASE 1*

0.1140

0.0180

0.9001

0.8120

0.2910

2024 Al T-37

lap splice

A6001AR.XLS

6/4/15 6:00 PM CASE 1#

0.1140

0.0180

0.9001

0.8120

0.2910

0.1060

3

Warning: No false call
analysis.

0.09

0.095

0.114

1.000

ET

2024 Al T-37

lap splice

A6001B.XLS

6/4/15 6:01 PM CASE 1#

0.0940

0.0140

0.9001

0.8120

0.2760

0.0930

1

Warning: No false call
analysis.

MLE Divergence
Warning: Initial results
listed.

0.065

0.075

0.094

1.000

ET

2024 Al T-37

lap splice

A6001C.XLS

6/4/15 6:03 PM CASE 1#

0.1140

0.0180

0.9001

0.8120

0.2910

0.1060

3

Warning: No false call
analysis.

MLE Divergence
Warning: Initial results
listed.

0.085

0.09

0.114

1.000

2024 Al T-37

lap splice

A6001D.XLS

6/4/15 6:04 PM CASE 1#

0.1280

0.0240

0.9050

0.8120

0.3720

0.1270

1

Warning: No false call
analysis.

0.105

0.115

0.128

1.000

ET

2024 Al T-37

lap splice

A6001E.XLS

6/4/15 6:05 PM CASE 1#

0.1280

0.0240

0.9050

0.8120

0.3720

0.1270

1

Warning: No false call
analysis.

0.095

0.1

0.128

1.000

ET

0.075

0.09

0.12

1.000

ET

0.16

0.185

6/4/15 6:06 PM CASE 1*

A6001G.XLS

6/4/15 6:07 PM CASE 4

2024 Al T-37

2024 Al T-37

lap splice

lap splice

A6001GR.XLS

A6001H.XLS

0.1200

0.0230

0.9050

6/4/15 6:09 PM CASE 6

6/4/15 6:11 PM CASE 1*

0.8120
0.8666
0.8707

0.1310

0.0250

0.0870
0.0540

0.2760
0.1920

0.9001

0.8120
0.8120

27

0.10314

hole

A6001F.XLS

0.0663

ET
ET

0.1803

0.0776
28

2

ET
ET

1.000

hole

lap splice

0.2575

0.36

1.000
0.978

2024 Al T-37

lap splice

0.0579

27

0.275

0.242

ET

SS AMS 355

2024 Al T-37

0.0030

0.0339

0.21

1.000

SS AMS 355

2024 Al T-37

0.5493

0.0902

0.225

0.365

0.18

29

0.1004
4

0.21

0.265

29

0.1929
0.0902

0.175

0.8140

0.1004

6/4/15 5:51 PM CASE 5

hole

1

0.474

0.5150

0.1929

SS AMS 355

29

0.2350

0.17

Warning: No false call
analysis.

0.8140

24

SS AMS 355

0.2225

ET
ET

Warning: No false call
analysis.

A400014.XLS

A500014.XLS

Warning: No false call
analysis.

9

A400015.XLS

hole

29

0.2750
0.3150

hole

SS AMS 355

1.1000

0.095

hole

0.9001

0.29

Warning: No false call
analysis.

SS AMS 355

0.0540

0.09

Warning: No false call
analysis.

Warning: No false call
analysis.

SS AMS 355

0.1031

Warning: No false call
analysis.

29

0.3550

0.2575

Warning: No false call
analysis.

1.1000

0.8140

0.2575

29

0.4960

0.2470

Ti 6Al4V

0.0540

57

0.1520

0.2120

SS AMS 355

0.1031

0

24

0.61

2219 Al T-87

0.8853

22

False Call
Rate

Warning: No false call
analysis.

0.7100
24

False Call
Xss # Xpodopt Xpodopt # UCL

0.0587

3

Warning: No false call
analysis.

0.3720
27

0.2760

27

0.8120

8

0.2760

Warning: No false call
analysis.

0.3220

Warning: No false call
analysis.

24

1.6240

29

0.3720

0.185

MLE Divergence
Warning: Initial results
listed.

0.105

0.12

0.227

1.000

ET

MLE Divergence
Warning: Initial results
listed.

0.105

0.115

0.131

1.000

ET

0.095

0.11

0.128

1.000

ET

0.075

0.085

0.094

1.000

ET

0.1

0.12

0.07

0.08

0.105
0.095

lap splice

A6001J.XLS

6/4/15 6:12 PM CASE 1#

0.1310

0.0250

0.9001

0.8120

0.3720

0.1305

29

Warning: No false call
analysis.

2024 Al T-37

lap splice

A6001JR.XLS

6/4/15 6:13 PM CASE 1#

0.1280

0.0240

0.9050

0.8120

0.3720

0.1230

2

Warning: No false call
analysis.

2024 Al T-37

2024 Al T-37

lap splice
lap splice

lap splice

A6002A.XLS
A6002B.XLS

A6002C.XLS

6/4/15 6:14 PM CASE 1#
6/4/15 6:15 PM CASE 2

6/4/15 6:17 PM CASE 1*

0.0940
0.1050

0.1050

0.0140
0.0180

0.0180

0.9001

0.8120

0.9001

0.8120

0.9001

0.2760
26

0.8120

0.2910

2024 Al T-37

lap splice

A6002D.XLS

6/4/15 6:18 PM CASE 1*

0.1280

0.0240

0.9050

0.8120

0.3720

lap splice

A6002DR.XLS

6/4/15 6:19 PM CASE 1#

0.1540

0.0340

0.9077

0.8120

0.3220

2024 Al T-37

lap splice
lap splice

A6002E.XLS
A6002ER.XLS

6/4/15 6:20 PM CASE 1*
6/4/15 6:21 PM CASE 1#

0.1310
0.1860

0.0250
0.0450

0.9001

0.8120

0.9001

0.8120

A6002F.XLS

6/4/15 6:22 PM CASE 7

A6002G.XLS

6/4/15 6:24 PM CASE 1#

0.1200

0.0230

0.9050

0.8120

0.3720

2024 Al T-37

lap splice

A6002H.XLS

6/4/15 6:25 PM CASE 1*

0.2220

0.0910

0.9001

0.8120

2024 Al T-37

lap splice

A6002HR.XLS

6/4/15 6:27 PM CASE 1*

0.1300

0.0250

0.9050

0.8120

A6002J.XLS

6/4/15 6:28 PM CASE 6

lap splice

A6003A.XLS

6/4/15 6:30 PM CASE 1*

0.8609
0.1054

0.0190

0.9001

0.0200

Warning: No false call
analysis.

0.1840

0.2910

0.1270

1.6240

0.8120
0.8117

MLE Divergence
Warning: Initial results
listed.

Warning: No false call
analysis.

0.1530

29

Warning: No false call
analysis.

0.3720

lap splice

lap splice

26

Warning: No false call
analysis.

lap splice

MLE Divergence
Warning: Initial results
listed.

Warning: No false call
analysis.

0.3720

2024 Al T-37

2024 Al T-37

0.0710

Warning: No false call
analysis.

Warning: No false call
analysis.

2024 Al T-37

2024 Al T-37

0.8190

1

0.2910

2024 Al T-37

2024 Al T-37

0.0930

29

MLE Divergence
Warning: Initial results
listed.

Warning: No false call
analysis.

29

Warning: No false call
analysis.

MLE Divergence
Warning: Initial results
listed.

0.3720

Warning: No false call
analysis.

MLE Divergence
Warning: Initial results
listed.

0.3720

Warning: No false call
analysis.

27

0.1190

0.2760

24

1.6240

29

Warning: No false call
analysis.

29

ET

0.16

Warning: No false call
analysis.

2024 Al T-37

2024 Al T-37

MLE Divergence
Warning: Initial results
listed.

ET

ET

1.000

ET

0.105

1.000

ET

0.115

0.128

1.000

ET

0.11

0.154

1.000

ET

0.11

0.13

0.227

1.000

ET

0.11

0.125

0.186

1.000

ET

1.000

ET

0.2

0.265

0.095

0.105

0.12

ET

0.12

0.135

0.222

0.978

ET

0.105

0.12

0.13

1.000

ET

0.145

0.175
0.1054

1.000

ET

ET

0.2910

Warning: No false call
analysis.

0.085

0.095

MLE Divergence
Warning: Initial results
listed.

0.085

0.095

0.1141

1.000

ET

MLE Divergence
Warning: Initial results
listed.

0.065

0.08

0.10405

1.000

ET

0.09

0.1

0.1054

1.000

ET

2024 Al T-37

lap splice

A6003B.XLS

6/4/15 6:31 PM CASE 1*

0.1141

0.0190

0.9050

0.8117

0.2910

Warning: No false call
analysis.

2024 Al T-37

lap splice

A6003C.XLS

6/4/15 6:32 PM CASE 1*

0.0936

0.0150

0.9001

0.8117

0.2762

Warning: No false call
analysis.

2024 Al T-37

lap splice

A6003D.XLS

6/4/15 6:34 PM CASE 1#

0.1054

0.0190

0.9001

0.8117

0.2910

0.1030

1

*All lengths are in inches
12

Warning: No false call
analysis.


### TABLE 3

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<th>2024 Al T-37 lap splice</th>
<th>2024 Al T-37 lap splice</th>
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<th>2219 Al T-87/w2319 weld LFC</th>
<th>2219 Al T-87/w2319 weld flush TFC</th>
<th>STEEL 4340 plate</th>
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<td>0.2910</td>
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<td>0.2910</td>
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</tbody>
</table>

*All lengths are in inches*
**DOEPOD CAPABILITIES DATA BOOK - SUMMARY**

**TABLE 3**

| MATERIAL          | APPLICATION | PLATE NAME | Grade/Type | Case# | Class 3 | CT  | Start Date | End Date | Start | End | Type | Start | End | Start | End | Ins. | Mod. | Mod. | Mod. | Ins. | Mod. | Mod. | Ins. | Mod. | Mod. | Ins. | Mod. | Mod. | Ins. | Mod. | Mod. |
|-------------------|-------------|------------|------------|-------|---------|-----|------------|----------|-------|-----|------|-------|-----|-------|-----|------|----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
| 2219 Al T-87      | plate       | C1002BL    | 0.1080     | 0.315  | 0.02   | 0.035 | 0.086      | 1.000    | 0.092 | 0.900 | 0.979 | 0.063  | 0.090 | 0.090 | 0.090 | 4     | 0.090 | 4     | 0.090 | 0.180 | 29    | 0.085 | 0.180 | 29    | 0.085 | 0.180 | 29    | 0.085 | 0.180 | 29    |
| 2219 Al T-87      | plate       | C1002CL    | 0.0830     | 0.127  | 0.085  | 0.115 | 0.086      | 1.000    | 0.092 | 0.900 | 0.979 | 0.063  | 0.090 | 0.090 | 0.090 | 4     | 0.090 | 4     | 0.090 | 0.180 | 29    | 0.085 | 0.180 | 29    | 0.085 | 0.180 | 29    | 0.085 | 0.180 | 29    |
| 2219 Al T-87      | plate       | C2002CL    | 0.4740     | 0.127  | 0.100  | 0.175 | 0.124      | 1.000    | 0.092 | 0.900 | 0.979 | 0.063  | 0.090 | 0.090 | 0.090 | 4     | 0.090 | 4     | 0.090 | 0.180 | 29    | 0.085 | 0.180 | 29    | 0.085 | 0.180 | 29    | 0.085 | 0.180 | 29    |
| Ti 6Al4V          | plate       | C3001AL    | 0.7942     | 0.140  | 0.105  | 0.175 | 0.154      | 1.000    | 0.092 | 0.900 | 0.979 | 0.063  | 0.090 | 0.090 | 0.090 | 4     | 0.090 | 4     | 0.090 | 0.180 | 29    | 0.085 | 0.180 | 29    | 0.085 | 0.180 | 29    | 0.085 | 0.180 | 29    |
| STEEL 4340        | plate       | B1003AD    | 0.8514     | 0.315  | 0.02   | 0.035 | 0.086      | 1.000    | 0.092 | 0.900 | 0.979 | 0.063  | 0.090 | 0.090 | 0.090 | 4     | 0.090 | 4     | 0.090 | 0.180 | 29    | 0.085 | 0.180 | 29    | 0.085 | 0.180 | 29    | 0.085 | 0.180 | 29    |
| STEEL 4340        | plate       | B1003BL    | 0.2340     | 0.315  | 0.02   | 0.035 | 0.086      | 1.000    | 0.092 | 0.900 | 0.979 | 0.063  | 0.090 | 0.090 | 0.090 | 4     | 0.090 | 4     | 0.090 | 0.180 | 29    | 0.085 | 0.180 | 29    | 0.085 | 0.180 | 29    | 0.085 | 0.180 | 29    |
| STEEL 4340        | plate       | B1003CL    | 0.2340     | 0.315  | 0.02   | 0.035 | 0.086      | 1.000    | 0.092 | 0.900 | 0.979 | 0.063  | 0.090 | 0.090 | 0.090 | 4     | 0.090 | 4     | 0.090 | 0.180 | 29    | 0.085 | 0.180 | 29    | 0.085 | 0.180 | 29    | 0.085 | 0.180 | 29    |
| STEEL 4340        | plate       | C6001AL    | 0.7942     | 0.140  | 0.105  | 0.175 | 0.154      | 1.000    | 0.092 | 0.900 | 0.979 | 0.063  | 0.090 | 0.090 | 0.090 | 4     | 0.090 | 4     | 0.090 | 0.180 | 29    | 0.085 | 0.180 | 29    | 0.085 | 0.180 | 29    | 0.085 | 0.180 | 29    |
| STEEL 4340        | plate       | C6002AL    | 0.2500     | 0.315  | 0.02   | 0.035 | 0.086      | 1.000    | 0.092 | 0.900 | 0.979 | 0.063  | 0.090 | 0.090 | 0.090 | 4     | 0.090 | 4     | 0.090 | 0.180 | 29    | 0.085 | 0.180 | 29    | 0.085 | 0.180 | 29    | 0.085 | 0.180 | 29    |
| SS AMS 355        | hole        | B30012     | 0.8855     | 0.140  | 0.105  | 0.175 | 0.154      | 1.000    | 0.092 | 0.900 | 0.979 | 0.063  | 0.090 | 0.090 | 0.090 | 4     | 0.090 | 4     | 0.090 | 0.180 | 29    | 0.085 | 0.180 | 29    | 0.085 | 0.180 | 29    | 0.085 | 0.180 | 29    |
| SS AMS 355        | hole        | C500011    | 0.8855     | 0.140  | 0.105  | 0.175 | 0.154      | 1.000    | 0.092 | 0.900 | 0.979 | 0.063  | 0.090 | 0.090 | 0.090 | 4     | 0.090 | 4     | 0.090 | 0.180 | 29    | 0.085 | 0.180 | 29    | 0.085 | 0.180 | 29    | 0.085 | 0.180 | 29    |
| SS AMS 355        | hole        | C6001AL    | 0.7942     | 0.140  | 0.105  | 0.175 | 0.154      | 1.000    | 0.092 | 0.900 | 0.979 | 0.063  | 0.090 | 0.090 | 0.090 | 4     | 0.090 | 4     | 0.090 | 0.180 | 29    | 0.085 | 0.180 | 29    | 0.085 | 0.180 | 29    | 0.085 | 0.180 | 29    |
| **MLE Divergence**| **Warning** | **No**     | **Call**   | **Analysis** |

*All lengths are in inches*
### TABLE 3*

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<th>MATERIAL</th>
<th>APPLICATION</th>
<th>FILE NAME</th>
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<td>2219 Al T-87/w2319 weld LOP C9003(3)L.xls</td>
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*All lengths are in inches

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*Note: WARNING: No false call analysis.*
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<th>STRUCTURE</th>
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<th>Part Number</th>
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<td>D3003AL.xls</td>
<td>2219 Al T-87 plate</td>
<td>D1002CL.XLS</td>
<td>6/4/15 11:55 PM</td>
<td>CASE 1*</td>
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<td>0.9077</td>
<td>0.1780</td>
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<td>0.045</td>
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<td>2219 Al T-87 plate</td>
<td>D1003CD.xls</td>
<td>6/5/15 12:10 AM</td>
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<td>2219 Al T-87 plate</td>
<td>D2002AL.XLS</td>
<td>6/5/15 12:14 AM</td>
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<td>0.0600</td>
<td>0.9001</td>
<td>0.5500</td>
<td>0.5380</td>
<td>0.2880</td>
<td>0.030</td>
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<td>2219 Al T-87 plate</td>
<td>D2002CD.xls</td>
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<td>2219 Al T-87 plate</td>
<td>D2002CL.XLS</td>
<td>6/5/15 12:17 AM</td>
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<td>1.6030</td>
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<td>2.4030</td>
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<td>1.6030</td>
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<td>D8001(3)D.xls</td>
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<td>CASE 6</td>
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<td>0.0950</td>
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<td>0.0730</td>
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<td>2219 Al T-87 stringer panel</td>
<td>D8002(3)L.xls</td>
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<td>CASE 1*</td>
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<td>0.6840</td>
<td>0.5630</td>
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<td>0.6840</td>
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<td>CASE 6</td>
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<td>0.3410</td>
<td>2.5420</td>
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<td>0.9050</td>
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<td>D8007(3)L.xls</td>
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<td>CASE 6</td>
<td>0.7169</td>
<td>0.0040</td>
<td>0.3410</td>
<td>2.5420</td>
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<td>D8008(3)L.xls</td>
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<td>0.0040</td>
<td>0.3410</td>
<td>2.5420</td>
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<td>0.3410</td>
<td>2.5420</td>
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<td>D8011(3)L.xls</td>
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<td>CASE 6</td>
<td>0.7169</td>
<td>0.0040</td>
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<td>2.5420</td>
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<td>2219 Al T-87 stringer panel</td>
<td>D8012(3)L.xls</td>
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<td>CASE 6</td>
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<td>0.3410</td>
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*All lengths are in inches*
### DOEPOD CAPABILITIES DATA BOOK - SUMMARY

#### TABLE 3

| MATERIAL | STRUCTURE | FILE NAME | AREA/TEXT | CASE # | INPUT | LENGTH | AREA | LCL | X | XL | Xs | Xpoh | Best_LCL CLASS-LENGTH XL XL # Xm Xm # Xs Xs # Xlcl Xlcl # Xpoh Xpoh # 2XL 2XL # Xss Xss # Xpodopt Xpodopt # | XMLE Divergence Warning | MLE Divergence Warning | WARNING | WARNING | WARNING | WARNING |
|----------|-----------|-----------|-----------|--------|-------|--------|------|-----|---|----|----|------|------------------|------------------|------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 2219 Al T-87/w2319 weld flush | TFC DD003(3)L.xls | 6/5/15 3:05 AM | CASE 7 | 0.2713 | 0.0010 | 0.1780 | 0.9900 | 29 | IN | 718 and HAYNES plate | E1001AL.XLS | 6/5/15 3:07 AM | CASE 6 | 0.5709 | 0.0420 | 0.1900 | 0.4220 | 28 | 0.4220 | 28 | 0.8440 | 29 |
| 2219 Al T-87 plate | F10001BA.XLS | 6/5/15 3:14 AM | CASE 6 | 0.4729 | 0.0100 | 0.5136 | 0.8091 | 28 | 0.8091 | 28 | 1.6182 | 29 |
| 2219 Al T-87 plate | F10601AD.XLS | 6/5/15 3:28 AM | CASE 7 | 0.0398 | 0.0040 | 0.0370 | 0.0860 | 29 |
| 2219 Al T-87 plate | F12201AD.XLS | 6/5/15 3:48 AM | CASE 7 | 0.7206 | 0.0660 | 0.1780 | 0.3560 | 29 |
| 2219 Al T-87 plate | F10602BD.XLS | 6/5/15 3:38 AM | CASE 7 | 0.8827 | 0.0140 | 0.0430 | 0.0860 | 29 |
| 2219 Al T-87 plate | F10603BD.XLS | 6/5/15 3:45 AM | CASE 1# | 0.0430 | 0.0110 | 0.9001 | 0.0430 | |
| 2219 Al T-87 plate | F12202BL.XLS | 6/5/15 4:02 AM | CASE 1# | 0.5390 | 0.2000 | 0.9152 | 0.9790 | 0.7100 | 0.5370 | 29 |
| 2219 Al T-87 plate | F10603CL.XLS | 6/5/15 3:47 AM | CASE 4 | 0.8931 | 0.2000 | 0.3420 | 0.3420 | 29 |
| 2219 Al T-87 plate | F10601CL.XLS | 6/5/15 3:35 AM | CASE 7 | 0.0127 | 0.0010 | 0.2590 | 0.6840 | 29 |
| 2219 Al T-87 plate | F10602CL.XLS | 6/5/15 3:38 AM | CASE 7 | 0.345 | 0.465 | 0.539 | 1.000 | RT |
| *All lengths are in inches*
**TABLE 3**

| MATERIAL | APPLICATION | POLE NAME | Series | Length | Area | Width | Width | Area | Width | Width | Length | Area | Width | Width | Length | Area | Width | Width | Length | Area | Width | Width | Length | Area | Width | Width | Length | Area | Width | Width | Length | Area | Width | Width | Length | Area | Width | Width | Length | Area | Width | Width | Length | Area | Width | Width | Length | Area | Width | Width | Length | Area | Width | Width | Length | Area | Width | Width | Length | Area | Width | Width | Length | Area | Width | Width | Length | Area |
|----------|-------------|-----------|-------|--------|------|-------|-------|------|-------|-------|--------|------|-------|-------|--------|------|-------|-------|--------|------|-------|-------|--------|------|-------|-------|--------|------|-------|-------|--------|------|-------|-------|--------|------|-------|-------|--------|------|-------|-------|--------|------|-------|-------|--------|------|-------|-------|--------|------|-------|-------|--------|------|-------|-------|--------|------|-------|-------|--------|------|-------|-------|--------|------|-------|-------|--------|------|-------|-------|--------|------|-------|-------|--------|------|-------|-------|--------|------|-------|-------|--------|------|-------|-------|--------|------|-------|-------|--------|------|-------|-------|--------|------|-------|-------|--------|------|-------|-------|
| Ti 6Al4V | plate F30651BD.XLS | 6/5/15 4:35 AM CASE 7 | 0.051 | 0.0100 | 0.0140 | 0.0440 | 20 | 0.0540 | 28 | 0.0108 | 29 |
| Ti 6Al4V | plate F30651BD.XLS | 6/5/15 4:37 AM CASE 7 | 0.051 | 0.0140 | 0.0540 | 0.1080 | 29 |
| Ti 6Al4V | plate F30651CL.XLS | 6/5/15 4:39 AM CASE 7 | 0.093 | 0.0930 | 0.2500 | 0.8140 | 29 |
| Ti 6Al4V | plate F30653AD.XLS | 6/5/15 4:40 AM CASE 6 | 0.060 | 0.0060 | 0.0180 | 0.1000 | 28 |
| Ti 6Al4V | plate F30653BL.XLS | 6/5/15 4:43 AM CASE 7 | 0.017 | 0.0840 | 0.8140 | 29 |
| Ti 6Al4V | plate F32251AL.XLS | 6/5/15 4:49 AM CASE 6 | 0.060 | 0.0030 | 0.2150 | 0.3520 | 28 |
| Ti 6Al4V | plate F32251CD.XLS | 6/5/15 4:54 AM CASE 7 | 0.087 | 0.3520 | 0.7040 | 29 |
| Ti 6Al4V | plate F32253BD.XLS | 6/5/15 4:59 AM CASE 6 | 0.370 | 0.2470 | 0.3700 | 27 |
| Ti 6Al4V | plate F32253BL.XLS | 6/5/15 5:00 AM CASE 6 | 0.370 | 0.2470 | 0.3700 | 27 |
| STEEL 4340 | plate F40601A.XLS | 6/5/15 5:04 AM CASE 7 | 0.043 | 0.0040 | 0.0913 | 0.4960 | 29 |
| STEEL 4340 | plate F40601B.XLS | 6/5/15 5:05 AM CASE 7 | 0.007 | 0.0070 | 0.0943 | 0.4960 | 29 |
| STEEL 4340 | plate F40601C.XLS | 6/5/15 5:06 AM CASE 7 | 0.007 | 0.0070 | 0.1163 | 0.4960 | 29 |
| STEEL 4340 | plate F40603A.XLS | 6/5/15 5:08 AM CASE 6 | 0.007 | 0.0070 | 0.0943 | 0.2480 | 28 |
| STEEL 4340 | plate F40603B.XLS | 6/5/15 5:09 AM CASE 6 | 0.007 | 0.0070 | 0.0943 | 0.2480 | 28 |
| STEEL 4340 | plate F42501A.XLS | 6/5/15 5:12 AM CASE 6 | 0.008 | 0.0080 | 0.3300 | 2.4030 | 28 |
| STEEL 4340 | plate F42501B.XLS | 6/5/15 5:13 AM CASE 6 | 0.300 | 0.4000 | 2.4030 | 28 |
| STEEL 4340 | plate F42503B.XLS | 6/5/15 5:19 AM CASE 5 | 0.063 | 0.3500 | 2.4030 | 28 |
| STEEL 4340 | plate F42503C.XLS | 6/5/15 5:20 AM CASE 5 | 0.068 | 0.3500 | 2.4030 | 28 |

*All lengths are in inches*
| MATERIAL | STRUCTURE | FILE NAME | Analysis Date Time | Case # | CASE-WIDTH | LENGTH | AREA | AREA | LENGTH | AREA | LENGTH | AREA | CASE-WIDTH | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | 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| LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA 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AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | LENGTH | AREA | AREA | Length or Area per Inspection (in or in²) =

**Warning:** No false call analysis.

19
CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**Directed DOE Options**

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**TABLE C**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

---

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.*
CASE 2 - 90/95 Xpod is reached at a class length. Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.

Survey/Optimum Xpoh = 0.000 inch Samples

NTIAC 90% POD = 0.903 @ 0.185 inch
NTIAC 90/95 POD = 0.902 @ 0.250 inch

False Call Rate = with UCL @ 95%

Largest Classlength , XL = 0.979 inch
Samples Needed @ XL = 24
Classlength Mid-point , Xm = 0.646 inch
Samples Needed @ Xm = 29
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xcl =
Samples Needed @ Xcl = POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =


data: A1001BL.XLS
file: DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsm

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Large flaw validation failure. Extend flaw size range to 1.008.

Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.

CASE 1*: 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths; this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

* Although Xpod appears to have been reached at a point, there are misses at larger class lengths; this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 10 more large flaws.

Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.

CASE 1*: 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.

File Name = A1002BL.XLS
Data Set Name = A1002BL(CRACK #)
Date & Time = 6/4/15 5:22 PM

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.979 inch
Classlength @ 90/95 Xpod = 0.336 inch
Lower Confidence Bound = 0.8975 inch
Best LCL = 0.9001 inch
Classwidth @ Best LCL = 0.9001 inch
Classlength @ Best LCL = 0.9001 inch
User Provided a 90/95 POD = 0.9672
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp =
POD @ Xpod = 0.000 inch

File Name = A1002BL.XLS
Data Set Name = A1002BL(CRACK #)
Date & Time = 6/4/15 5:22 PM

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.979 inch
Classlength @ 90/95 Xpod = 0.336 inch
Lower Confidence Bound = 0.8975 inch
Best LCL = 0.9001 inch
Classwidth @ Best LCL = 0.9001 inch
Classlength @ Best LCL = 0.9001 inch
User Provided a 90/95 POD = 0.9672
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp =
POD @ Xpod = 0.000 inch

Xp = 0.1310 inch

Analysis file name: DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsm

Large flaw validation failure. Need 10 more large flaws.

Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.

CASE 1*: 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.

Survey/Optimum Xpoh = 0.000 inch
False Call Rate = with UCL @ 95% =

Largest Classlength , XL = 0.979 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.336 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl =
Opt. POD classlength, Xpodopt =
Opt. POD classlength, Xpodopt =
Sample Needed @ Xpoh =
Samples Needed @ Xp = 0.1310 inch

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 10 more large flaws.

Note: Xpopt is within one class width of Xpod.

Warning: No false call analysis.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpopt or Optimum Xpoh (if listed) is also satisfied.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### Table A*

<table>
<thead>
<tr>
<th>Additional Samples</th>
<th>XL</th>
<th>Xm</th>
<th>Xs</th>
<th>Xss</th>
<th>Xlcl</th>
<th>Xpoh</th>
<th>2XL</th>
<th>Xpod</th>
<th>Xpodopt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class Length</td>
<td>0.979</td>
<td>0.523</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.152</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt = 0.152

### Table B*

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
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</thead>
<tbody>
<tr>
<td>Xpodopt</td>
<td>15</td>
<td>Xpod</td>
<td>25</td>
</tr>
</tbody>
</table>

### Table C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
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<td>XL = 0.979</td>
<td></td>
</tr>
<tr>
<td>Xm = 0.523</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
<tr>
<td>Xpod</td>
<td></td>
</tr>
<tr>
<td>Xpodopt</td>
<td>0.152</td>
</tr>
</tbody>
</table>

No Misses Observed

At Least One Miss Occurred

XL  ○ Xm  ○ Xs  ○ Xss  ▲ Xlcl  ● Xpoh  ▲ 2XL  ▲ Xpod  ● Xpodopt

*Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 4 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.

File Name  =  A1003AL.XLS
Data Set Name  =  A1003AL(CRACK #)
Date & Time  =  6/4/15 5:27 PM
Warning: No false call analysis.

MLE Divergence Warning: Initial results listed.

Large flaw validation failure. Need 4 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.

Survey/Optimum Xpo  h =

NTIAC 90% POD =
NTIAC 90/95 POD =

False Call Rate =

with UCL @ 95% =

Largest Classlength, XL  =  0.610 inch
Samples Needed @  XL  =
Classlength Mid-point, Xn  =  0.262 inch
Samples Needed @ Xn  =
Smallest Classlength, Xs  =
Samples Needed @ Xs  =
New Smaller Classlength, Xss  =
Best LCL Classlength, Xlcl  =
Samples Needed @ Xlcl  =
Opt. POD classlength, Xpodopt  =
New Largest Classlength, 2XL  =
Xn is Near Verification Point  =
Xn is Near Verification Point  =
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Need 4 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.

File Name = A1003BL.XLS
Data Set Name = A1003BL(CRACK #)
Date & Time = 6/4/15 5:30 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0080 inch
Classlength @ 90/95 Xpod = 0.9001 inch
Lower Confidence Bound = 0.0890 inch
Best LCL = 0.0830 inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD =
User's Maximum Allowed Classlength = inch
Best LCL POD = 1.0000
POD @ Xpod =

Largest Classlength , XL =
Samples Needed @ XL =
Classlength Mid-point , Xm =
Samples Needed @ Xm =
NSmallest Classlength, Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =

Survey/Optimum Xpoh =
0.910 @ 0.040 inch
0.904 @ 0.050 inch

False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 0.610 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.262 inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =

Xp = 0.0860 inch

CASE 1*: 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 4 more large flaws.

Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.

False Call Rate = with UCL @ 95%

- Largest Classlength, XL = 0.610 inch
- Samples Needed @ XL =
- Classlength Mid-point, Xm = 0.262 inch
- Samples Needed @ Xm =
- Smallest Classlength, Xs =
- New Smaller Classlength, Xss =
-Best LCL Classlength, Xlcl =
- Samples Needed @ Xlcl =
- POD classlength, Xpodopt =
- New Largest Classlength, 2XL =
- Xn is Near Verification Point =
- Opt. POD classlength, Xpodopt =
- Samples Needed @Xpodopt =

Survey/Optimum Xpoh = 0.000 inch Samples

NTIAC 90% POD = 0.906 @ 0.090 inch

NTIAC 90/95 POD = 0.906 @ 0.115 inch

Xp = 0.610 inch

36
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.*

---

**Directed DOE Options**

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**TABLE C**

Class Length Additional Samples

<table>
<thead>
<tr>
<th>XL =</th>
<th>Xm =</th>
<th>Xs =</th>
<th>Xss =</th>
<th>Xlcl =</th>
<th>Xpoh =</th>
<th>2XL =</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.100</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpod =**

---

* Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.*
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpod = 0.5300 - 0.003 inch
False Call Rate = with UCL @ 95%:

Largest Classlength , XL = inch
Samples Needed @ XL =
Classlength Mid-point , Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength , Xss = inch
Best LCL Classlength, Xlcl = inch
Samples Needed @ Xlcl =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength, 2XL = inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @ Xpodopt =

File Name = A2002BL.XLS
Data Set Name = A2002BL(CRACK #)
Date & Time = 6/4/15 5:38 PM
Xpod 90/95 Reached Anywhere? = NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.8609
Best LCL = 0.2000 inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod =
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths, this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 1.422.
Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Large flaw validation failure. Extend flaw size range to 0.675.

Warning: No false call analysis.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Survey/Optimum Xpoh = 0.1850  -0.002 Inch  28 Samples

NTIAC 90% POD = 0.904 @ 0.175 Inch
NTIAC 90/95 POD = 0.904 @ 0.210 Inch

False Call Rate = with UCL @ 95% =

- Largest Classlength , XL = 0.407 Inch
- Samples Needed @ XL =
- Classlength Mid-point , Xm = 0.275 Inch
- Samples Needed @ Xm =
- Smallest Classlength, Xs =
- Samples Needed @ Xs =
- New Smaller Classlength, Xs =
- BestLCL Classlength, Xcl =
- Samples Needed @ Xcl =
- POH Classlength, Xpoh =
- Samples Needed @ Xpoh =
- New Largest Classlength , 2XL =
- Xm is Near Verification Point =
- Opt. POD classlength, Xpopt = 0.233 Inch
- Samples Needed @Xpopt = 29
- Xp = 0.2250 Inch
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the PODH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.***

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### Table C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.407</td>
</tr>
<tr>
<td>Xm</td>
<td>0.275</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpod</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt = 0.223  29**
Warning: No false call analysis.

CASE 2 - 90/95 Xpod is reached at a class length. Further VALIDATION is required. Recommend satisfying XL and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.

Survey/Optimum Xpoh =

NTIAC 90% POD =

NTIAC 90/95 POD =

False Call Rate =

Largest Classlength, XL =

Samples Needed @ XL =

Classlength Mid-point, Xm =

Samples Needed @ Xm =

Smallest Classlength, Xs =

Samples Needed @ Xs =

New Smaller Classlength, Xss =

Best LCL Classlength, Xlcl =

Samples Needed @ Xlcl =

POH Classlength, Xpoh =

Samples Needed @ Xpoh =

New Largest Classlength, 2XL =

Xn is Near Verification Point =

Opt. POD classlength, Xpodopt =

Samples Needed @ Xpodopt =

Xp =

Large flaw validation failure. Extend flaw size range to 0.795.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited Misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no Misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### Directed DOE Options

#### TABLE A*

Selected class lengths with existing Misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>Need Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.407</td>
<td>57</td>
</tr>
<tr>
<td>0.315</td>
<td>9</td>
</tr>
</tbody>
</table>

#### TABLE B*

Selected class lengths with no Misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>Need Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.407</td>
<td>57</td>
</tr>
<tr>
<td>0.3550</td>
<td>63</td>
</tr>
<tr>
<td>0.3520</td>
<td>49</td>
</tr>
<tr>
<td>0.3450</td>
<td>49</td>
</tr>
</tbody>
</table>

#### TABLE C

Selected class lengths with existing Misses. Additional samples are required to achieve the listed Xpod.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>Need Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.407</td>
<td>57</td>
</tr>
<tr>
<td>0.315</td>
<td>9</td>
</tr>
</tbody>
</table>

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited Misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no Misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.726.

Note: Xpod is within one class width of Xpod.

Warning: No false call analysis.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

False Call Rate = with UCL @ 95% =
Largest Classlength, XL = 0.407 inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 0.355 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL Classlength, Xsl =
Samples Needed @ Xsl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.235 inch
Samples Needed @ Xpodopt = 1
Xp = 0.2420 inch

NTIAC 90% POD = 0.907 @ 0.180 inch
NTIAC 90/95 POD = 0.901 @ 0.210 inch

File Name = A3001CL.XLS
Data Set Name = A3001CL(CRK #)

Date & Time = 6/4/15 5:43 PM
Xpod 90/95 Reached Anywhere? = REACHED
Classwidth @ 90/95 Xpod = 0.0420 inch
Classlength @ 90/95 Xpod = 0.2420 inch
Lower Confidence Bound = 0.9001 inch
Best LCL Classwidth @ Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD @
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod = 1.0000

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
**Detection Probability** (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POM function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POM function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses, and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited Misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no Misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
**Detection Probability** (Utilization of DOEPOD results requires approval of Engineering Authority)

**Warning: No false call analysis.**

### Case 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Unit</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod Reached Anywhere?</td>
<td>NOT REACHED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classwidth @ 90/95 Xpod</td>
<td></td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td>Classlength @ 90/95 Xpod</td>
<td></td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td>Lower Confidence Bound @ 95%</td>
<td></td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td>Best LCL</td>
<td>0.8150</td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td>Classwidth @ Best LCL</td>
<td>0.0750</td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td>Classlength @ Best LCL</td>
<td>0.1752</td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td>User Provided a 90/95 POD @</td>
<td></td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td>User's Maximum Allowed Classlength</td>
<td></td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td>Inspector Classwidth @ Xp</td>
<td></td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td>POD @ Xp</td>
<td></td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td>Probability of Hit (POH), Lower Confidence Limit, LCL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xp, 90/95 POD</td>
<td>0.257</td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td>NTIAC 90% POD @</td>
<td>0.905</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NTIAC 90/95 POD @</td>
<td>0.903</td>
<td></td>
<td></td>
</tr>
<tr>
<td>False Call Rate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>with UCL @ 95%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Largest Classlength, XL</td>
<td>0.257</td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td>Samples Needed @ XL</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classlength Mid-point, Xm</td>
<td></td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td>Samples Needed @ Xm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smallest Classlength, Xs</td>
<td></td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td>Samples Needed @ Xs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Smaller Classlength, Xss</td>
<td></td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td>Best LCL Classlength, Xlcl</td>
<td></td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td>Samples Needed @ Xlcl</td>
<td>0.257</td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td>POH Classlength, Xpoh</td>
<td></td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td>Samples Needed @ Xpoh</td>
<td>0.257</td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td>New Largest Classlength, 2XL</td>
<td>0.515</td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td>Xn is Near Verification Point</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt. POD classlength, Xpodopt</td>
<td></td>
<td>inch</td>
<td></td>
</tr>
<tr>
<td>Samples Needed @ Xpodopt</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Analysis File Name:** DOEPOD_v1.2.01_PC.06.2010_Win7.xlsm

**Survey/Optimum Xpoh:** 0.1898 - 0.010 inch

**Samples:** 28

**Calculations:**

- Largest Classlength, XL = 0.257 inch
- Samples Needed @ XL = 24
- Classlength Mid-point, Xm = inch
- Samples Needed @ Xm =
- Smallest Classlength, Xs = inch
- Samples Needed @ Xs =
- New Smaller Classlength, Xss = inch
- Best LCL Classlength, Xlcl = inch
- Samples Needed @ Xlcl = 0.257 inch
- POH Classlength, Xpoh = inch
- Samples Needed @ Xpoh = 0.257 inch
- New Largest Classlength, 2XL = 0.515 inch
- Xn is Near Verification Point =
- Opt. POD classlength, Xpodopt = inch
- Samples Needed @ Xpodopt =

**Warning:** No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Warning: No false call analysis.

Large flaw validation failure. Extend flaw size range to 0.30942.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Note: Xpodopt is within one class width of Xpod.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### Directed DOE Options

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xl</th>
<th>Xm</th>
<th>Xs</th>
<th>Xss</th>
<th>Xlcl</th>
<th>Xpod</th>
<th>Xpodopt</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.257</td>
<td>28</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.156</td>
<td>28</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =**

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

### Additional Samples Needed

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
</table>

- **No Misses Observed**
- **At Least One Miss Occurred**

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 5 - This is a survey data set. 90/95 Xpod is not reached anywhere. Recommend satisfying XL and Survey Xpoh (if listed)

Survey/Optimum Xpoh = 0.0663 -0.003 inch 28 Samples

Warning: No false call analysis.

Probability of Hit (POH) in Class Range

Class Length, inch

0.000 0.050 0.100 0.150 0.200 0.250 0.300

0.000 0.100 0.200 0.300 0.400 0.500 0.600 0.700 0.800 0.900 1.000

Probability of Hit (POH), Lower Confidence Limit, LCL

Class Length,

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Large flaw validation failure. Extend flaw size range to 0.3094.

Warning: No false call analysis.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited Misses, and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no Misses, and these class lengths provide an alternate target Xpod point. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resloved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**TABLE C**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.046</td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td>0.034</td>
</tr>
<tr>
<td>2XL</td>
<td>0.002</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**
**Warning:** No false call analysis.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

**Large flaw validation failure. Extend flaw size range to 0.17715.**

Note: Xpodopt is within one class width of Xpod.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

---

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**Xpod, Class Length** | **No. Need** | **Xpod, Class Length** | **No. Need**
--- | --- | --- | ---
A500014.XLS | A500014(HOLE #)

**TABLE C**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

Additional Samples

- **XL** = 0.090
- **Xm** = 0.078
- **Xs** =
- **Xss** =
- **Xlcl** =
- **Xpoh** =
- **2XL** =

**Alternate Xm = Xpodopt = 0.058**

---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths, this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 5 - This is a survey data set. 90/95 Xpod is not reached anywhere. Recommend satisfying XL and Survey Xpoh (if listed).
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths; this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.18306.

Note: Xpodopt is within one class width of Xpod.

Warning: No false call analysis.

CASE 18: 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 16 more large flaws.

Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Warning: No false call analysis.

Large flaw validation failure. Need 16 more large flaws.

Note: Xpodopt is within one class width of Xpod.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

<table>
<thead>
<tr>
<th>TABLE A*</th>
<th>Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.</th>
<th>TABLE B*</th>
<th>Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.812</td>
<td>Xm = 0.291</td>
<td>Xs =</td>
<td>Xss =</td>
</tr>
<tr>
<td>Xpod, Class Length</td>
<td>No. Need</td>
<td>Xpod, Class Length</td>
<td>No. Need</td>
</tr>
</tbody>
</table>

* File Name = A6001AR.XLS
  Data Set Name = A6001AR(SITE CODE)

** Directed DOE Options

** Alternate Xm = Xpodopt = 0.105

** Alternate Xm = Xpodopt = 0.105

---

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

** Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

*** The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 15 more large flaws.

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

File Name = A6001B.XLS
Data Set Name = A6001B(SITE CODE)
Date & Time = 6/4/15 6:01 PM

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.0140 inch
Classlength @ 90/95 Xpod = 0.9001 inch
Lower Confidence Bound = 0.065 inch
Best LCL = 0.075 inch
Classwidth @ Best LCL = 0.0940 inch
Classlength @ Best LCL = 0.0940 inch
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
Inspection Classwidth @ Xp =
POD @ Xpod = 1.0000

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL Xp
used to satisfy XL and Xm requirements. An alternate 90/95 Xpod
is available if Xpodopt or Optimum Xpoh (if listed) is also
satisfied.

Survey/Optimum Xpoh = 0.0780 -0.002 inch 28 Samples

False Call Rate =
with UCL @ 95% =
Largest Classlength , XL = 0.812 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.276 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.093 inch
Samples Needed @Xpodopt = 1
Xp = 0.0940 inch
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resloved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Case 18 - 90/95 Xpod may be validated from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or optimum Xpoh (if listed) is also satisfied.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

### Directed DOE Options

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**No Misses Observed**

File Name = A6001C.XLS
Data Set Name = A6001C(SITE CODE)

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**No Misses Observed**

**TABLE C**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**Alternate Xm** = Xpodopt = 0.106

**Additional Samples**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.812</td>
<td></td>
</tr>
<tr>
<td>0.291</td>
<td></td>
</tr>
<tr>
<td>0.106</td>
<td>3</td>
</tr>
</tbody>
</table>

**MISS NO.**

* No Misses Observed
* At Least One Miss Occurred

**Xpodopt**

**Xl**

**Xm**

**Xs**

**Xss**

**Xlcl**

**Xpoh**

**2XL**

**Alternate Xm**

**Xpodopt**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 16 more large flaws.

Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

CASE 18: 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

CASE 19 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

File Name = A60010D.XLS
Data Set Name = A60010D(SITE CODE)
Date & Time = 6/4/15 6:04 PM
Xpod 90/95 Reached Anywhere? = REACHED
Classwidth @ 90/95 Xpod = 0.0240 inch
Classlength @ 90/95 Xpod = 0.1280 inch
Lower Confidence Bound @ 95% = 0.9050 inch
Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
POD @ Xpod = 1.0000

Survey/Optimum Xpoh = 0.1040 @ 0.001 Inch
False Call Rate =
Sampling @ 95% =
Largest Classlength, XL = 0.812 inch
Opt. POD classlength, Xpodopt = 0.127 inch
Xm is Near Verification Point =
Clarified POD classlength, Xpodopt = 0.127 inch
New Largest Classlength, 2XL =
Best LCL =
Cl, Classlength =
Sample Needed @ Xpoh =
Samples Needed @ Xpoh =
New Smaller Classlength, Xss =
POH Classlength, Xpoh =
Samples Needed @ Xs =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xdop =
Xp =

Large flaw validation failure. Need 16 more large flaws.

Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

CASE 19 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

File Name = A60010D.XLS
Data Set Name = A60010D(SITE CODE)
Date & Time = 6/4/15 6:04 PM
Xpod 90/95 Reached Anywhere? = REACHED
Classwidth @ 90/95 Xpod = 0.0240 inch
Classlength @ 90/95 Xpod = 0.1280 inch
Lower Confidence Bound @ 95% = 0.9050 inch
Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
POD @ Xpod = 1.0000

Survey/Optimum Xpoh = 0.1040 @ 0.001 Inch
False Call Rate =
Sampling @ 95% =
Largest Classlength, XL = 0.812 inch
Opt. POD classlength, Xpodopt = 0.127 inch
Xm is Near Verification Point =
Clarified POD classlength, Xpodopt = 0.127 inch
New Largest Classlength, 2XL =
Best LCL =
Cl, Classlength =
Sample Needed @ Xpoh =
Samples Needed @ Xpoh =
New Smaller Classlength, Xss =
POH Classlength, Xpoh =
Samples Needed @ Xs =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xdop =
Xp =

Large flaw validation failure. Need 16 more large flaws.

Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

CASE 19 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

File Name = A60010D.XLS
Data Set Name = A60010D(SITE CODE)
Date & Time = 6/4/15 6:04 PM
Xpod 90/95 Reached Anywhere? = REACHED
Classwidth @ 90/95 Xpod = 0.0240 inch
Classlength @ 90/95 Xpod = 0.1280 inch
Lower Confidence Bound @ 95% = 0.9050 inch
Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
POD @ Xpod = 1.0000

Survey/Optimum Xpoh = 0.1040 @ 0.001 Inch
False Call Rate =
Sampling @ 95% =
Largest Classlength, XL = 0.812 inch
Opt. POD classlength, Xpodopt = 0.127 inch
Xm is Near Verification Point =
Clarified POD classlength, Xpodopt = 0.127 inch
New Largest Classlength, 2XL =
Best LCL =
Cl, Classlength =
Sample Needed @ Xpoh =
Samples Needed @ Xpoh =
New Smaller Classlength, Xss =
POH Classlength, Xpoh =
Samples Needed @ Xs =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xdop =
Xp =

Large flaw validation failure. Need 16 more large flaws.

Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

CASE 19 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

File Name = A60010D.XLS
Data Set Name = A60010D(SITE CODE)
Date & Time = 6/4/15 6:04 PM
Xpod 90/95 Reached Anywhere? = REACHED
Classwidth @ 90/95 Xpod = 0.0240 inch
Classlength @ 90/95 Xpod = 0.1280 inch
Lower Confidence Bound @ 95% = 0.9050 inch
Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
POD @ Xpod = 1.0000

Survey/Optimum Xpoh = 0.1040 @ 0.001 Inch
False Call Rate =
Sampling @ 95% =
Largest Classlength, XL = 0.812 inch
Opt. POD classlength, Xpodopt = 0.127 inch
Xm is Near Verification Point =
Clarified POD classlength, Xpodopt = 0.127 inch
New Largest Classlength, 2XL =
Best LCL =
Cl, Classlength =
Sample Needed @ Xpoh =
Samples Needed @ Xpoh =
New Smaller Classlength, Xss =
POH Classlength, Xpoh =
Samples Needed @ Xs =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xdop =
Xp =

Large flaw validation failure. Need 16 more large flaws.

Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

CASE 19 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

File Name = A60010D.XLS
Data Set Name = A60010D(SITE CODE)
Date & Time = 6/4/15 6:04 PM
Xpod 90/95 Reached Anywhere? = REACHED
Classwidth @ 90/95 Xpod = 0.0240 inch
Classlength @ 90/95 Xpod = 0.1280 inch
Lower Confidence Bound @ 95% = 0.9050 inch
Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
POD @ Xpod = 1.0000

Survey/Optimum Xpoh = 0.1040 @ 0.001 Inch
False Call Rate =
Sampling @ 95% =
Largest Classlength, XL = 0.812 inch
Opt. POD classlength, Xpodopt = 0.127 inch
Xm is Near Verification Point =
Clarified POD classlength, Xpodopt = 0.127 inch
New Largest Classlength, 2XL =
Best LCL =
Cl, Classlength =
Sample Needed @ Xpoh =
Samples Needed @ Xpoh =
New Smaller Classlength, Xss =
POH Classlength, Xpoh =
Samples Needed @ Xs =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xdop =
Xp =

Large flaw validation failure. Need 16 more large flaws.

Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

CASE 19 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

---

**Directed DOE Options**

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**TABLE C**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

---

*Although Xpod appears to have been reached at a point, there are misses at larger class lengths, this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 18: 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the P0H function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited Misses, and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no Misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
**Detection Probability** (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

**Large flaw validation failure. Need 16 more large flaws.**

Any highlighted Misses are RED and shown in Column A of this data sheet.

**MLE Divergence Warning:** Initial results listed.

**Warning:** No false call analysis.

### File Name 
A6001F.XLS

### Data Set Name 
A6001F(SITE CODE)

### Date & Time 
6/4/15 6:06 PM

### Xpod 90/95 Reached Anywhere? 
REACHED

### Classwidth @ 90/95 Xpod 
0.0230 inch

### Lower Confidence Bound @ 95% 
0.090 inch

### Hit/Miss 
0.9050

### POD @ Xpod 
0.000

### Lower Confidence Limit, LCL

<table>
<thead>
<tr>
<th>Class Length, inch</th>
<th>Prob. of Hit (POH),</th>
<th>95% LCL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>1.0000</td>
<td>0.000</td>
</tr>
<tr>
<td>0.010</td>
<td>0.9990</td>
<td>0.000</td>
</tr>
<tr>
<td>0.020</td>
<td>0.9980</td>
<td>0.000</td>
</tr>
<tr>
<td>0.030</td>
<td>0.9960</td>
<td>0.000</td>
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<td>0.040</td>
<td>0.9940</td>
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</tr>
<tr>
<td>0.050</td>
<td>0.9920</td>
<td>0.000</td>
</tr>
<tr>
<td>0.060</td>
<td>0.9900</td>
<td>0.000</td>
</tr>
<tr>
<td>0.070</td>
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<td>0.9840</td>
<td>0.000</td>
</tr>
<tr>
<td>0.100</td>
<td>0.9820</td>
<td>0.000</td>
</tr>
</tbody>
</table>

### Large flaw validation failure. Need 16 more large flaws.**

Any highlighted Misses are RED and shown in Column A of this data sheet.

**MLE Divergence Warning:** Initial results listed.

**Warning:** No false call analysis.

CASE 1*: 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

**Survey/Optimum Xpoh:**

<table>
<thead>
<tr>
<th>NTIAC 90% POD</th>
<th>Sampled @</th>
<th>Inch</th>
</tr>
</thead>
</table>
| 0.400        | 0.000     | 0.065

<table>
<thead>
<tr>
<th>NTIAC 90/95 POD</th>
<th>Sampled @</th>
<th>Inch</th>
</tr>
</thead>
</table>
| 0.400           | 0.000     | 0.065

**False Call Rate:**

| Largest Classlength, XL | 0.812 inch |
| Classlength Mid-point, Xm | 0.372 inch |
| Smallest Classlength, Xs | 0.090 inch |
| New Smaller Classlength, Xss | 0.120 inch |
| Best LCL Classlength, Xlcl | 0.000 inch |
| Samples Needed @ Xlcl | 0.0230 inch |
| Opt. POD classlength, Xpopt | 0.000 inch |
| Samples Needed @ Xpopt | 0.0230 inch |

Xp = 0.000 inch
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**TABLE C**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

Additional Samples

Directed DOE Options

File Name = A46001G.XLS
Data Set Name = A46001G(SITE CODE)

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.812</td>
</tr>
<tr>
<td>Xm</td>
<td>0.276</td>
</tr>
<tr>
<td>Xs</td>
<td>0.276</td>
</tr>
<tr>
<td>Xss</td>
<td>0.276</td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpod</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm** = Xpodopt

0.00 5.00 10.00 15.00 20.00 25.00 30.00 35.00

Number of Additional Samples Needed

<table>
<thead>
<tr>
<th>Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td></td>
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<tr>
<td>0.05</td>
<td></td>
</tr>
<tr>
<td>0.10</td>
<td></td>
</tr>
<tr>
<td>0.15</td>
<td></td>
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<td>0.20</td>
<td></td>
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<td>0.25</td>
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</tr>
<tr>
<td>0.90</td>
<td></td>
</tr>
</tbody>
</table>

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 16 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

### Table

<table>
<thead>
<tr>
<th>File Name</th>
<th>A6001H.XLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Set Name</td>
<td>A6001H(SITE CODE)</td>
</tr>
<tr>
<td>Date &amp; Time</td>
<td>6/4/15 6:11 PM</td>
</tr>
<tr>
<td>Xpod 90/95 Reached Anywhere?</td>
<td>REACHED</td>
</tr>
<tr>
<td>Classwidth @ 90/95 Xpod</td>
<td>inch</td>
</tr>
<tr>
<td>Lower Confidence Bound @ Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>Classwidth @ Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>Classlength @ Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>User Provided a 90/95 POD</td>
<td>inch</td>
</tr>
<tr>
<td>User's Maximum Allowed Classlength</td>
<td>inch</td>
</tr>
<tr>
<td>Inspector Classwidth @ Xp</td>
<td>inch</td>
</tr>
<tr>
<td>POD @ Xp</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

### Graph

- **Class Length, inch** vs **Probability of Hit (POH)/Lower Confidence Bound @ 95%**
- **Case 1**: 90/95 Xpod is reached, Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.
- **Survey/Optimum Xpoh**: 0.000 Inch samples
- **False Call Rate with UCL @ 95%**: 0.000
- **NTIAC 90% POD**: 0.903 @ 0.105 inch
- **NTIAC 90/95 POD**: 0.902 @ 0.120 inch
- **MLE Divergence Warning**: Initial results listed.
- **Warning**: No false call analysis.

### Calculations

- **Largest Classlength, XL**: 0.812 inch
- **Samples Needed @ XL**: 0.372 inch
- **Smallest Classlength, Xs**: 0.105 inch
- **Samples Needed @ Xs**: 0.120 inch
- **New Smaller Classlength, Xss**: 0.227 inch
- **Best LCL Classlength, Xlcl**: 0.227 inch
- **Samples Needed @ Xlcl**: 0.000 inch
- **POH Classlength, Xpoh**: 0.227 inch
- **Samples Needed @ Xpoh**: 0.000 inch
- **New Largest Classlength, 2XL**: 0.000 inch
- **Xm is Near Verification Point**: 0.000 inch
- **Opt. POD classlength, Xpodopt**: 0.227 inch
- **Samples Needed @ Xpodopt**: 0.000 inch
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 16 more large flaws.

Note: Xpodopt is within one class width of Xpod.

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

File Name = A6001.XLS
Data Set Name = A6001(SITE CODE)
Date & Time = 6/4/15 6:12 PM

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.0250 inch
Classlength @ 90/95 Xpod = 0.1310 inch
Lower Confidence Bound = 0.9001 inch
Best LCL = 0.9001 inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ =
User's Maximum Allowed Classlength = inch
POD @ Xpod = 1.0000

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Survey/Optimum Xpoh = 0.1070 inch
False Call Rate = with UCL @ 95% =
Largest Classlength, XL = 0.812 inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 0.372 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
Opt. POD classlength, Xpodopt = 0.131 inch
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt = 29

Large flaw validation failure. Need 16 more large flaws.

Note: Xpodopt is within one class width of Xpod.

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

File Name = A6001.XLS
Data Set Name = A6001(SITE CODE)
Date & Time = 6/4/15 6:12 PM

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.0250 inch
Classlength @ 90/95 Xpod = 0.1310 inch
Lower Confidence Bound = 0.9001 inch
Best LCL = 0.9001 inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ =
User's Maximum Allowed Classlength = inch
POD @ Xpod = 1.0000
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
CASE 1: 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 15 more large flaws.

Note: Xpodopt is within one class width of Xpod.

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

File Name = A6002A.XLS
Data Set Name = A6002A(SITE CODE)
Date & Time = 6/4/15 6:14 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0140 inch
Classlength @ 90/95 Xpod = 0.0940 inch
Lower Confidence Bound @ 95% = 0.9001 inch
Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD =
User’s Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod =

Largest Classlength, XL = 0.0940 inch
Samples Needed @ XL = 26 Samples

NTIAC 90% POD = 0.936 @ 0.075 inch
NTIAC 90/95 POD = 0.923 @ 0.085 inch
False Call Rate = with UCL @ 95% =
Largest Classlength, XL = 0.812 inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 0.276 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.093 inch
Samples Needed @Xpodopt = 1
Xp = 0.0940 inch

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Warning: No false call analysis.

CASE 2 - 90/95 Xpod is reached at a class length. Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths, this indicates that the POM function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.*

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Need 16 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

CASE 1*: 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

Survey/Optimum Xpoh =

NTIAC 90% POD =
NTIAC 90/95 POD =

False Call Rate =

with UCL @ 95% =

Largest Classlength, XL =
Samples Needed @ XL =
Classlength Mid-point, Xm =
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL Classlength, Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =

Xp =

Large flaw validation failure. Need 16 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

TABLE A*
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

TABLE B*
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**Alternate Xm = Xpodopt =
CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Warning: No false call analysis.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Need 17 more large flaws.

Note: Xpodopt is within one class width of Xpod.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller, to within the class width indicated in the companion chart.**
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**Directed DOE Options**

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**Xpod, Class Length**

**Additional Samples**

---

-file name = A6002E.xls
-data set name = A6002E(SITE CODE)

---

**No Misses Observed**
**At Least One Miss Occurred**

**XL**
**Xm**
**Xs**
**Xss**
**Xlcl**
**Xpoh**
**2XL**
**Xpod**
**Xpodopt**

---

**0.812**
**0.372**

---

**TABLE C**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.
Large flaw validation failure. Need 18 more large flaws.

Note: Xpodopt is within one class width of Xpod.

Warning: No false call analysis.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

- Probability of Hit (POH)
- Lower Confidence Limit, LCL

Class Length,
Detection Probability  (Utilization of DOEPOD results  requires approval of Engineering Authority)

<table>
<thead>
<tr>
<th>Class Range</th>
<th>Probability of Hit (POH)</th>
<th>Lower Confidence Bound @ 95%</th>
<th>Xp, 90/95 POD</th>
<th>MLE(Mean) POD</th>
<th>MLE(95%) LCL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000 - 0.100</td>
<td>0.0450</td>
<td>0.1860</td>
<td>0.9001</td>
<td>0.812</td>
<td>0.372</td>
</tr>
<tr>
<td>0.100 - 0.200</td>
<td>0.110</td>
<td>0.125</td>
<td>0.906</td>
<td>0.184</td>
<td>0.1860</td>
</tr>
<tr>
<td>0.200 - 0.300</td>
<td>0.1420</td>
<td>0.001</td>
<td>0.903</td>
<td>0.1420</td>
<td>0.001</td>
</tr>
<tr>
<td>0.300 - 0.400</td>
<td>0.000</td>
<td>0.100</td>
<td>0.906</td>
<td>0.000</td>
<td>0.100</td>
</tr>
<tr>
<td>0.400 - 0.500</td>
<td>0.000</td>
<td>0.100</td>
<td>0.906</td>
<td>0.000</td>
<td>0.100</td>
</tr>
<tr>
<td>0.500 - 0.600</td>
<td>0.000</td>
<td>0.100</td>
<td>0.906</td>
<td>0.000</td>
<td>0.100</td>
</tr>
<tr>
<td>0.600 - 0.700</td>
<td>0.000</td>
<td>0.100</td>
<td>0.906</td>
<td>0.000</td>
<td>0.100</td>
</tr>
<tr>
<td>0.700 - 0.800</td>
<td>0.000</td>
<td>0.100</td>
<td>0.906</td>
<td>0.000</td>
<td>0.100</td>
</tr>
<tr>
<td>0.800 - 0.900</td>
<td>0.000</td>
<td>0.100</td>
<td>0.906</td>
<td>0.000</td>
<td>0.100</td>
</tr>
<tr>
<td>0.900 - 1.000</td>
<td>0.000</td>
<td>0.100</td>
<td>0.906</td>
<td>0.000</td>
<td>0.100</td>
</tr>
</tbody>
</table>

**False Call Rate**
- with UCL @ 95% = 0.1420
- with UCL @ 95% = 0.001

**Summary**

- Survey/Optimum Xpoh = 0.1420
- Samples Needed = 26
- NTIAC 90% POD = 0.903 @ 0.110
- NTIAC 90/95 POD = 0.906 @ 0.125
- New Smaller Classlength, Xss = 0.184
- Opt. POD classlength, Xpodopt = 0.184
- New Largest Classlength, XsL = 0.184
- Xp = 0.1860

**Analysis File Name**: DOEPOD_v.1.2.01_PC.06262010.WIN7.exe

**Date & Time**: 6/6/15 6:21 PM

**Xpod 90/95 Reached Anywhere?**
- Reached: 0.0450, 0.1860, 0.900
- Xp = 0.812, 0.372

**User Provided a 90/95 POD @**
- User's Maximum Allowed Classlength = inch

**Classlength @ Best LCL**
- Classlength = inch

**Lower Confidence Bound**
- Lower Confidence Bound = inch

**Best LCL**
- Best LCL = inch

**BestILC**
- BestILC Classlength, Xcl = inch
- Samples Needed @ Xcl = inch
- POH Classlength, Xpoh = inch
- Samples Needed @ Xpoh = inch
- Opt. POD classlength, Xpodopt = inch
- Samples Needed @ Xpodopt = 29
- New Largest Classlength, XsL = inch
- Xm is Near Verification Point = inch

**Warning**: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths, this indicates that the POM function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpoh = 0.000 Inch  Samples =

| NTIAC 90% POD | @ | 0.300 Inch |
| NTIAC 90/95 POD | @ | 0.265 Inch |

False Call Rate = with UCL @ 95% =

- Largest Classlength, XL = inch
- Samples Needed @ XL =
- Classlength Mid-point, Xm = inch
- Samples Needed @ Xm =
- Smallest Classlength, Xs = inch
- Samples Needed @ Xs =
- New Smaller Classlength, Xss = inch
- Best LCL Classlength, Xlcl = inch
- Samples Needed @ Xlcl =
- POH Classlength, Xpoh = inch
- Samples Needed @ Xpoh =
- New Largest Classlength, 2XL = inch
- Xm is Near Verification Point =
- Opt. POD classlength, Xpodopt = inch
- Samples Needed @ Xpodopt =
- Xp = inch

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths that indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

### Directed DOE Options

**Table A**

<table>
<thead>
<tr>
<th>XL</th>
<th>Xm</th>
<th>Xs</th>
<th>Xss</th>
<th>XLd</th>
<th>Xpoh</th>
<th>2XL</th>
<th><strong>Alternate Xm</strong></th>
<th>Xpodopt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table B**

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.624</td>
<td>29</td>
</tr>
</tbody>
</table>

**A6002F.XLS**

**A6002F(SITE CODE)**
Note: Xpodopt is within one class width of Xpod.

CASE 1: 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.**

**Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.**

**Alternate Xm =**

**Xpodopt =**

**TABLE A**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.812</td>
</tr>
<tr>
<td>Xm</td>
<td>0.372</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpod</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE B**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod</td>
<td>29</td>
</tr>
</tbody>
</table>

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod</td>
<td>29</td>
</tr>
</tbody>
</table>

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked. The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.**

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
## Detection Probability

(Use of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 19 more large flaws.

Any highlighted Misses are RED and shown in Column A of this data sheet.

**MLE Divergence Warning:** Initial results listed.

**Warning:** No false call analysis.

### CASE 1

- **90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.**

### Analysis:

- **Survey/Optimum Xpoh:** 0.1760 - 0.001 Inch
- **False Call Rate:** with UCL @ 95% = 0.001

### Results:

- **File Name:** A6002H.XLS
- **Data Set Name:** A6002H(SITE CODE)
- **Date & Time:** 6/4/15 6:25 PM

### Parameters:

- **Xpod 90/95 Reached Anywhere?**
  - Yes

- **Classwidth @ 90/95 Xpod:** 0.812 Inch
  - Samples Needed: 27

- **Classlength @ 90/95 Xpod:** 0.120 Inch

- **Lower Confidence Bound:** 0.0910 Inch
  - Best LCL: 0.0901 Inch

- **Classwidth @ Best LCL:** 0.904 Inch
  - Classlength @ Best LCL: 0.135 Inch

- **User Provided a 90/95 POD @ Xp:** 0.9783

- **User's Maximum Allowed Classlength:** 0.9783

- **POD @ Xp:** 0.812 Inch

- **Inspector Classwidth @ Xp:** 0.372 Inch

- **Best POD Classlength, Xpodopt:** 0.2220 Inch
  - Samples Needed: 118

- **Opt. POD classlength, Xpodopt:** 0.2220 Inch

- **New Smaller Classlength, Xs:** 0.912 Inch
  - Samples Needed: 27

- **New Largest Classlength, 2XL:** 0.812 Inch
  - Xn is Near Verification Point: 0.812 Inch

- **Smallest Classlength, Xs:** 0.372 Inch
  - Samples Needed: 27

- **New Smaller Classlength, Xs:** 0.904 Inch
  - Samples Needed: 27

- **Best LCL Classlength, Xlcl:** 0.812 Inch
  - Samples Needed: 27

- **Samples Needed @ Xs:** 27

- **Samples Needed @ Xss:** 27

- **POH Classlength, Xpoh:** 0.001 Inch
  - Samples Needed: 27

- **XL is Near Verification Point:** 0.812 Inch
  - Opt. POD classlength, Xpodopt:** 0.2220 Inch

- **False Call Rate:** with UCL @ 95% = 0.001

### Notes:

- **False Call Rate:** 0.001

### Graph:

- **Graph:** Probability of Hit (POH) vs. Class Length, inch
  - **Y-axis:** Probability of Hit (POH)
  - **X-axis:** Class Length, inch
  - **Markers:**
    - Probability of Hit (POH) in Class Range
    - Lower Confidence Bound @ 95%
    - Hit/Miss
    - Xp, 90/95 POD
    - MLE(Mean) POD
    - MLE(95%) LCL

---

118
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the PoH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibits Misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibits no Misses and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Warning: No false call analysis.

**CASE 1** - 90/95 Xp is reached, Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xp and XL when causes of highlighted Misses are understood and corrected.

### Table

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xp 90/95 Reached Anywhere?</td>
<td>REACHED</td>
</tr>
<tr>
<td>Class width @ 90/95 Xp</td>
<td>0.025 inch</td>
</tr>
<tr>
<td>Lower Confidence Bound</td>
<td>0.905 inch</td>
</tr>
<tr>
<td>Best LCL</td>
<td>0.905 inch</td>
</tr>
<tr>
<td>Class width @ Best LCL</td>
<td>0.130 inch</td>
</tr>
<tr>
<td>Class length @ Best LCL</td>
<td>0.120 inch</td>
</tr>
<tr>
<td>User Provided a 90/95 POD</td>
<td>0.904 inch</td>
</tr>
<tr>
<td>User's Maximum Allowed Class length</td>
<td>0.105 inch</td>
</tr>
<tr>
<td>Inspector Class width @ Xp</td>
<td>0.872 inch</td>
</tr>
<tr>
<td>POD @ Xp</td>
<td>0.000 inch</td>
</tr>
</tbody>
</table>

### Analysis

- **File Name**: A6002HR.XLS
- **Data Set Name**: A6002HR(SITE CODE)
- **Date & Time**: 6/4/15 6:27 PM
- **Warning**: No false call analysis.

### Graph

- **Class Length, inch**
  - Probability of Hit (POH)
  - Lower Confidence Bound @ 95%
  - Hit/Miss
  - Xp 90/95 POD
  - MLE(Mean) POD
  - MLE(95%) LCL

### Statistics

- **NTIAC 90% POD**: 0.909 @ 0.105 inch
- **NTIAC 90/95 POD**: 0.904 @ 0.120 inch
- **False Call Rate**: with UCL @ 95%
  - Largest Class length, XL: 0.812 inch
  - Samples Needed @ XL: 120
  - Class length Mid-point, Xm: 0.372 inch
  - Samples Needed @ Xm: 120
  - Smallest Class length, Xs: inch
  - Samples Needed @ Xs: inch
  - New Smaller Class length, Xss: inch
  - Best LCL Class length, Xlcl: inch
  - Samples Needed @ Xlcl: inch
  - Opt. POD class length, Xpodopt: inch
  - New Largest Class length, 2XL: inch
  - Xp is Near Verification Point: inch
  - Samples Needed @ Xpoh: inch

### Additional Notes

- Large flaw validation failure. Need 16 more large flaws.
- Any highlighted Misses are RED and shown in Column A of this data sheet.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

*TABLE A*
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

*TABLE B*
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

**Warning:** No false call analysis.

**CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey/Optimum Xpoh</td>
<td>0.2550</td>
<td>inch</td>
</tr>
<tr>
<td>False Call Rate</td>
<td>0.0145</td>
<td>inch</td>
</tr>
<tr>
<td>with UCL @ 95%</td>
<td></td>
<td>inch</td>
</tr>
<tr>
<td>Largest Classlength</td>
<td>0.812</td>
<td>inch</td>
</tr>
<tr>
<td>Samples Needed @ XL</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Classlength Mid-point</td>
<td>0.1270</td>
<td>inch</td>
</tr>
<tr>
<td>Samples Needed @ Xm</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Smallest Classlength</td>
<td></td>
<td>inch</td>
</tr>
<tr>
<td>Samples Needed @ Xs</td>
<td></td>
<td>inch</td>
</tr>
<tr>
<td>New Smaller Classlength</td>
<td></td>
<td>inch</td>
</tr>
<tr>
<td>Best LCL</td>
<td>0.0200</td>
<td>inch</td>
</tr>
<tr>
<td>Samples Needed @ Xl</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>POH Classlength</td>
<td></td>
<td>inch</td>
</tr>
<tr>
<td>Samples Needed @ Xpoh</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>Opt. POD classlength</td>
<td></td>
<td>inch</td>
</tr>
<tr>
<td>New Largest Classlength</td>
<td></td>
<td>inch</td>
</tr>
<tr>
<td>Xn is Near Verification Point</td>
<td></td>
<td>inch</td>
</tr>
<tr>
<td>Opt. POD classlength</td>
<td></td>
<td>inch</td>
</tr>
<tr>
<td>Samples Needed @ Xpod</td>
<td></td>
<td>inch</td>
</tr>
</tbody>
</table>

**DATE & TIME:** 6/4/15 6:28 PM

**Xpod 90/95 Reached Anywhere?** NOT REACHED

<table>
<thead>
<tr>
<th>Class Length, inch</th>
<th>Samples Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xp</td>
<td>24</td>
</tr>
<tr>
<td>XL</td>
<td>27</td>
</tr>
<tr>
<td>Xpoh</td>
<td>28</td>
</tr>
</tbody>
</table>

**File Name:** A6002J.XLS

**Data Set Name:** A6002J(SITE CODE)

**Date & Time:** 6/4/15 6:28 PM

**Xpod 90/95 Reached Anywhere?** NOT REACHED

**Class Length @ 90/95 Xpod:** Xp

**Lower Confidence Bound @ 95%:** Classwidth @ 90/95 Xpod

**Best LCL:** Classlength @ Best LCL

**User Provided a 90/95 POD @:** POD @ Xp

**User's Maximum Allowed Classlength:** Classlength @ 90/95 Xpod

**Detect Probability (Utilization of DOEPOD results requires approval of Engineering Authority):**
Although Xpod appears to have been reached at a point, there are misses at larger class lengths, indicating that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 15 more large flaws.

Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

CASE 1 - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

Survey/Optimum Xpoh = 0.0000 inch @ 0.085 inch
NTIAC 90% POD = 0.936 inch @ 0.085 inch
NTIAC 90/95 POD = 0.930 inch @ 0.095 inch

False Call Rate = with UCL @ 95% =

Largest Classlength , XL = 0.812 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.291 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =

Xp = 0.1054 inch

File Name = A6003A.XLS
Data Set Name = A6003A(SITE CODE)

Date & Time = 6/4/15 6:30 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod =
Lower Confidence Bound =
Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod = 1.0000

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Need 16 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

MLE Divergence Warning: initial results listed.

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

FILE NAME = A6003B.XLS
DATA SET NAME = A6003B(SITE CODE)
DATE & TIME = 6/4/15 6:31 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0190 inch
Classlength @ 90/95 Xpod = 0.1141 inch
Lower Confidence Bound @ 95% = 0.9050 inch
Best LCL @ 95% =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod = 1.0000

Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Larger Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =

New Smaller Classlength, Xss =
Smallest Classlength, Xs =
Samples Needed @ Xs =

Smallest Classlength, Xs =
Samples Needed @ Xs =

Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
Large flaw validation failure. Need 16 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

MLE Divergence Warning: initial results listed.

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

FILE NAME = A6003B.XLS
DATA SET NAME = A6003B(SITE CODE)
DATE & TIME = 6/4/15 6:31 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0190 inch
Classlength @ 90/95 Xpod = 0.1141 inch
Lower Confidence Bound @ 95% = 0.9050 inch
Best LCL @ 95% =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod = 1.0000

Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Larger Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =

New Smaller Classlength, Xss =
Smallest Classlength, Xs =
Samples Needed @ Xs =

Smallest Classlength, Xs =
Samples Needed @ Xs =

Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
Large flaw validation failure. Need 16 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

MLE Divergence Warning: initial results listed.

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

FILE NAME = A6003B.XLS
DATA SET NAME = A6003B(SITE CODE)
DATE & TIME = 6/4/15 6:31 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0190 inch
Classlength @ 90/95 Xpod = 0.1141 inch
Lower Confidence Bound @ 95% = 0.9050 inch
Best LCL @ 95% =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod = 1.0000

Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Larger Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =

New Smaller Classlength, Xss =
Smallest Classlength, Xs =
Samples Needed @ Xs =

Smallest Classlength, Xs =
Samples Needed @ Xs =

Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
Large flaw validation failure. Need 16 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

MLE Divergence Warning: initial results listed.

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

FILE NAME = A6003B.XLS
DATA SET NAME = A6003B(SITE CODE)
DATE & TIME = 6/4/15 6:31 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0190 inch
Classlength @ 90/95 Xpod = 0.1141 inch
Lower Confidence Bound @ 95% = 0.9050 inch
Best LCL @ 95% =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod = 1.0000

Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Larger Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =

New Smaller Classlength, Xss =
Smallest Classlength, Xs =
Samples Needed @ Xs =

Smallest Classlength, Xs =
Samples Needed @ Xs =

Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
Large flaw validation failure. Need 16 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

MLE Divergence Warning: initial results listed.

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POM function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POM function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Need 15 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.812 inch
Classlength @ 90/95 Xpod = 0.276 inch
Lower Confidence Bound = 0.0150 inch
Best LCL = 0.9001 inch
Classwidth @ Best LCL = 0.080 inch
classlength @ Best LCL = 0.065 inch
User Provided a 90/95 POD @ = 1.0000
User’s Maximum Allowed Classlength = 0.900 inch
Inspector Classwidth @ Xp = 0.905 inch
POD @ Xpod = 0.900

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.

Survey/Optimum Xpoh = 0.000 inch
False Call Rate = with UCL @ 95% = 0.000

Large flaw validation failure. Need 15 more large flaws.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm** requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 15 more large flaws.

Warning: No false call analysis.

Note: Xpod is within one class width of Xpod.

CASE 1: 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

File Name = A6003D.XLS
Data Set Name = A6003D(SITE CODE)
Date & Time = 6/4/15 6:34 PM
Xpod 90/95 Reached Anywhere? Yes
Class width @ 90/95 Xpod = 0.103 inch
Lower Confidence Bound @ 95% = 0.090 inch
Best LCL = 0.090 inch
Class width @ Best LCL = 0.105 inch
Class length @ Best LCL = 0.9001 inch
User Provided a 90/95 POD @ = 0.934 inch
POD @ Xpod = 0.932 inch
Xpodopt = 0.0844 inch
POH @ Xpod = 0.001 inch
S = 27

Warning: No false call analysis.

Large flaw validation failure. Need 15 more large flaws.

Note: Xpod is within one class width of Xpod.

CASE 1: 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited Misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no Misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

** Directed DOE Options**

<table>
<thead>
<tr>
<th>Table C</th>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.812</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td>0.291</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm =**

Xpodopt = 0.103

---

**TABLE A**

Selected class lengths with existing Misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**

Selected class lengths with no Misses. Additional samples at these class lengths will achieve the Xpod listed.

---

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths which indicates that the POH function may be oscillatory. This needs to be checked. The class lengths listed in Table A exhibited Misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown. The class lengths listed in Table B exhibited no Misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.**

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 16 more large flaws.

Any highlighted Misses are RED and shown in Column A of this data sheet.

MLE Divergence Warning: initial results listed.

Warning: No false call analysis.

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.

User Provided a 90/95 POD @ Xp

POD @ Xpod = 0.9783

Classlength @ Best LCL = 0.9001 inch

Best LCL = 0.9001 inch

User's Maximum Allowed Classlength = 0.1283 inch

Classwidth @ Best LCL = 0.0360 inch

Best LCL = 0.0360 inch

NTIAC 90% POD = 0.939 @ 0.105 inch

NTIAC 90/95 POD = 0.937 @ 0.115 inch

False Call Rate = 0.000 with UCL @ 95% =

Largest Classlength, XL = 0.812 inch

Samples Needed @ XL = 0.322

Classlength Mid-point, Xm = 0.322 inch

Samples Needed @ Xm = 0.1453

Smallest Classlength, Xs = 0.105 inch

Samples Needed @ Xs = 0.105

New Smaller Classlength, Xss = 0.115 inch

Best LCL Classlength, Xlcl = 0.115

Samples Needed @ Xlcl = 0.115

POD Classlength, Xpoh = 0.105

Samples Needed @ Xpoh = 0.105

New Largest Classlength, 2XL = 0.1453 inch

Xm is Near Verification Point =

Opt. POD classlength, Xpodopt = 0.1453 inch

Xp = 0.812 inch

Samples Needed @ Xp = 0.1453

0.000 0.200 0.400 0.600 0.800 1.000

Class Length, inch

0.000 0.200 0.400 0.600 0.800 1.000

Probability of Hit (POH) in Class Range

Lower Confidence Bound @ 95%

Hit/Miss

Xp, 90/95 POD

MLE(Mean) POD

MLE(95%) LCL

A6003E.XLS

Date & Time = 6/4/15 6:35 PM

Xpod 90/95 Reached Anywhere?

Classwidth @ 90/95 Xpod = 0.1283 inch

Lower Confidence Bound = 0.0360 inch

Classlength @ 90/95 Xpod = 0.9001 inch

Best LCL = 0.9001 inch

Classwidth @ Best LCL = 0.0360 inch

Classlength @ Best LCL = 0.9001 inch

User Provided a 90/95 POD @ Xp

POD @ Xpod = 0.9783
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart."
Large flaw validation failure. Need 15 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths; this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Large flaw validation failure. Need 19 more large flaws.

**Warning: No false call analysis.**

**CASE 2 - 90/95 Xpod is reached at a class length. Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.**

### Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

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<th>Probability of Hit (POH), Lower Confidence Limit, LCL</th>
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### Survey/Optimum Xpoh
- NTIAC 90% POD = 0.908 @ 0.190 inch
- NTIAC 90/95 POD = 0.902 @ 0.225 inch

### False Call Rate with UCL @ 95%
- Largest Classlength, XL = 0.812 inch
- Samples Needed @ XL = 26
- Classlength Mid-point, Xm = 0.511 inch
- Samples Needed @ Xm = 29
- Smallest Classlength, Xs = inch
- Samples Needed @ Xs = inch
- New Smaller Classlength, Xss = inch
- BestLCL Classlength, Xcl = inch
- Samples Needed @ Xcl = inch
- POD Classlength, Xpoh = inch
- Samples Needed @ Xpoh = inch
- Opt. POD classlength, Xpodopt = inch
- New Largest Classlength, 2XL = inch
- Xm is Near Verification Point = inch
- Opt. POD classlength, Xpodopt = inch
- Samples Needed @ Xpodopt = inch

### Analysis File name: DOEPOD v.1.2.01 PC-OBOA2010 Win7.xlsm

**File Name:** A6003G.XLS
**Data Set Name:** A6003G(SITE CODE)
**Date & Time:** 6/4/15 6:38 PM
**Xpod 90/95 Reached Anywhere?** REACHED
**Classwidth @ 90/95 Xpod:** 0.030 inch
**Lower Confidence Bound:** 0.1200 inch
**Best LCL:** 0.9001 inch
**Classwidth @ Best LCL:** inch
**Classlength @ Best LCL:** inch
**User Provided a 90/95 POD:** @
**User's Maximum Allowed Classlength:** inch
**POD @ Xpod:** 1.0000
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths; this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Warning: No false call analysis.

Large flaw validation failure. Need 16 more large flaws.

CASE 2 - 90/95 Xpod is reached at a class length. Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.

Figure: Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

File Name = A6003H.XLS
Data Set Name = A6003H(SITE CODE)
Date & Time = 6/4/15 6:39 PM
Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = inch
Best LCL = inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xp = 1.0000

Survey/Optimum Xpoh = 0.812 inch @ 0.140 inch
False Call Rate with UCL @ 95% = 0.000 inch

Detection Probability (POH) in Class Range
Lower Confidence Bound @ 95%
Hit/Miss
Xp, 90/95 POD
MLE(Mean) POD
MLE(95%) LCL

Large flaw validation failure. Need 16 more large flaws.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 15 more large flaws.

Note: Xpodopt is within one class width of Xpod.

Warning: No false call analysis.

MLE Divergence Warning: Initial results listed.

CASE I#: 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = 0.812 inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 0.291 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
Opt. POD classlength, Xpodopt = 0.098 inch
New Largetst Classlength, XL =
Xm is Near Verification Point =
Opt, POD classlength, Xpodopt = 0.098 inch
Samples Needed @ Xpodopt = 29
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart***

---

**Directed DOE Options**

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<th>File Name = A6003J.XLS</th>
<th>Data Set Name = A6003J(SITE CODE)</th>
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</thead>
</table>

| TABLE C |
|----------------|------------------|
| Class Length | Additional Samples |
| XL = 0.812   |                      |
| Xm = 0.291   |                      |
| Xs = 0.098   | 29                 |
| Xss = 0.00   |                   |
| Xlcl = 2XL   |                   |
| Xpoh = 0.00  |                   |
| **Alternate Xm =** Xpodopt = 0.098 |

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

Xpod, CLASS Length, No. Need, Xpod, CLASS Length, No. Need

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart***
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 15 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

MLE Divergence Warning: Initial results listed.

Warning: No false call analysis.

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm
requirements. Xp may VALIDATE between Xpod and XL when
causes of highlighted Misses are understood and corrected.

Sample/Optimum Xpoh = 0.000 inch Samples

NTIAC 90% POD = 0.907 @ 0.080 inch
NTIAC 90/95 POD = 0.908 @ 0.095 inch

False Call Rate = 0.000 with UCL @ 95% =

Largest Classlength , XL = 0.812 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.276 inch
Samples Needed @ Xm =
Smallest Classlength , Xs =
Samples Needed @ Xs =
New Smaller Classlength , Xss =
Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =

Xp = 0.0940 inch
**Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.**

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Large flaw validation failure. Need 16 more large flaws.

Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart***

**Directed DOE Options**

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**Alternate Xm = 0.107 **

**Xpodopt =** 3

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

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**TABLE C**

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**FILE NAME = A6004B.XLS**

**DATA SET NAME = A6004B(SITE CODE)**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 15 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths; this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
**Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)**

**Warning: No false call analysis.**

CASE 5 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and Xpoh.

Survey/Optimum Xpoh = 0.1760 - 0.001 \( \text{inch} \) 27 Samples

- NTIAC 90% POD = 0.901 \( @ \) 0.140 \( \text{inch} \)
- NTIAC 90/95 POD = 0.907 \( @ \) 0.165 \( \text{inch} \)

**False Call Rate** = with UCL @ 95% =

- Largest Classlength, XL = 0.812 \( \text{inch} \)
- Samples Needed @ XL = 27
- Classlength Mid-point, Xm = \( \text{inch} \)
- Samples Needed @ Xm = \( \text{inch} \)
- Smallest Classlength, Xs = \( \text{inch} \)
- Samples Needed @ Xs = \( \text{inch} \)
- New Smaller Classlength, Xss = \( \text{inch} \)
- BestLCL Classlength, Xlcl = \( \text{inch} \)
- Samples Needed @ Xlcl = \( \text{inch} \)
- Samples Needed @ Xpoh = 0.176 \( @ \) 27
- New Largest Classlength, 2XL = \( \text{inch} \)
- Xn is Near Verification Point = \( \text{inch} \)
- Opt. POD classlength, Xpodopt = \( \text{inch} \)
- Samples Needed @ Xpodopt = \( \text{inch} \)
- Xp = \( \text{inch} \)
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 5 - This is a survey data set. 90/95 Xpod is not reached anywhere. Recommend satisfying XL and Survey Xpoh (if listed)

File Name = A6004CR.XLS
Data Set Name = A6004CR(SITE CODE)

Date & Time = 6/4/15 6:48 PM
Xpod 90/95 Reached Anywhere? = NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.0010 inch
Best LCL = inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xp =

Best LCL Classlength, Xlcl =
New Smaller Classlength, Xss =
POH Classlength, Xpoh =
New Largest Classlength, 2XL =

Survey/Optimum Xpoh = 0.1760 -0.001 Inch
\[ \text{False Call Rate} = \] with UCL @ 95% =
Largest Classlength , XL = 0.812 inch
Samples Needed @ XL = 27
Classlength Mid-point , Xm = inch
Samples Needed @ Xm = inch
Smallest Classlength, Xs = inch
Samples Needed @ Xs = inch
New Smaller Classlength, Xss = inch
Best LCL Classlength, Xlcl = inch
Samples Needed @ Xlcl = inch
POH Classlength, Xpoh = 0.176 inch
Samples Needed @ Xpoh = 27
Opt. POD classlength, Xpodopt = inch
New Largest Classlength, 2XL = inch
Xm is Near Verification Point =

Warning: No false call analysis.

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Alternative Xm = Xpodopt**

TABLE A*
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpodopt</th>
<th>Xpod, Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.812</td>
<td>0.176</td>
<td>27</td>
</tr>
</tbody>
</table>

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpodopt</th>
<th>Xpod, Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.176</td>
<td>27</td>
<td></td>
</tr>
</tbody>
</table>

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Need 15 more large flaws.

Note: Xpodopt is within one class width of Xpod.
Warning: No false call analysis.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Survey/Optimum Xpoh = 0.0870 - 0.001 Inch 24 Samples
False Call Rate = with UCL @ 95% =

Largest Classlength , XL = 0.812 Inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.291 Inch
Samples Needed @ Xm =
Smallest Classlength , Xs =
Samples Needed @ Xs =
New Smaller Classlength , Xss =
Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.104 Inch
Samples Needed @ Xpodopt = 3
Xp = 0.1050 Inch
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
**Warning:** No false call analysis.

**Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)**

Large flaw validation failure. Need 16 more large flaws.

**Note:** Xpodopt is within one class width of Xpod.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

### File Name = A6004E.XLS
### Data Set Name = A6004E(SITE CODE)
### Date & Time = 6/4/15 6:50 PM
### Xpod 90/95 Reached Anywhere? = REACHED
### Classwidth @ 90/95 Xpod = 0.0250 inch
### Classlength @ 90/95 Xpod = 0.1310 inch
### Lower Confidence Bound = 0.9001 inch
### Best LCL =
### Classwidth @ Best LCL =
### Classlength @ Best LCL =
### User Provided a 90/95 POD =
### User's Maximum Allowed Classlength =
### Inspector Classwidth @ Xp =
### POD @ Xpod = 1.0000
### POD @ Xpod =

**Variable POD @ Xp**

<table>
<thead>
<tr>
<th>POD @ Xp</th>
<th>Xp</th>
<th>Xpoh</th>
<th>Xlcl</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.914 @ 0.110 inch</td>
<td>0.909 @ 0.125 inch</td>
<td>0.1070 -0.001 inch</td>
<td>0.125</td>
</tr>
</tbody>
</table>

**Largest Classlength, XL**

| XL | 0.812 inch |

**Survey/Optimum Xpoh**

<table>
<thead>
<tr>
<th>NTIAC 90% POD</th>
<th>NTIAC 90/95 POD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.914 @ 0.110 inch</td>
<td>0.909 @ 0.125 inch</td>
</tr>
</tbody>
</table>

**False Call Rate**

<table>
<thead>
<tr>
<th>False Call Rate with UCL @ 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Largest Classlength, XL = 0.812 inch</td>
</tr>
<tr>
<td>Samples Needed @ XL =</td>
</tr>
<tr>
<td>Classlength Mid-point, Xm = 0.372 inch</td>
</tr>
<tr>
<td>Samples Needed @ Xm =</td>
</tr>
<tr>
<td>Smallest Classlength, Xs =</td>
</tr>
<tr>
<td>Samples Needed @ Xs =</td>
</tr>
<tr>
<td>New Smaller Classlength, Xss =</td>
</tr>
<tr>
<td>BestLCL Classlength, Xlcl =</td>
</tr>
<tr>
<td>Samples Needed @ Xlcl =</td>
</tr>
<tr>
<td>POD Classlength, Xpoh =</td>
</tr>
<tr>
<td>Samples Needed @ Xpoh =</td>
</tr>
<tr>
<td>New Largest Classlength, 2XL =</td>
</tr>
<tr>
<td>Xn is Near Verification Point =</td>
</tr>
<tr>
<td>Opt. POD classlength, Xpodopt = 0.131 inch</td>
</tr>
<tr>
<td>Samples Needed @Xpodopt = 29</td>
</tr>
<tr>
<td>Xp = 0.125 inch</td>
</tr>
</tbody>
</table>

**Analysis File Name:** DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsmAnalysis

**Warning:** No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 15 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

CASE 1*: 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

Survey/Optimum Xpoh = 0.000 Inch Samples

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

Largest Classlength, XL = 0.812 Inch
Samples Needed @ XL = 0.291 Inch
Classlength Mid-point, Xm = 0.291 Inch
Samples Needed @ Xm = 0.926 Inch
Smallest Classlength, Xs = 0.075 Inch
Samples Needed @ Xs = 0.907 Inch
New Smaller Classlength, Xss = 0.065 Inch
Best LCL Classlength, Xlcl = 0.000 Inch
Samples Needed @ Xlcl = 0.000 Inch
POH Classlength, Xpoh = 0.000 Inch
Samples Needed @ Xpoh = 0.000 Inch
New Largest Classlength, 2XL = 0.105 Inch
Xm is Near Verification Point = False
Opt. POD classlength, Xpodopt = 0.018 Inch
Samples Needed @ Xpodopt = 0.105 Inch
Although Xpod appears to have been reached at a point, there are misses at larger class lengths; this indicates that the POh function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Large flaw validation failure. Need 15 more large flaws.

Note: Xpodopt is within one class width of Xpod.

Warning: No false call analysis.

**Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)**

- **Xp** = 0.812 inch
- **XL** = 0.105 inch
- **Xm** = 0.291 inch
- **Xs** = 0.080 inch
- **XL** = 0.105 inch
- **Xpoh** = 0.085 inch
- **2XL** = 0.105 inch

**MLE Divergence Warning:**

- Initial results listed.
- Warning: No false call analysis.

**False Call Rate** = 0.085 - 0.001 inch

**Survey/Optimum Xp**

- NTIAC 90% POD = 0.931 @ 0.070 inch
- NTIAC 90/95 POD = 0.936 @ 0.080 inch

**Largest Classlength, XL** = 0.812 inch

**Opt. POD classlength, Xpodopt**

- Samples Needed @ Xpodopt = 25
- Xp = 0.105 inch

**New Largest Classlength, 2XL**

- Samples Needed @ 2XL = 25

**User Provided a 90/95 POD @**

- User's Maximum Allowed Classlength = inch

**Optimum POD Classlength, Xpodopt**

- Xp = 0.105 inch

**Reaching Anywhere?**

- Classwidth @ 90/95 Xpod = inch
- Lower Confidence Bound = inch
- Best LCL = inch
- Classwidth @ Best LCL = inch
- Classlength @ Best LCL = inch

**Largest Classlength, XL =**

- Samples Needed @ XL = 25

**Classlength Mid-point, Xm =**

- Samples Needed @ Xm = 25

**New Smaller Classlength, Xss =**

- Samples Needed @ Xss = 25

**Best LCL Classlength, Xlcl =**

- Samples Needed @ Xlcl = 25

**POH Classlength, Xpoh =**

- Samples Needed @ Xpoh = 25
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### Directed DOE Options

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.812</td>
</tr>
<tr>
<td>Xm</td>
<td>0.291</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt = 0.102**

![Directed DOE Options Diagram](image-url)
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 18 more large flaws.

Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

File Name = A6004G.XLS
Data Set Name = A6004G(SITE CODE)
Date & Time = 6/4/15 6:54 PM

Xpod 90/95 Reached Anywhere?
Classlength @ 90/95 Xpod =
Lower Confidence Bound =
Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD @
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod =

False Call Rate = with UCL @ 95% =
Largest Classlength , XL =
Samples Needed @ XL =
Classlength Mid-point , Xm =
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
Opt. POD classlength, Xpodopt =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =

Survey/Optimum Xpoh = 0.1600 -0.001 Inch 26 Samples
NTIAC 90% POD = 0.907 @ 0.150 inch
NTIAC 90/95 POD = 0.904 @ 0.185 inch

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Warning: No false call analysis.

CASE 1 - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

False Call Rate = with UCL @ 95% =
- Largest Classlength, XL = 0.812 inch
- Samples Needed @ XL =
- Classlength Mid-point, Xm = 0.372 inch
- Samples Needed @ Xm =
- Smallest Classlength, Xs =
- Samples Needed @ Xs =
- New Smaller Classlength, Xss =
- Best LCL Classlength, Xlcl =
- Samples Needed @ Xlcl =
- Opt. POD classlength, Xpodopt =
- New Largest Classlength, 2XL =
- Xn is Near Verification Point =
- POD @ Xpoh =
- Samples Needed @Xpoh =

Survey/Optimum Xpoh = 0.000 Inch Samples
- NTIAC 90% POD = 0.903 @ 0.135 inch
- NTIAC 90/95 POD = 0.905 @ 0.165 inch

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Need 18 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Need 17 more large flaws.

Note: Xpodopt is within one class width of Xpod. Warning: No false call analysis.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Largest Classlength, XL = 0.812 inch
Samples Needed @ XL = 3
Classlength Mid-point, Xm = 0.372 inch
Samples Needed @ Xm = 3
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.171 inch
Samples Needed @Xpodopt = 3
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
Best POD classlength, Xp = 0.1760 inch

Warning: No false call analysis.

File Name = A6004.XLS
Data Set Name = A6004(SITE CODE)
Date & Time = 6/4/15 6:57 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0390 inch
Lower Confidence Bound @ 90/95 Xpod = 0.9001 inch
Best LCL =
Classwidth @ Best LCL = inch
Classlength @ Best LCL =
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
POD @ Xp = 1.0000 inch

Xp, 90/95 POD =
MLE(Mean) POD =
MLE(95%) LCL =

False Call Rate =
with UCL @ 95% =

Survey/Optimum Xpoh = 0.1320 @ 0.105 inch
NTIAC 90% POD = 0.919 @ 0.105 inch
NTIAC 90/95 POD = 0.915 @ 0.120 inch

Large flaw validation failure. Need 17 more large flaws.

Warning: No false call analysis.

Analysis file name: DOEPOD 1.2.01.PC.086a2010.Wi7.xlsm
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

<table>
<thead>
<tr>
<th>No Misses Observed</th>
<th>At Least One Miss Occurred</th>
<th>XL</th>
<th>Xm</th>
<th>Xs</th>
<th>Xss</th>
<th>Xlcl</th>
<th>Xpoh</th>
<th>2XL</th>
<th>Xpod</th>
<th>Xpodopt</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABLE C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class Length</td>
<td>Additional Samples</td>
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<tr>
<td>Xs =</td>
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<tr>
<td>Xss =</td>
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<td>Alternate Xm =</td>
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</tbody>
</table>

| TABLE A* Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed. |
| TABLE B* Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed. |
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths, this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.
Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpoh = 0.000 Inch Samples

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = Inch
Samples Needed @ XL =
Classlength Mid-point, Xm = Inch
Samples Needed @ Xm =
Smallest Classlength, Xs = Inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = Inch
Best LCL Classlength, Xlcl = Inch
Samples Needed @ Xlcl =
POH Classlength, Xpoh = Inch
Samples Needed @ Xpoh =
New Largest Classlength, 2XL = Inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = Inch
Samples Needed @ Xpodopt =
Xp = Inch

File Name = A7001CL.XLS
Data Set Name = A7001CL(CRK #)
File Name = A7001CL.XLS
Data Set Name = A7001CL(CRK #)

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

File Name = A7001CL.XLS
Data Set Name = A7001CL(CRK #)

File Name = A7001CL.XLS
Data Set Name = A7001CL(CRK #)

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Data Set Name = A7001CL(CRK #)

File Name = A7001CL.XLS
Data Set Name = A7001CL(CRK #)

File Name = A7001CL.XLS
Data Set Name = A7001CL(CRK #)

File Name = A7001CL.XLS
Data Set Name = A7001CL(CRK #)

File Name = A7001CL.XLS
Data Set Name = A7001CL(CRK #)
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpoh = 0.000 Inch Samples

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Warning: No false call analysis.

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpoh = 1.6030 -0.300 inch
28 Samples

NTIAC 90% POD @ inch
NTIAC 90/95 POD @ inch
False Call Rate = with UCL @ 95% =

Largest Classlength , XL = 2.403 inch
Samples Needed @ XL = 28
Classlength Mid-point , Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xlcl = inch
Samples Needed @ Xlcl =
POH Classlength, Xpoh = 1.603 inch
Samples Needed @ Xpoh = 28
New Largest Classlength , 2XL = 4.806 inch
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @Xpodopt =
Xp = inch

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpoh = 1.6030 -0.300 inch
28 Samples

NTIAC 90% POD @ inch
NTIAC 90/95 POD @ inch
False Call Rate = with UCL @ 95% =

Largest Classlength , XL = 2.403 inch
Samples Needed @ XL = 28
Classlength Mid-point , Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xlcl = inch
Samples Needed @ Xlcl =
POH Classlength, Xpoh = 1.603 inch
Samples Needed @ Xpoh = 28
New Largest Classlength , 2XL = 4.806 inch
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @Xpodopt =
Xp = inch
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpoh = 1.6030 -0.300 inch
28 Samples

NTIAC 90% POD = @ inch
NTIAC 90/95 POD = @ inch
False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 2.403 inch
Samples Needed @ XL = 28
Classlength Mid-point , Xm = inch
Samples Needed @ Xm = inch
Smallest Classlength, Xs = inch
Samples Needed @ Xs = inch
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xlcl = inch
Samples Needed @ Xlcl = inch
POH Classlength, Xpoh = 1.603 inch
Samples Needed @ Xpoh = 28
New Largest Classlength , 2XL = 4.806 inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @Xpodopt = inch

Xp = 2.403 inch

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**Alternate Xm = Xpodopt =

### Table C

<table>
<thead>
<tr>
<th>Class Length</th>
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<tr>
<td>XL</td>
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<tr>
<td>Xm</td>
<td>1.603</td>
</tr>
<tr>
<td>Xs</td>
<td>2.406</td>
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</tbody>
</table>

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

TABLE C

Selected class lengths with existing misses.

Tableau de données:

<table>
<thead>
<tr>
<th>Xpod,Class Length</th>
<th>No. Need</th>
<th>Xpod,Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod,Class Length</td>
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<td>Xpod,Class Length</td>
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<tr>
<td>No Misses Observed</td>
<td></td>
<td>At Least One Miss Occurred</td>
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</table>

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Need 7 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.

Survey/Optimum Xpoh = 0.936 @ 0.025 inch
NTIAC 90% POD = 0.936 @ 0.025 inch
NTIAC 90/95 POD = 0.937 @ 0.030 inch
False Call Rate = with UCL @ 95% =

Largest Classlength, XL = 0.342 inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 0.161 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
Opt. POD classlength, Xpodopt =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
Samples Needed @ Xpoh = 0.0440 inch

False Call Rate =

XL is Near Verification Point =

POH Classlength, Xpoh =

Samples Needed @ Xpoh =
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked. The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement. **The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.342</td>
</tr>
<tr>
<td>Xm</td>
<td>0.161</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
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<tr>
<td>Xpoh</td>
<td></td>
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<tr>
<td>2XL</td>
<td></td>
</tr>
<tr>
<td><strong>Alternate Xm</strong></td>
<td>Xpodopt</td>
</tr>
</tbody>
</table>

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.*

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

Large flaw validation failure. Need 8 more large flaws.

Note: Xpodopt is within one class width of Xpod.

Case 18: 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**TABLE C**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**Alternate Xm**
Xpodopt = 0.014

**Directed DOE Options**

<table>
<thead>
<tr>
<th>File Name =</th>
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</thead>
<tbody>
<tr>
<td>A8002L.XLS</td>
<td>A8002L(Eci-a-b5)</td>
</tr>
</tbody>
</table>
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

**Warning:** Large flaw validation failure. Need 8 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet.

**Warning:** No false call analysis.

**File Name:** A8003L.XLS
**Data Set Name:** A8003L(Eci-a-b8)
**Date & Time:** 6/4/15 7:16 PM

**Xpod 90/95 Reached Anywhere?**
- Classwidth @ 90/95 Xpod
- Lower Confidence Bound
- Best LCL
- Classwidth @ Best LCL
- Classlength @ Best LCL
- User Provided a 90/95 POD @
- User’s Maximum Allowed Classlength
- Inspector Classwidth @ Xp
- POD @ Xpod

**Class Length, inch**
- **Largest Classlength, XL:** 0.906 inch
- **Samples Needed @ XL:** 0.010 inch
- **New Largest Classlength, 2XL:** 0.342 inch
- **Samples Needed @ 2XL:** 0.161 inch
- **Smallest Classlength, Xs:** 0.010 inch
- **Samples Needed @ Xs:** 0.161 inch
- **User Provided a 90/95 POD @:** 0.906 inch
- **Best LCL Classlength, Xlcl:** 0.933 inch
- **Samples Needed @ Xlcl:** 0.015 inch
- **POH Classlength, Xpoh:** 0.906 inch
- **Samples Needed @ Xpoh:** 0.010 inch
- **New Smaller Classlength, Xss:** 0.010 inch
- **Opt. POD classlength, Xpodopt:** 0.015 inch
- **Samples Needed @ Xpodopt:** 0.010 inch
- **NTIAC 90% POD:** 0.906 @ 0.010 inch
- **NTIAC 90/95 POD:** 0.933 @ 0.015 inch

**False Call Rate**
- **with UCL @ 95%**
- **Classwidth @ Xp:** 0.342 inch
- **Xm is Near Verification Point:** 0.0147 inch
- **Opt. POD classlength, Xpodopt:** 0.0147 inch
- **Survey/Optimum Xpoh:** 0.000 inch
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

---

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**Alternate Xm = Xpodopt**

---

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.*

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 9 more large flaws.

Note: Xpodopt is within one class width of Xpod.

Warning: No false call analysis.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

File Name = AB004L.XLS
Data Set Name = AB004L(Eci-a-p)
Date & Time = 6/4/15 7:22 PM

Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod
Classlength @ 90/95 Xpod
Lower Confidence Bound
Best LCL
Classwidth @ Best LCL
Classlength @ Best LCL
User Provided a 90/95 POD
User's Maximum Allowed Classlength
POD @ Xpod

Best LCL Classlength, Xlcl
POH Classlength, Xpoh

NTIAC 90% POD = 0.906 @ 0.030 inch
NTIAC 90/95 POD = 0.929 @ 0.040 inch
False Call Rate = with UCL @ 95% =

Largest Classlength, XL = 0.342 inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 0.169 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL Classlength, XlcL =
Samples Needed @ XlcL =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.058 inch
Samples Needed @ Xpodopt = 29

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

### Directed DOE Options

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.342</td>
</tr>
<tr>
<td>Xm</td>
<td>0.169</td>
</tr>
<tr>
<td>Xs</td>
<td><strong>Alternate Xm</strong></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Xpodopt** = 0.058 29

### Table C

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.058</td>
<td></td>
</tr>
</tbody>
</table>

**Table A**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.342</td>
<td></td>
</tr>
</tbody>
</table>

**Table B**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.169</td>
<td></td>
</tr>
</tbody>
</table>

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
**Detection Probability** (Utilization of DOEPOD results requires approval of Engineering Authority)

**Large flaw validation failure. Need 8 more large flaws.**

**Note:** Xpodopt is within one class width of Xpod.

**Warning:** No false call analysis.

<table>
<thead>
<tr>
<th>Entry</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>File Name</td>
<td>AB005L.XLS</td>
</tr>
<tr>
<td>Data Set Name</td>
<td>AB005L(Eci-m-a)</td>
</tr>
<tr>
<td>Date &amp; Time</td>
<td>6/4/15 7:23 PM</td>
</tr>
<tr>
<td>Xpod 90/95 Reached Anywhere?</td>
<td>REACHED</td>
</tr>
<tr>
<td>Classwidth @ 90/95 Xpod</td>
<td>0.035 inch</td>
</tr>
<tr>
<td>Lower Confidence Bound</td>
<td>0.9104 inch</td>
</tr>
<tr>
<td>Classwidth @ Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>Classlength @ Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>User Provided a 90/95 POD</td>
<td>inch</td>
</tr>
<tr>
<td>User's Maximum Allowed Classlength</td>
<td>inch</td>
</tr>
<tr>
<td>POD @ Xpod</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

**CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.**

- **Survey/Optimum Xpoh** = 0.0409 inch @ 0.030 inch, 25 Samples
- **False Call Rate with UCL @ 95%** = 0.0409 - 0.001 inch
  - Largest Classlength, XL = 0.342 inch
  - Samples Needed @ XL = 29
  - Classlength Mid-point, Xm = 0.035 inch
  - Samples Needed @ Xm = 29
  - Smallest Classlength, Xs = 0.035 inch
  - Samples Needed @ Xs = 29
  - New Smaller Classlength, Xss = 0.169 inch
  - Best LCL Classlength, Xcl = 0.030 inch
  - Samples Needed @ Xcl = 29
  - POD Classlength, Xpoh = 0.030 inch
  - Samples Needed @ Xpoh = 29
  - Opt. POD classlength, Xpodopt = 0.057 inch
  - New Largest Classlength, 2XL = 0.342 inch
  - Xm is Near Verification Point = inch
  - LCL Classlength, Xlcl = inch
  - Samples Needed @ Xlcl = 29
  - POH Classlength, Xpoh = 0.035 inch
  - Samples Needed @ Xpoh = 29
  - New Larger Classlength, XL = 0.342 inch
  - Xp = 0.0575 inch
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Need 9 more large flaws.
Note: Xpodopt is within one class width of Xpod.

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

File Name = A8006L.XLS
Data Set Name = A8006(Eci-m-c)
Date & Time = 6/4/15 7:24 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0390 inch
Classlength @ 90/95 Xpod = 0.0587 inch
Lower Confidence Bound = 0.9050 inch
Best LCL = Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ 1.0000
POD @ Xpod =
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xp =

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Survey/Optimum Xpoh = 0.0409 0.001 Inch 25 Samples
NTIAC 90% POD = 0.939 @ 0.040 inch
NTIAC 90/95 POD = 0.926 @ 0.045 inch
False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 0.342 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.169 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
Opt. POD classlength, Xpodopt = 0.058 inch
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =

Xp = 0.0587 inch
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpoh = 0.0800 - 0.003 inch
False Call Rate = with UCL @ 95%

NTIAC 90% POD = 0.901 @ 0.120 inch
NTIAC 90/95 POD =

Largest Classlength, XL = 0.095 inch
Samples Needed @ XL = 26
Classlength Mid-point, Xm =
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh = 0.080 inch
Samples Needed @ Xpoh = 26
New Largest Classlength, 2XL = 0.190 inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### Directed DOE Options

#### TABLE C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.085</td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm =

Xpodopt =

#### TABLE A*

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

#### TABLE B*

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

Xpod, Class Length, No. Need.

**No Misses Observed**

**At Least One Miss Occurred**

### File Name =

A9001(3)D.xlsx

A9001(3)D(CK. NO.)

### Data Set Name =

0.000 0.020 0.040 0.060 0.080 0.100 0.120 0.140 0.160 0.180 0.200

### Number of Additional Samples Needed

<table>
<thead>
<tr>
<th>Inch</th>
<th>0.000</th>
<th>0.020</th>
<th>0.040</th>
<th>0.060</th>
<th>0.080</th>
<th>0.100</th>
<th>0.120</th>
<th>0.140</th>
<th>0.160</th>
<th>0.180</th>
<th>0.200</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>0.020</td>
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<td></td>
<td></td>
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<tr>
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<td>0.120</td>
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</tr>
<tr>
<td>0.180</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

** Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

*** The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpod = 0.0950 - 0.014 inch
26 Samples

False Call Rate = with UCL @ 95%

- Largest Classlength, XL = 0.095 inch
- Samples Needed @ XL = 26
- Classlength Mid-point, Xm = inch
- Samples Needed @ Xm = inch
- Smallest Classlength, Xs = inch
- Samples Needed @ Xs = inch
- New Smaller Classlength, Xss = inch
- Best LCL Classlength, Xlcl = inch
- Samples Needed @ Xlcl = inch
- POH Classlength, Xpoh = 0.095 inch
- Samples Needed @ Xpoh = 26
- New Largest Classlength, 2XL = 0.190 inch
- Xn is Near Verification Point = inch
- Opt. POD classlength, Xpodopt = inch
- Samples Needed @ Xpodopt = inch
- Xp = inch

Warning: No false call analysis.

False Call Rate =

- NTIAC 90% POD = 0.967 @ 0.055 inch
- NTIAC 90/95 POD = 0.931 @ 0.065 inch

Analysis File name: DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsm

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

<table>
<thead>
<tr>
<th>TABLE A*</th>
<th>TABLE B*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.</td>
<td>Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.</td>
</tr>
<tr>
<td>Xpod, Class Length</td>
<td>No Need</td>
</tr>
<tr>
<td>0.095</td>
<td>26</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =

<table>
<thead>
<tr>
<th>No Misses Observed</th>
<th>At Least One Miss Occurred</th>
<th>XL</th>
<th>Xm</th>
<th>Xs</th>
<th>Xss</th>
<th>Xlcl</th>
<th>Xpoh</th>
<th>2XL</th>
<th>Xpod</th>
<th>Xpodopt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
**CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.**

### File Name
A9003(3)D.xls

### Data Set Name
A9003(3)D(CK. No.)

### Date & Time
6/4/15 7:32 PM

### Xpod 90/95 Reached Anywhere?
NOT REACHED

### Classwidth @ 90/95 Xpod
\[ X_p = 0.095 \text{ inch} \]

### Classlength @ 90/95 Xpod
\[ X_{poh} = 0.140 \text{ inch} \]

### Lower Confidence Bound @ 95%
\[ LCL = 0.076 \text{ inch} \]

### Best LCL
\[ 0.0570 \text{ inch} \]

### Classlength @ Best LCL
\[ 0.0020 \text{ inch} \]

### User Provided a 90/95 POD @
\[ 0.909 \text{ inch} \]

### User's Maximum Allowed Classlength
\[ @ 0.105 \text{ inch} \]

### Inspector Classwidth @ Xp
\[ 0.0020 \text{ inch} \]

### POD @ Xpod
\[ 0.0020 \text{ inch} \]

### NTIAC 90% POD
\[ 0.909 \text{ @ } 0.105 \text{ inch} \]

### NTIAC 90/95 POD
\[ 0.904 \text{ @ } 0.140 \text{ inch} \]

### False Call Rate
\[ \text{with UCL @ 95%} \]

- Largest Classlength, XL
  \[ 0.095 \text{ inch} \]
- Samples Needed @ XL
  \[ 26 \]
- Classlength Mid-point, Xm
  \[ \text{inch} \]
- Samples Needed @ Xm
  \[ \text{inch} \]
- Smallest Classlength, Xs
  \[ \text{inch} \]
- Samples Needed @ Xs
  \[ \text{inch} \]
- New Smaller Classlength, Xss
  \[ \text{inch} \]
- Best LCL Classlength, Xlcl
  \[ \text{inch} \]
- Samples Needed @ Xlcl
  \[ \text{inch} \]
- POH Classlength, Xpoh
  \[ 0.076 \text{ inch} \]
- Samples Needed @ Xpoh
  \[ 26 \]
- New Largest Classlength, 2XL
  \[ 0.190 \text{ inch} \]
- Xm is Near Verification Point
  \[ \text{inch} \]
- Opt. POD classlength, Xpodopt
  \[ \text{inch} \]
- Samples Needed @ Xpodopt
  \[ \text{inch} \]
- Xp
  \[ \text{inch} \]
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**Directed DOE Options**

<table>
<thead>
<tr>
<th>TABLE A*</th>
<th>Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TABLE B</strong></td>
<td>Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =

File Name = A9003(3)L.xls
Data Set Name = A9003(3)L(CK. No.)
**Warning:** No false call analysis.

### Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

**CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod 90/95 Reached Anywhere?</td>
<td>NOT REACHED</td>
</tr>
<tr>
<td>Classwidth @ 90/95 Xpod</td>
<td>inch</td>
</tr>
<tr>
<td>Classlength @ 90/95 Xpod</td>
<td>inch</td>
</tr>
<tr>
<td>Lower Confidence Bound</td>
<td>0.6070 inch</td>
</tr>
<tr>
<td>Best LCL</td>
<td>0.0040 inch</td>
</tr>
<tr>
<td>Classwidth @ Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>Classlength @ Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>User Provided a 90/95 POD @</td>
<td>inch</td>
</tr>
<tr>
<td>User's Maximum Allowed Classlength</td>
<td>inch</td>
</tr>
<tr>
<td>Inspector Classwidth @ Xp</td>
<td>inch</td>
</tr>
<tr>
<td>POD @ Xpod</td>
<td>inch</td>
</tr>
<tr>
<td>POD @ Xp</td>
<td>inch</td>
</tr>
</tbody>
</table>

**Survey/Optimum Xpoh =** 1.2710 - 0.025 inch

**False Call Rate =** with UCL @ 95%

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTIAC 90% POD</td>
<td>inch</td>
</tr>
<tr>
<td>NTIAC 90/95 POD</td>
<td>inch</td>
</tr>
<tr>
<td>Largest Classlength, XL</td>
<td>1.271 inch</td>
</tr>
<tr>
<td>Samples Needed @ XL</td>
<td>26</td>
</tr>
<tr>
<td>Classlength Mid-point, Xm</td>
<td>inch</td>
</tr>
<tr>
<td>Samples Needed @ Xm</td>
<td>inch</td>
</tr>
<tr>
<td>Smallest Classlength, Xs</td>
<td>inch</td>
</tr>
<tr>
<td>Samples Needed @ Xs</td>
<td>inch</td>
</tr>
<tr>
<td>New Smaller Classlength, Xss</td>
<td>inch</td>
</tr>
<tr>
<td>BestLCL Classlength, Xcl</td>
<td>inch</td>
</tr>
<tr>
<td>Samples Needed @ Xcl</td>
<td>inch</td>
</tr>
<tr>
<td>POD Classlength, Xpoh</td>
<td>1.271 inch</td>
</tr>
<tr>
<td>Samples Needed @ Xpoh</td>
<td>26</td>
</tr>
<tr>
<td>New Largest Classlength, 2XL</td>
<td>2.543 inch</td>
</tr>
<tr>
<td>Xn is Near Verification Point</td>
<td>inch</td>
</tr>
<tr>
<td>Opt. POD classlength, Xpodopt</td>
<td>inch</td>
</tr>
<tr>
<td>Samples Needed @ Xpodopt</td>
<td>inch</td>
</tr>
<tr>
<td>Xp</td>
<td>inch</td>
</tr>
</tbody>
</table>
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths that indicates the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

---

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpoh</th>
<th>1.271</th>
<th>26</th>
</tr>
</thead>
<tbody>
<tr>
<td>2XL</td>
<td>2.542</td>
<td>29</td>
</tr>
</tbody>
</table>

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpodopt</td>
<td></td>
</tr>
</tbody>
</table>
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 2 - 90/95 Xpod is reached at a class length. Further VALIDATION is required. Recommend satisfying XL and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.

Survey/Optimum Xpoh = 0.000 Inch Samples

NTIAC 90% POD = @ Inch
NTIAC 90/95 POD = @ Inch
False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 1.271 Inch
Samples Needed @ XL = 155
Classlength Mid-point , Xm = 1.156 Inch
Samples Needed @ Xm = 8
Smallest Classlength, Xs = Inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = Inch
Best LCL Classlength, Xlcl = Inch
Samples Needed @ Xlcl = POD Classlength, Xpoh = Inch
Samples Needed @ Xpoh =
New Largest Classlength , 2XL = Inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = Inch
Samples Needed @Xpodopt =
Xp = Inch
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpoh = 0.000 Inch Samples

NTIAC 90% POD = @ inch
NTIAC 90/95 POD = @ inch
False Call Rate = with UCL @ 95% =

Largest Classlength, XL = inch
Samples Needed @ XL =
Classlength Mid-point, Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
Best LCL Classlength, Xcl = inch
Samples Needed @ Xcl =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength, 2XL = inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @ Xpodopt =
Xp = inch

File Name = AB001[3]L.xls
Data Set Name = AB001[3][CK. NO.)
Date & Time = 6/4/15 7:43 PM
Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.6070 inch
Best LCL = 0.030 inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD =
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod =

Largest Classlength, XL = 0.0030 inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 0.2870 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =
Xp =
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited Misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no Misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited Misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no Misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpoh = 1.1880 -0.100 inch Samples = 26

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.*

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

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The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Warning: No false call analysis.

CASE 7 - 90/95 Xp is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpoh = 1.0850 - 0.008 inch 26 Samples

Largest Classlength, XL = inch
Samples Needed @ XL =
Classlength Mid-point, Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xlcl = inch
Samples Needed @ Xlcl =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength, 2XL = inch
Xn is Near Verification Point = inch
Opt. POD classlength, Xpopdopt = inch
Samples Needed @ Xpopdopt =

NO REACHED
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

*Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.*

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
**Detection Probability** (Utilization of DOEPOD results requires approval of Engineering Authority)

**Warning:** No false call analysis.

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

**Warning:** No false call analysis.

### Analysis

- **File Name:** AC002(3)L.xls
- **Data Set Name:** AC002(3)[LCK. NO.)
- **Date & Time:** 6/4/15 7:49 PM
- **Xpod 90/95 Reached Anywhere?** NOT REACHED
- **Classwidth @ 90/95 Xpod =**
- **Classlength @ 90/95 Xpod =**
- **Lower Confidence Bound =**
- **Best LCL =**
- **Classwidth @ Best LCL =**
- **Classlength @ Best LCL =**
- **User Provided a 90/95 POD =**
- **User’s Maximum Allowed Classlength =**
- **Inspector Classwidth @ Xp =**
- **POD @ Xpod =**
- **Largest Classlength , XL =**
- **Samples Needed @ XL =**
- **Classlength Mid-point , Xm =**
- **Samples Needed @ Xm =**
- **Smallest Classlength, Xs =**
- **Samples Needed @ Xs =**
- **New Smaller Classlength, Xss =**
- **BestLCL Classlength, Xlcl =**
- **Samples Needed @ Xlcl =**
- **POH Classlength, Xpoh =**
- **Samples Needed @ Xpoh =**
- **New Largest Classlength , 2XL =**
- **Xm is Near Verification Point =**
- **Opt. POD classlength, Xpodopt =**
- **Samples Needed @ Xpodopt =**

### Graph Description

- **Optimum Xpoh Available; Using Best LCL**
- **Probability of Hit (POH) in Class Range**
- **Lower Confidence Bound @ 95%**
- **Hit/Miss**
- **Xp, 90/95 POD**
- **MLE(Mean) POD**
- **MLE(95%) LCL**

### Additional Information

- **Survey/Optimum Xpoh =** 0.4980 -0.004 inch
- **23 Samples**
- **NTIAC 90% POD =** 0.900 @ 0.465 inch
- **NTIAC 90/95 POD =** 0.991 @ 0.740 inch
- **False Call Rate =** with UCL @ 95% =
  - **Largest Classlength , XL =** 1.435 inch
  - **Samples Needed @ XL =** 26
  - **Classlength Mid-point , Xm =**
  - **Samples Needed @ Xm =**
  - **Smallest Classlength, Xs =**
  - **Samples Needed @ Xs =**
  - **New Smaller Classlength, Xss =**
  - **BestLCL Classlength, Xlcl =**
  - **Samples Needed @ Xlcl =**
  - **POH Classlength, Xpoh =** 0.498 inch
  - **Samples Needed @ Xpoh =** 23
  - **New Largest Classlength , 2XL =** 2.870 inch
  - **Xm is Near Verification Point =**
  - **Opt. POD classlength, Xpodopt =**
  - **Samples Needed @ Xpodopt =**
  - **Xp =**

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Although $X_{pod}$ appears to have been reached at a point, there are Misses at larger class lengths, which indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in $LCL < 0.90$. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target $X_{pod}$ points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate $X_m$ requirement removes the need to meet the adjacent $X_m$ requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

<table>
<thead>
<tr>
<th>TABLE A*</th>
<th>TABLE B*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.</td>
<td>Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

**Alternate Xm = Xpodopt**

---

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.*

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 7 more large flaws. Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.

MLE Divergence Warning: Initial results listed.

File Name = AD001(3)L.xls
Data Set Name = AD001(3)(CK. NO.)
Date & Time = 6/4/15 7:52 PM
Xpod Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0290 inch
Classlength @ 90/95 Xpod = 0.3480 inch
Lower Confidence Bound = 0.9050 inch
Best LCL = inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ inch
User's Maximum Allowed Classlength = inch
POD @ Xpod = 1.0000

CASE 1*: 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

Survey/Optimum Xpoh = 0.911 inch @ 0.105 inch
NTIAC 90% POD = 0.911 inch
NTIAC 90/95 POD = 0.905 inch
False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 1.562 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 1.119 inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xlcl = inch
Samples Needed @ Xlcl =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength, 2XL = inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @Xpodopt =

Xp = 0.3480 inch

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths: this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis. Any highlighted Misses are RED and shown in Column A of this data sheet

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

Survey/Optimum Xpoh = 0.000 Inch Samples

<table>
<thead>
<tr>
<th>False Call Rate = with UCL @ 95% =</th>
</tr>
</thead>
<tbody>
<tr>
<td>Largest Classlength, XL = 1.562 inch</td>
</tr>
<tr>
<td>Samples Needed @ XL =</td>
</tr>
<tr>
<td>Classlength Mid-point, Xm = 1.119 inch</td>
</tr>
<tr>
<td>Samples Needed @ Xm =</td>
</tr>
<tr>
<td>Smallest Classlength, Xs =</td>
</tr>
<tr>
<td>Samples Needed @ Xs =</td>
</tr>
<tr>
<td>New Smaller Classlength, Xss =</td>
</tr>
<tr>
<td>BestLCL Classlength, Xlcl =</td>
</tr>
<tr>
<td>Samples Needed @ Xlcl =</td>
</tr>
<tr>
<td>Opt. POD classlength, Xpodopt =</td>
</tr>
<tr>
<td>Samples Needed @ Xpodopt =</td>
</tr>
</tbody>
</table>

File Name = AD002[3]L.xls
Data Set Name = AD002[3]L(CK. NO.)
Date & Time = 6/4/15 7:58 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0290 inch
Lower Confidence Bound = 0.0290 inch
Xp, 90/95 POD = 1.562 inch
MLE(Mean) POD = 1.119 inch
MLE(95%) LCL = 0.185 inch
MLE(95%) LCL = 0.240 inch
Largest Classlength, XL = 1.562 inch
Opt. POD classlength, Xpodopt = 1.0000
NTIAC 90% POD = 0.901 @ 0.185 inch
NTIAC 90/95 POD = 0.902 @ 0.240 inch
Lower Confidence Bound @ 95% = 0.9050
Best LCL = 0.9050
Classlength @ Best LCL =
Classwidth @ Best LCL =
User Provided a 90/95 POD @
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod =
Classlength @ 90/95 Xpod =
Classwidth @ 90/95 Xpod =
Class Length, inch

Analysis file name: DOEPOD_v.1.2.01.PC.Office2010.Win7.xlsm

Large flaw validation failure. Need 7 more large flaws.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**Directed DOE Options**

<table>
<thead>
<tr>
<th>TABLE A*</th>
<th>Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>1.562</td>
</tr>
<tr>
<td>Xm</td>
<td>1.119</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm =**

<table>
<thead>
<tr>
<th>Xpodopt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.562</td>
</tr>
</tbody>
</table>

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod,Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE C**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod,Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 7 more large flaws.

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
**Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)**

Large flaw validation failure. Extend flaw size range to 0.705.

**Warning:** No false call analysis.

Note: Xpodopt is within one class width of Xpod.

**File Name:** AE001(3).xls  
**Data Set Name:** AE001(3)(L).xls

**Date & Time:** 6/4/15 8:10 PM

- **Xpod 90/95 Reached Anywhere?** REACHED
- **Classwidth @ 90/95 Xpod** = 0.0570 inch
- **Lower Confidence Bound =** 0.9050 inch
- **Best LCL =** 0.2350 inch
- **Classlength @ Best LCL** = inch
- **User Provided a 90/95 POD @**
- **POD @ Xpod** = 1.0000

**Classwidth @ 90/95 Xpod =** inch
**Classlength @ 90/95 Xpod =** inch
**Lower Confidence Bound =** inch
**Best LCL =** inch
**Classlength @ Best LCL** = inch
**User's Maximum Allowed Classlength =** inch
**Inspector Classwidth @ Xp =** inch

**User Provided a 90/95 POD @**

**POD @ Xpod =** 1.0000

**Warning:** No false call analysis.

**CASE 18:** 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

- **Survey/Optimum Xpoh** = 0.1780 inch 23 Samples
- **False Call Rate =** 0.1780 - 0.017 inch
- **with UCL @ 95% =** 0.308 inch
- **Largest Classlength, XL =** 0.495 inch
- **Samples Needed @ XL =** 23 Samples
- **Classlength Mid-point, Xm =** 0.308 inch
- **Samples Needed @ Xm =** 23 Samples
- **Smallest Classlength, Xs =** inch
- **Samples Needed @ Xs =** 23 Samples
- **New Smaller Classlength, Xss =** inch
- **BestLCL Classlength, Xlcl =** inch
- **Samples Needed @ Xlcl =** 23 Samples
- **POH Classlength, Xpoh =** inch
- **Opt. POD classlength, Xpodopt =** 0.495 inch
- **New Largest Classlength, 2XL =** inch
- **Xm is Near Verification Point =** 0.308 inch
- **Opt. POD classlength, Xpodopt =** 0.224 inch
- **Samples Needed @Xpodopt =** 8 Samples
- **Xp =** 0.2350 inch

**Note:** Xpodopt is within one class width of Xpod.

**Warning:** No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

* Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

** The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 0.801.

Note: Xpodopt is within one class width of Xpod.

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL when Xm is satisfied. Xp used to satisfy XL requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Survey/Optimum Xpoh = 0.1820 -0.003 inch
False Call Rate = with UCL @ 95%

Largest Classlength , XL = 0.495 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.381 inch
Samples Needed @ Xm = 29
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
Opt. POD classlength, Xpodopt = 0.253 inch
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Best Xpoh =
POH @ Xpoh =
Samples Needed @ Xpoh =

File Name = AE002[3].xls
Data Set Name = AE002[3](L.CK. NO.)
Date & Time = 6/4/15 8:11 PM
Xp 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0850 inch
Classlength @ 90/95 Xpod = 0.2670 inch
Lower Confidence Bound =
Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xp = 1.0000

Largest Classlength , XL = 0.943 inch
Samples Needed @ XL = 29
Classlength Mid-point , Xm = 0.912 inch
Samples Needed @ Xm = 29
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
Opt. POD classlength, Xpodopt =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Survey/Optimum Xpoh = 0.1820 -0.003 inch
False Call Rate = with UCL @ 95%
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths; this indicates that the POH function may be oscillatory. This needs to be checked.*

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.705.
MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

File Name = AE003[J].xls
Data Set Name = AE003[J](L.CLK. NO.)
Date & Time = 6/4/15 8:11 PM
Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.0570 inch
Lower Confidence Bound @ 95% = 0.2350 inch
Best LCL = 0.9050 inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ = inch
User's Maximum Allowed Classlength = inch
POD @ Xpod = 1.0000

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Survey/Optimum Xpoh = 0.1380 -0.0570 inch
26 Samples
XL = 0.1380
OPT. POD classlength, Xpodopt = 0.495 inch
Samples Needed @ Xpodopt = 26
Xm is Near Verification Point = False
PoH classlength, Xpoh = 0.308 inch
New Smaller Classlength, Xss = 0.2350 inch
BestLCL Classlength, Xcl = inch
Samples Needed @ Xcl = inch
POH Classlength, Xpoh = inch
Opt. POD classlength, Xpodopt = 0.138 inch
New Largest Classlength, 2XL = inch
Xm is Near Verification Point = False

False Call Rate = with UCL @ 95% =
Largest Classlength, XL = 0.495 inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 0.308 inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xcl = inch
Samples Needed @ Xcl = inch
POH Classlength, Xpoh = inch
Opt. POD classlength, Xpodopt = 0.138 inch
New Largest Classlength, 2XL = inch
Xm is Near Verification Point = False
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpoh = 0.2100 -0.041 Inch  28 Samples

False Call Rate =

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
**CASE 6** - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

**Warning:** No false call analysis.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

**File Name =** B1001AL.XLS
**Data Set Name =** B1001AL(CRK #)

**Date & Time =** 6/4/15 8:14 PM

Xpod 90/95 Reached Anywhere?
- 90/95 Xpod = NOT REACHED

Classwidth @ 90/95 Xpod = 0.8855 inch
Classlength @ 90/95 Xpod = 0.0540 inch

Lower Confidence Bound = 0.850 inch
Best LCL = 0.0540 inch
Classlength @ Best LCL = 0.2340 inch

User Provided a 90/95 POD @ =
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod =

**Survey/Optimum Xpoh =** 1.6030 inch

**Largest Classlength , XL =** 2.403 inch
**Samples Needed @ XL =** 28

**Classlength Mid-point , Xm =** 1.603 inch
**Samples Needed @ Xm =** 28

**Smallest Classlength, Xs =** 0.900 inch
**Samples Needed @ Xs =**

**New Smaller Classlength, Xss =**
**BestLCL Classlength, Xlcl =**
**Samples Needed @ Xlcl =**

**POH Classlength, Xpoh =**
**Samples Needed @ Xpoh =**

**New Largest Classlength , 2XL =**

**Xm is Near Verification Point =**
**Opt. POD classlength, Xpodopt =**
**Samples Needed @ Xpodopt =**

**False Call Rate =**
- **with UCL @ 95% =**

**NTIAC 90% POD =** 0.900 inch
**@** 0.695 inch

**False Call Rate**
- **with UCL @ 95%**

**Largest Classlength , XL =** 2.403 inch
**Samples Needed @ XL =** 28

**Classlength Mid-point , Xm =** 1.603 inch
**Samples Needed @ Xm =** 28

**Smallest Classlength, Xs =** 0.900 inch
**Samples Needed @ Xs =**

**New Smaller Classlength, Xss =**
**BestLCL Classlength, Xlcl =**
**Samples Needed @ Xlcl =**

**POH Classlength, Xpoh =**
**Samples Needed @ Xpoh =**

**New Largest Classlength , 2XL =**

**Xm is Near Verification Point =**
**Opt. POD classlength, Xpodopt =**
**Samples Needed @ Xpodopt =**

**Warning:** No false call analysis.
**Directed DOE Options**

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 2.403</td>
<td>28</td>
</tr>
<tr>
<td>Xm = 1.603</td>
<td>28</td>
</tr>
<tr>
<td>Xs = 4.806</td>
<td>29</td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td><strong>Alternate Xm = Xpodopt</strong></td>
<td></td>
</tr>
</tbody>
</table>

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths indicating that the POH function may be oscillatory. This needs to be checked. The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first. Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement. The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.*
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Warning: No false call analysis.

Survey/Optimum Xpoh = 0.3700 -0.019 inches with UCL @ 95% = 28 samples

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

File Name = B1001BL.XLS
Data Set Name = B1001BL(CRK #)

Date & Time = 6/4/15 8:17 PM
Xpod 90/95 Reached Anywhere? = NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.8719
Best LCL = 0.0530
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ = inch
User's Maximum Allowed Classlength = inch
Best POD @ Xp = inch
POH Classlength, Xpoh = inch

B1001BL.xlsmAnalysis file name:

False Call Rate = with UCL @ 95% =
Largest Classlength, XL = 2.403 inches
Samples Needed @ XL = 28
Classlength Mid-point, Xm = inches
Samples Needed @ Xm =
Smallest Classlength, Xs = inches
Samples Needed @ Xs =
New Smaller Classlength, Xss = inches
BestLCL Classlength, Xlcl = inches
Samples Needed @ Xlcl =
POH Classlength, Xpoh = 1.227 inches
Samples Needed @ Xpoh = 28
New Largest Classlength, 2XL = 4.806 inches
Xm is Near Verification Point = inches
Opt. POD classlength, Xpodopt = inches
Samples Needed @ Xpodopt =
Xp = inches

NOT REACHED
Although $X_{pod}$ appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in $LCL$ below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target $X_{pod}$ points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate $X_m$ requirement removes the need to meet the adjacent $X_m$ requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 2 - 90/95 Xpod is reached at a class length. Xp used to
reduce XL requirements. Recommend satisfying XL, Xm and the
smallest Xpod in TABLE B that is greater than the largest Xpod in
TABLE A, and/or the largest Xpod in Table A.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Need 6 more large flaws.

Warning: No false call analysis.

File Name = B1001CD.XLS
Data Set Name = B1001CD(CRK #)
Date & Time = 6/4/15 8:19 PM

Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0330 inch
Classlength @ 90/95 Xpod = 0.0600 inch
Lower Confidence Bound = 0.9001
Hit/Miss =

MLE(Mean) POD =
MLE(95%) LCL =

Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD =

User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =

POD @ Xpod = 0.9783

Largest Classlength , XL =
Samples Needed @ XL = 240
Classlength Mid-point , Xm =
Samples Needed @ Xm = 14
Smallest Classlength, Xs =
Samples Needed @ Xs =

New Smaller Classlength, Xss =
Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =

New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =

NTIAC 90% POD =
NTIAC 90/95 POD =
False Call Rate =
with UCL @ 95% =

Analysis File name: DOEPOD.1.2.01.PC.Office2010.Win7.xlsm
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

### Directed DOE Options

<table>
<thead>
<tr>
<th>Table A</th>
<th>Table B</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.210</td>
<td>XL = 0.210</td>
</tr>
<tr>
<td>Xm = 0.117</td>
<td>Xm = 0.117</td>
</tr>
<tr>
<td>Xs =</td>
<td>Xs =</td>
</tr>
<tr>
<td>Xss =</td>
<td>Xss =</td>
</tr>
<tr>
<td>Xlcl =</td>
<td>Xlcl =</td>
</tr>
<tr>
<td>Xpoh =</td>
<td>Xpoh =</td>
</tr>
<tr>
<td>2XL =</td>
<td>2XL =</td>
</tr>
<tr>
<td><strong>Alternate Xm =</strong></td>
<td><strong>Alternate Xm =</strong></td>
</tr>
<tr>
<td>Xpodopt =</td>
<td>Xpodopt =</td>
</tr>
</tbody>
</table>

FILE NAME = B1001CD.XLS
DATA SET NAME = B1001CD(CRK #)

### TABLE C

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1680</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td>0.1653</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td>0.1623</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td>0.1600</td>
<td>64</td>
<td></td>
</tr>
</tbody>
</table>

### TABLE A*

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

### TABLE B*

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 20 more large flaws.

Warning: No false call analysis.

CASE 2 - 90/95 Xpod is reached at a class length. Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority) 
Large flaw validation failure. Need 19 more large flaws.

Warning: No false call analysis.

**CASE 2 - 90/95 Xpod is reached at a class length. Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.**

### Summary
- **File Name:** B1003AL.XLS
- **Data Set Name:** B1003AL(CRK #)
- **Date & Time:** 6/4/15 8:22 PM
- **Xpod 90/95 Reached Anywhere?** REACHED
- **Classwidth @ 90/95 Xpod:** 0.0590 inch
- **Classlength @ 90/95 Xpod:** 0.2340 inch
- **Lower Confidence Bound:** 0.9001 inch
- **Best LCL:** 0.9001 inch
- **Classwidth @ Best LCL:** 0.260 inch
- **Classlength @ Best LCL:** 0.465 inch
- **User Provided a 90/95 POD @:**
- **User's Maximum Allowed Classlength:**
- **POD @ Xpod:** 1.0000

### Analysis
- **Best POD classlength, Xlcl:**
- **Samples Needed @ Xlcl:**
- **POH classlength, Xpoh:**
- **New Largest classlength, 2XL:**
- **opt. POD classlength, Xpodopt:**
- **Samples Needed @ Xpodopt:**
- **Inspection classwidth @ Xp:** 2.403 inch
- **Classlength Mid-point, Xm:** 1.603 inch
- **Smallest Classlength, Xs:**
- **New Smaller classlength, Xss:**
- **Probability of Hit (POH):**
- **Lower Confidence Bound @ 95%:**

### Additional Notes
- **False Call Rate =**
- **Largest Classlength, XL:** 2.403 inch
- **Samples Needed @ XL:** 24
- **Classlength Mid-point, Xm:** 1.603 inch
- **Samples Needed @ Xm:** 28
- **Smallest Classlength, Xs:**
- **New Smaller Classlength, Xss:**
- **Best LCL Classlength, Xlc:**
- **Samples Needed @ Xlc:**
- **POH Classlength, Xpoh:**
- **Samples Needed @ Xpoh:**
- **New Largest Classlength, 2XL:**
- **Xn is Near Verification Point:**
- **Opt. POD classlength, Xpodopt:**
- **Samples Needed @ Xpodopt:**

**Note:** No false call analysis. Large flaw validation failure. Need 19 more large flaws.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

![Directed DOE Options](image)

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4000</td>
<td>57</td>
</tr>
<tr>
<td>0.3700</td>
<td>52</td>
</tr>
<tr>
<td>0.3650</td>
<td>52</td>
</tr>
<tr>
<td>0.3500</td>
<td>36</td>
</tr>
</tbody>
</table>

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4000</td>
<td>57</td>
</tr>
<tr>
<td>0.4600</td>
<td>28</td>
</tr>
</tbody>
</table>

**TABLE C**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.403</td>
<td>24</td>
</tr>
<tr>
<td>1.603</td>
<td>28</td>
</tr>
</tbody>
</table>
CASE 6: 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

NTIAC 90% POD = @ inch
NTIAC 90/95 POD = @ inch
False Call Rate = with UCL @ 95% =
Largest Classlength, XL = 0.210 inch
Samples Needed @ XL = 28
Classlength Mid-point, Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh = 
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =
XL =
Xp = inch

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**Alternate Xm = Xpodopt =

### Table A*

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>XLM</th>
<th>XM</th>
<th>XS</th>
<th>XSS</th>
<th>XLD</th>
<th>XPOH</th>
<th>2XL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.210</td>
<td>0.210</td>
<td>0.420</td>
<td>28</td>
<td>28</td>
<td>29</td>
<td></td>
</tr>
</tbody>
</table>

### Table B*

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>XLM</th>
<th>XM</th>
<th>XS</th>
<th>XSS</th>
<th>XLD</th>
<th>XPOH</th>
<th>2XL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.210</td>
<td>0.210</td>
<td>0.420</td>
<td>28</td>
<td>28</td>
<td>29</td>
<td></td>
</tr>
</tbody>
</table>

---

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 19 more large flaws.

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

File Name = B1003BL.XLS
Data Set Name = B1003BL(CRK # )

Date & Time = 6/4/15 8:25 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 2.403
Classlength @ 90/95 Xpod = 1.603
Lower Confidence Bound = 0.911
Best LCL = 0.908
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD =
User's Maximum Allowed Classlength = inch
POD @ Xpod = 1.0000

Best LCL Classlength, Xlcl = inch
POH Classlength, Xpoh = inch
New Largest Classlength, 2XL = inch

False Call Rate =

Largest Classlength , XL = 2.403 inch
Samples Needed @ XL = 27
Classlength Mid-point , Xm = 1.603 inch
Samples Needed @ Xm = 28
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
Best LCL Classlength, Xlc = inch
Samples Needed @ Xlc =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength , 2XL = inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @Xpodopt =
Xp = inch

CASE 2 - 90/95 Xpod is reached at a class length. Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.

Survey/Optimum Xpoh = 0.000
Samples

NTIAC 90% POD = 0.911 @ 0.110
NTIAC 90/95 POD = 0.908 @ 0.135

Analysis file name: DOEPOD_v.1.2.01_PC.08a2010.Win7.xlsx
** Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

- The class lengths listed in Table A exhibited misses, and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

- The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

<table>
<thead>
<tr>
<th>TABLE A*</th>
<th>Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.</th>
<th>TABLE B*</th>
<th>Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod</td>
<td>Class Length</td>
<td>No. Need</td>
<td>Xpod</td>
</tr>
<tr>
<td>1.2270</td>
<td>0.4000</td>
<td>45</td>
<td>1.6030</td>
</tr>
<tr>
<td>0.3700</td>
<td>0.4600</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>0.3650</td>
<td>0.4600</td>
<td>28</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

- NTIAC 90% POD = 0.900 @ 0.045 inch
- NTIAC 90/95 POD =
- False Call Rate = with UCL @ 95% =
- Largest Classlength, XL = 0.210 inch
- Samples Needed @ XL = 28
- Classlength, Xmidpoint, Xmx =
- Smallest Classlength, Xs =
- Samples Needed @ Xs =
- New Smaller Classlength, Xss =
- BestLCL Classlength, Xlcl =
- Samples Needed @ Xlcl =
- POH Classlength, Xpoh = 0.156 inch
- Samples Needed @ Xpoh =
- New Largest Classlength, 2XL = 0.420 inch
- Xmx is Near Verification Point =
- Opt. POD classlength, Xpodopt =
- Samples Needed @ Xpodopt =

Warning: No false call analysis.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

- Probability of Hit (POH) in Class Range
- Lower Confidence Bound @ 95%
- Hit/Miss
- Xp, 90/95 POD
- MLE(Mean) POD
- MLE(95%) LCL
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**Satisfy the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

---

### Directed DOE Options

#### TABLE A*

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.210</td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xld</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td>0.156</td>
</tr>
<tr>
<td>2XL</td>
<td>0.420</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =

---

### TABLE C

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.210</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>0.156</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>0.420</td>
<td>29</td>
<td></td>
</tr>
</tbody>
</table>

---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Large flaw validation failure. Need 19 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

*Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
<table>
<thead>
<tr>
<th>Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Xpod 90/95 Reached Anywhere?</strong></td>
</tr>
<tr>
<td><strong>Best LCL</strong></td>
</tr>
<tr>
<td><strong>Not Reached</strong></td>
</tr>
<tr>
<td><strong>POD @ Xpod</strong></td>
</tr>
<tr>
<td><strong>User Provided a 90/95 POD @</strong></td>
</tr>
<tr>
<td><strong>User's Maximum Allowed Classlength</strong></td>
</tr>
<tr>
<td><strong>Inspection Classwidth @ Xp</strong></td>
</tr>
<tr>
<td><strong>POD @ Xp</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Case 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Survey/Optimum Xpoh</strong> = 0.1898 - 0.010 inch</td>
</tr>
<tr>
<td><strong>NTIAC 90% POD</strong> = 0.907 @ 0.115 inch</td>
</tr>
<tr>
<td><strong>NTIAC 90/95 POD</strong> = 0.905 @ 0.175 inch</td>
</tr>
<tr>
<td><strong>False Call Rate</strong> = 0.1898 - 0.010 inch</td>
</tr>
<tr>
<td><strong>with UCL @ 95%</strong> = 0.257 inch</td>
</tr>
<tr>
<td><strong>Largest Classlength, XL</strong> = 24 inch</td>
</tr>
<tr>
<td><strong>Samples Needed @ XL</strong> = inch</td>
</tr>
<tr>
<td><strong>Classlength Mid-point, Xm</strong> = inch</td>
</tr>
<tr>
<td><strong>Samples Needed @ Xm</strong> = inch</td>
</tr>
<tr>
<td><strong>Smallest Classlength, Xs</strong> = inch</td>
</tr>
<tr>
<td><strong>Samples Needed @ Xs</strong> = inch</td>
</tr>
<tr>
<td><strong>New Smaller Classlength, Xss</strong> = inch</td>
</tr>
<tr>
<td><strong>BestLCL Classlength, Xicl</strong> = inch</td>
</tr>
<tr>
<td><strong>Samples Needed @ Xicl</strong> = inch</td>
</tr>
<tr>
<td><strong>POH Classlength, Xpoh</strong> = 0.257 inch</td>
</tr>
<tr>
<td><strong>Samples Needed @ Xpoh</strong> = 24 inch</td>
</tr>
<tr>
<td><strong>New Largest Classlength, 2XL</strong> = inch</td>
</tr>
<tr>
<td><strong>Xm is Near Verification Point</strong> = inch</td>
</tr>
<tr>
<td><strong>Opt. POD classlength, Xpodopt</strong> = inch</td>
</tr>
<tr>
<td><strong>Samples Needed @ Xpodopt</strong> = inch</td>
</tr>
<tr>
<td><strong>Xp</strong> = inch</td>
</tr>
</tbody>
</table>

**Warning:** No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Warning: No false call analysis.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Survey/Optimum Xpoh = 0.0492 @ 0.004 inch 28 Samples
NTIAC 90% POD = 0.909 @ 0.040 inch
NTIAC 90/95 POD = 0.936 @ 0.065 inch
False Call Rate = with UCL @ 95% =
Largest Classlength, XL = 0.257 inch
Samples Needed @ XL =
ClassLength Mid-point , Xm = 0.193 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xn is Near Verification Point =
Opt. POD classlength, Xpopt = 0.100 inch
Samples Needed @Xpopt =
Samples Needed @Xpoh =

Note: Xpodopt is within one class width of Xpod.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 5 - 90/95 Xpoe is not reached anywhere. Recommend satisfying XL and xpoth.

Survey/ Optimum Xpoe = 0.0634 ± 0.001 Inch
27 Samples

xpoth is Near Verification Point

False Call Rate = 0.0634 - 0.001 Inch

Opt. POD classlength, Xpoth =

Largest classlength, XL = 0.257 Inch
Samples Needed @ XL = 28
Classlength Mid-point, Xm =
Samples Needed @ Xm =
Smallest classlength, Xs =
New Smaller classlength, Xss =
Best LCL classlength, Xlcl =
Samples Needed @ Xlcl =
POH classlength, Xpoh =
Samples Needed @ Xpoh =

New Largest classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpoth =
Samples Needed @ Xpoth =

Xp =

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.
Although $X_{pod}$ appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target $X_{pod}$ points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate $Xm$ requirement removes the need to meet the adjacent $Xm$ requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

- Probability of Hit (POH), Lower Confidence Limit, LCL
- Class Length,
- Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

File Name = 830011.XLS
Data Set Name = 830011(HOLE #)
Date & Time = 6/4/15 8:32 PM

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod =
Classlength @ 90/95 Xpod =
Lower Confidence Bound =
Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD @
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod =

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpoh = 0.000 0.020 0.040 0.060 0.080 0.100
False Call Rate = with UCL @ 95% =

- NTIAC 90% POD = 0.903 0.240
- NTIAC 90/95 POD =
- Opt. POD classlength, Xpodopt =
- New Largest Classlength , 2XL =
- Xn is Near Verification Point =
- Smallest Classlength, Xs =
- Classlength Mid-point , Xm =
- Largest Classlength , XL =
- Samples Needed @ XL =
- Samples Needed @ Xn =
- Samples Needed @ Xs =
- New Smaller Classlength, Xss =
- Best LCL Classlength, Xcl =
- Samples Needed @ Xcl =
- POD Classlength, Xpoh =
- Samples Needed @ Xpoh =
- New Largest Classlength, 2XL =
- Samples Needed @ Xpodopt =
- Xp =

Analysis file name: DOEPOD_v1.2.01.PC.Office2010.Win7.xlsm

Probability of Hit (POH) in Class Range
- Lower Confidence Bound @ 95%
- Hit/Miss
- Xp, 90/95 POD
- MLE(Mean) POD
- MLE(95%) LCL

262
Although Xpod appears to have been reached at a point, there are misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

- **FILE NAME** = B30012.XLS
- **DATA SET NAME** = B30012[HOLE #]

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.090</td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td>0.080</td>
</tr>
<tr>
<td>Xpoh</td>
<td>0.090</td>
</tr>
<tr>
<td>2XL</td>
<td>0.180</td>
</tr>
<tr>
<td><strong>Alternate Xm</strong> =</td>
<td></td>
</tr>
<tr>
<td>Xpodopt      =</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>265</td>
<td>4</td>
</tr>
</tbody>
</table>

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>265</td>
<td>4</td>
</tr>
</tbody>
</table>
Warning: No false call analysis.

CASE 5 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and Xpoh.
Although $X_{pod}$ appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target $X_{pod}$ points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate $X_m$ requirement removes the need to meet the adjacent $X_m$ requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
**Although** Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### Directed DOE Options

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.979</td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td>0.610</td>
</tr>
<tr>
<td>2XL</td>
<td>1.958</td>
</tr>
</tbody>
</table>

**Alternate Xm** = Xpodopt

### TABLE A*

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

### TABLE B*

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

- XL = 0.979
- Xm = 0.610
- Xs = 1.958
- Xss = 2XL
- Xlcl
- Xpoh
- Xpod
- Xpodopt

---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
WARNING: No false call analysis.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 1.617.

- Probability of Hit (POH) in Class Range
- Lower Confidence Bound @ 95%
- Hit/Miss
- Xp, 90/95 POD
- MLE(Mean) POD
- MLE(95%) LCL

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL Xp used to satisfy Xl and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

### File Name = C1001CL.XLS
### Data Set Name = C1001CL(CRACK #)
### Date & Time = 6/4/15 8:42 PM
### Xpod 90/95 Reached Anywhere? REACHED
### Classwidth @ 90/95 Xpod = 0.901 inch
### Classlength @ 90/95 Xpod = 0.900 inch
### Lower Confidence Bound = 0.3400 inch
### Best LCL = 0.315 inch
### Classwidth @ Best LCL = 0.610 inch
### Classlength @ Best LCL = 0.901 inch
### User Provided a 90/95 POD @ POD @ Xpod = 0.3400 inch
### User's Maximum Allowed Classlength = 1.0000 inch
### Inspector Classwidth @ Xp = 0.979 inch
### POD @ Xpod = 0.710 inch

### NTIAC 90% POD = 0.610 inch
### NTIAC 90/95 POD = 0.315 inch
### False Call Rate = 0.3400 - 0.001
### with UCL @ 95% = 0.001 inch
### Samples Needed @ XL = 28
### Largest Classlength, XL = 0.979 inch
### Samples Needed @ XL = 28
### Classlength Mid-point, Xm = 0.710 inch
### Samples Needed @ Xm = 28
### Smallest Classlength, Xs = inch
### Samples Needed @ Xs = 28
### New Smaller Classlength, Xss = inch
### BestLCL Classlength, Xcl = inch
### Samples Needed @ Xcl = 28
### POD Classlength, Xpoh = inch
### Samples Needed @ Xpoh = 28
### Opt. POD classlength, Xpoh = 0.537 inch
### New Largest Classlength, 2XL = 0.537 inch
### Xn is Near Verification Point = 0.537 inch
### Samples Needed @Xpoh = 29
### XP = 0.5390 inch

### CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

### Table C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.979</td>
</tr>
<tr>
<td>Xm</td>
<td>0.710</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpod<sub>opt</sub> = 0.537 29

### Table A*

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.537</td>
<td>Xpod&lt;sub&gt;opt&lt;/sub&gt;</td>
</tr>
</tbody>
</table>

### Table B*

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.537</td>
<td>Xpod&lt;sub&gt;opt&lt;/sub&gt;</td>
</tr>
</tbody>
</table>

---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Large flaw validation failure. Need 13 more large flaws. Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.

**CASE 1**: 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

### Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod 90/95 Reached Anywhere?</td>
<td>REACHED</td>
</tr>
<tr>
<td>Classwidth @ 90/95 Xpod</td>
<td>0.490</td>
</tr>
<tr>
<td>Lower Confidence Bound</td>
<td>0.9001</td>
</tr>
<tr>
<td>Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>Classwidth @ Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>Classlength @ Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>User Provided a 90/95 POD</td>
<td>inch</td>
</tr>
<tr>
<td>User's Maximum Allowed Classlength</td>
<td>inch</td>
</tr>
<tr>
<td>POD @ Xpod</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

### File Name = C1002AL.XLS
### Data Set Name = C1002AL(CRACK #)
### Date & Time = 6/4/15 8:45 PM

### Some Calculated Values

- **Prob. of Hit (POH)**
  - Lower Confidence Limit, LCL
- **Class Length**
- **Detection Probability**

### POD Xp = 0.979 inch

### False Call Rate = 0.000 with UCL @ 95% = 274

### Summary of Results

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTIAC 90% POD</td>
<td>0.906 @ 0.090 inch</td>
</tr>
<tr>
<td>NTIAC 90/95 POD</td>
<td>0.902 @ 0.115 inch</td>
</tr>
<tr>
<td>Largest Classlength, XL</td>
<td>0.979 inch</td>
</tr>
<tr>
<td>Samples Needed @ XL</td>
<td></td>
</tr>
<tr>
<td>Classlength Mid-point, Xm</td>
<td>0.543 inch</td>
</tr>
<tr>
<td>Samples Needed @ Xm</td>
<td></td>
</tr>
<tr>
<td>Smallest Classlength, Xs</td>
<td></td>
</tr>
<tr>
<td>Samples Needed @ Xs</td>
<td></td>
</tr>
<tr>
<td>New Smaller Classlength, Xss</td>
<td></td>
</tr>
<tr>
<td>Best LCL Classlength, Xlcl</td>
<td></td>
</tr>
<tr>
<td>Samples Needed @ Xlcl</td>
<td></td>
</tr>
<tr>
<td>POD Classlength, Xpoh</td>
<td></td>
</tr>
<tr>
<td>Samples Needed @ Xpoh</td>
<td></td>
</tr>
<tr>
<td>New Largest Classlength, 2XL</td>
<td></td>
</tr>
<tr>
<td>Xm Near Verification Point</td>
<td></td>
</tr>
<tr>
<td>Opt. POD classlength, Xpodopt</td>
<td></td>
</tr>
<tr>
<td>Samples Needed @ Xpodopt</td>
<td></td>
</tr>
</tbody>
</table>

**Analysis file name**: DOEPOD_v1.2.01_Pc.04032010.Win7.xlsm

**Warning**: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
**Detection Probability** (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 10 more large flaws.

Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.

---

### File Name

C1002BL.XLS

### Data Set Name

C1002BL(CRACK #)

### Date & Time

6/4/15 8:47 PM

REACHED

**Xpod 90/95 Reached Anywhere?**

- **Classwidth @ 90/95 Xpod**
- **Lower Confidence Bound @ 95%**
- **Best LCL**
- **Classwidth @ Best LCL**
- **Classlength @ Best LCL**
- **User Provided a 90/95 POD @**
- **User’s Maximum Allowed Classlength =**
- **Inspector Classwidth @ Xp =**
- **POD @ Xpod =**

### Class Range

- **Largest Classlength, XL =**
- **Samples Needed @ XL =**
- **Classlength Mid-point, Xm =**
- **Samples Needed @ Xm =**
- **Smallest Classlength, Xs =**
- **Samples Needed @ Xs =**
- **New Smaller Classlength, Xss =**
- **Best LCL Classlength, Xlcl =**
- **Samples Needed @ Xlcl =**
- **POH Classlength, Xpoh =**
- **Samples Needed @ Xpoh =**
- **New Largest Classlength, 2XL =**
- **Xm is Near Verification Point =**
- **Opt. POD classlength, Xpodopt =**
- **Samples Needed @Xpodopt =**

### POD @ Xpod

- **0.904**

### False Call Rate

- **0.000**

### Survey/Optimum Xpoh =

- **0.000**

### Samples

- **0.080**
- **0.105**
- **0.080**
- **0.105**

### NTIAC 90% POD =

- **0.904**

### NTIAC 90/95 POD =

- **0.903**

---

**CASE 1**: 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Need 13 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.

False Call Rate =
with UCL @ 95% =
Largest Classlength, XL = 0.979 inch
Samples Needed @ XL =
Classlength, Mid-point, Xm = 0.543 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
New LCL, Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =

Survey/Optimum Xpoh = 0.901 inch @ 0.110 inch
NTIAC 90% POD = 0.901 inch @ 0.145 inch
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpodopt</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpodopt</td>
<td></td>
</tr>
</tbody>
</table>

---

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked. The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual.*

*Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.*

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Need 4 more large flaws. Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.

MLE Divergence Warning: Initial results listed.

Warning: No false call analysis.

File Name: C1003AL.XLS
Data Set Name: C1003AL(CRACK #)
Date & Time: 6/4/15 8:51 PM

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.0860 inch
Classlength @ 90/95 Xpod = 0.610 inch
Lower Confidence Bound @ 95% = 0.035 inch
Best LCL = 0.0830 inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD = 0.9001
User's Maximum Allowed Classlength = inch
POD @ Xpod = 1.0000

Best LCL Classlength, Xlcl = 0.0000 inch
Samples Needed @ Xlcl =
POH Classlength, Xpoh = 0.020 inch
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =

Xp = 0.610 inch
0.262 inch
0.035 inch
0.0860 inch

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.

Survey/Optimum Xpoh = 0.000 inch
Samples

NTIAC 90% POD = 0.913 @ 0.020 inch
NTIAC 90/95 POD = 0.938 @ 0.035 inch

False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 0.610 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.262 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
Opt. POD classlength, Xpodopt =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Samples Needed @Xpodopt =

Large flaw validation failure. Need 4 more large flaws. Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 2 - 90/95 Xpod is reached at a class length. Xp used to satisfy XL requirements. Further VALIDATION is required. Recommend satisfying Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in T.

Warning: No false call analysis.

File Name = C1003BL.XLS
Data Set Name = C1003BL(CRACK #)

Date & Time = 6/4/15 8:56 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0170 inch
Classlength @ 90/95 Xpod = 0.1020 inch
Lower Confidence Bound = 0.9001 inch
Best LCL = inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ inch
User's Maximum Allowed Classlength = inch
POD @ Xp = 1.0000

POD @ Xpod = 0.000

False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 0.610 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.262 inch
Samples Needed @ Xm = 10
Smallest Classlength , Xs =
Samples Needed @ Xs =
New Smaller Classlength , Xss =
Best LCL Classlength , Xlcl =
Samples Needed @ Xlcl =
POH Classlength , Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =

Survey/Optimum Xpoh =
NTIAC 90% POD = 0.906 @ 0.080 inch
NTIAC 90/95 POD = 0.904 @ 0.095 inch

Warning: No false call analysis.

Any highlighted Misses are RED and shown in Column A of this data sheet.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths; this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Large flaw validation failure. Need 5 more large flaws.

Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.

### CASE 1 - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### Table A*
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.610</td>
<td></td>
</tr>
<tr>
<td>Xm = 0.262</td>
<td></td>
</tr>
<tr>
<td>Xs =</td>
<td></td>
</tr>
<tr>
<td>Xss =</td>
<td></td>
</tr>
<tr>
<td>Xlcl =</td>
<td></td>
</tr>
<tr>
<td>Xpoh =</td>
<td></td>
</tr>
<tr>
<td>2XL =</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =

### Table B*
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpodopt</td>
<td></td>
</tr>
</tbody>
</table>

### Table C
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.610</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xm = 0.262</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xs =</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xss =</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xlcl =</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xpoh =</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2XL =</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =

---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
**Detection Probability** (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 1.602.

**Warning:** No false call analysis.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

File Name = C2002BL.XLS  
Data Set Name = C2002BL(CRACK #)

Date & Time = 6/4/15 9:02 PM

- **Xpod 90/95 Reached Anywhere?**
- **Classwidh @ 90/95 Xpod**
- **Lower Confidence Bound**
- **Best LCL**
- **Classlength @ Best LCL**
- **User Provided a 90/95 POD @**
- **User's Maximum Allowed Classlength**
- **POD @ Xpod**

- **Lintner POD @ Xpod**
- **Largest Classlength, XL**
- **Samples Needed @ XL**
- **Opt. POD classlength, Xpodopt**
- **Largest Classlength, Xlcl**
- **Samples Needed @ Xlcl**
- **New Largest Classlength, 2XL**
- **Opt. POD classlength, Xpodopt**
- **Smallest Classlength, Xs**
- **Samples Needed @ Xs**
- **Xm is Near Verification Point**
- **Opt. POD classlength, Xpodopt**
- **New Smaller Classlength, Xss**
- **Samples Needed @ Xss**
- **POD Classlength, Xpoh**
- **POD @ Xpoh**
- **New Largest Classlength, 2XL**
- **Xm is Near Verification Point**
- **POD @ Xpoh**
- **Xs is Near Verification Point**

**Survey/Optimum Xpoh** = 0.1570 inch

**False Call Rate** = with UCL @ 95%

- **Largest Classlength, XL** = 0.550 inch
- **Samples Needed @ XL**
- **Classlength Mid-point, Xm** = 0.538 inch
- **Samples Needed @ Xm**
- **Smallest Classlength, Xs**
- **Samples Needed @ Xs**
- **New Smaller Classlength, Xss**
- **Best LCL Classlength, Xlcl**
- **Samples Needed @ Xlcl**
- **POD Classlength, Xpoh**
- **POD @ Xpoh**
- **New Largest Classlength, 2XL**
- **Xm is Near Verification Point**
- **Opt. POD classlength, Xpodopt**
- **Samples Needed @ Xpodopt**
- **Xp** = 0.5340 inch

**Warning:** No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

<table>
<thead>
<tr>
<th>No. Need</th>
<th>XL = 0.550</th>
<th>Xm = 0.538</th>
<th>Xs =</th>
<th>Xss =</th>
<th>Xlcl =</th>
<th>Xpoh =</th>
<th>2XL =</th>
<th>Xpodopt = 0.288</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TABLE A*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TABLE B*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
**Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 1.422.

**Warning:** No false call analysis.

### Case 2 - 90/95 Xpod is reached at a class length. Further VALIDATION is required. Recommend satisfying XL and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.

<table>
<thead>
<tr>
<th>Analysis File Name</th>
<th>C2002CL.XLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date &amp; Time</td>
<td>6/4/15 9:03 PM</td>
</tr>
<tr>
<td>Xpod 90/95 Reached Anywhere?</td>
<td>REACHED</td>
</tr>
<tr>
<td>Classwidth @ 90/95 Xpod</td>
<td>inch 0.2000</td>
</tr>
<tr>
<td>Classlength @ 90/95 Xpod</td>
<td>inch 0.4740</td>
</tr>
<tr>
<td>Lower Confidence Bound</td>
<td>inch 0.9001</td>
</tr>
<tr>
<td>Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>Classwidth @ Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>Classlength @ Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>User Provided a 90/95 POD @</td>
<td>inch</td>
</tr>
<tr>
<td>User's Maximum Allowed Classlength</td>
<td>inch</td>
</tr>
<tr>
<td>Inspector Classwidth @ Xp</td>
<td>inch</td>
</tr>
<tr>
<td>POD @ Xpod</td>
<td>inch 1.0000</td>
</tr>
</tbody>
</table>

### False Call Rate with UCL @ 95%:

- NTIAC 90% POD = 0.902 @ 0.220 inch
- NTIAC 90/95 POD = 0.901 @ 0.385 inch

- Largest Classlength, XL = 0.550 inch
- Samples Needed @ XL = 0
- Classlength Mid-point, Xm = 0.496 inch
- Samples Needed @ Xm = 0
- Smallest Classlength, Xs = inch
- Samples Needed @ Xs = 0
- New Smaller Classlength, Xss = inch
- BestLCL Classlength, Xlcl = inch
- Samples Needed @ Xlcl = 0
- POH Classlength, Xpoh = inch
- Samples Needed @ Xpoh = 0
- New Largest Classlength, 2XL = inch
- Xm is Near Verification Point = inch
- Xp is Near Verification Point = inch
- Opt. POD classlength, Xpodopt = inch
- Samples Needed @ Xpodopt = inch

### Probability of Hit (POH) in Class Range:

- Class Length, inch
- Probability of Hit (POH), Lower Confidence Limit, LCL

### File Name = C2002CL.XLS

### Data Set Name = C2002CL(CRACK #)

### Date & Time = 6/4/15 9:03 PM
**Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.**

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

---

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>XL</th>
<th>Xm</th>
<th>Xs</th>
<th>Xss</th>
<th>Xlcl</th>
<th>Xpoh</th>
<th>2XL</th>
<th>Xpod</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.550</td>
<td>0.496</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5220</td>
<td>1</td>
</tr>
<tr>
<td>0.5200</td>
<td>2</td>
</tr>
<tr>
<td>0.5120</td>
<td>3</td>
</tr>
<tr>
<td>0.5100</td>
<td>6</td>
</tr>
</tbody>
</table>

---

**TABLE C**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5220</td>
<td>1</td>
</tr>
<tr>
<td>0.5200</td>
<td>2</td>
</tr>
<tr>
<td>0.5120</td>
<td>3</td>
</tr>
<tr>
<td>0.5100</td>
<td>6</td>
</tr>
</tbody>
</table>

---

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.*

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Warning: No false call analysis.

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.585.
Any highlighted Misses are RED and shown in Column A of this data sheet
Warning: No false call analysis.

CASE 2 - 90/95 Xpod is reached at a class length. Xp used to satisfy XL requirements. Further VALIDATION is required.
Recommend satisfying Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in T

Survey/Optimum Xpoh = 0.000 inch
False Call Rate = with UCL @ 95% =
Largest Classlength, XL = 0.407 inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 0.300 inch
Samples Needed @ Xm = 17 inch
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
Opt. POD classlength, Xpodopt =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
POD @ Xpod = 0.000 inch

Analysis file name: DOEPOD v.1.2.01 PC-CR8a2010Win7.xlsm

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Warning: No false call analysis.

Large flaw validation failure. Extend flaw size range to 0.57.
Any highlighted Misses are RED and shown in Column A of this data sheet.

CASE 2 - 90/95 Xpod is reached at a class length. Xp used to satisfy XL requirements. Further VALIDATION is required.
Recommend satisfying Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in T.

Probability of Hit (POH) in Class Range
Lower Confidence Bound @ 95%
Hit/Miss
Xp, 90/95 POD
MLE(Mean) POD
MLE(95%) LCL

Class Length, inch
0.000 0.050 0.100 0.150 0.200 0.250 0.300 0.350 0.400 0.450

Probability of Hit (POH), Lower Confidence Limit, LCL
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths, this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**Alternate Xm = Xpodopt = 0.130 15**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

**Warning:** No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

### Data Set Information
- **File Name:** C3003AL.XLS
- **Data Set Name:** C3003AL(CRK #)
- **Date & Time:** 6/4/15 9:12 PM
- **NOT REACHED**
- **Xp:** 0.814 inch
- **Classwidth @ 90/95 Xp:** 0.185 inch
- **Classlength @ 90/95 Xp:** 0.465 inch
- **Classwidth @ 90/95 Xp:** 0.100 inch
- **Classlength @ 90/95 Xp:** 0.325 inch
- **User Provided a 90/95 POD:** Not applicable
- **User's Maximum Allowed Classlength:** Not applicable
- **POD @ Xp:** Not applicable

### Probability of Hit (POH) in Class Range

<table>
<thead>
<tr>
<th>Class Length, inch</th>
<th>Probability of Hit (POH), Lower Confidence Limit, LCL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000 - 0.100</td>
<td>0.000 - 0.100</td>
</tr>
<tr>
<td>0.100 - 0.200</td>
<td>0.100 - 0.200</td>
</tr>
<tr>
<td>0.200 - 0.300</td>
<td>0.200 - 0.300</td>
</tr>
<tr>
<td>0.300 - 0.400</td>
<td>0.300 - 0.400</td>
</tr>
<tr>
<td>0.400 - 0.500</td>
<td>0.400 - 0.500</td>
</tr>
<tr>
<td>0.500 - 0.600</td>
<td>0.500 - 0.600</td>
</tr>
<tr>
<td>0.600 - 0.700</td>
<td>0.600 - 0.700</td>
</tr>
<tr>
<td>0.700 - 0.800</td>
<td>0.700 - 0.800</td>
</tr>
<tr>
<td>0.800 - 0.900</td>
<td>0.800 - 0.900</td>
</tr>
<tr>
<td>0.900 - 1.000</td>
<td>0.900 - 1.000</td>
</tr>
</tbody>
</table>

### Class Length, inch
- **Classwidth @ 90/95 Xp:** 0.100 inch
- **Classlength @ 90/95 Xp:** 0.325 inch
- **Best LCL:** 0.0896 inch
- **Best POD:** 0.900 inch
- **Largest Classlength, XL:** 0.900 inch
- **New Largest Classlength, 2XL:** 0.834 inch
- **Opt. POD classlength, Xpodopt:** Not applicable
- **Samples Needed @ Xpod:** Not applicable

### Survey/Optimum Xpod =
- **NTIAC 90% POD:** 0.900 @ 0.185 inch
- **NTIAC 90/95 POD:** 0.900 @ 0.465 inch

### False Call Rate =
- **with UCL @ 95%**

---

### Notes:
- Xp is Near Verification Point
- POD is Reached for Xp
- POD is Not Reached for Xp
**Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.**

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

---

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td>0.814</td>
</tr>
<tr>
<td><strong>Alternate Xm =</strong></td>
<td></td>
</tr>
<tr>
<td>Xpodopt</td>
<td>29</td>
</tr>
</tbody>
</table>

---

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

- **No Misses Observed**
- **At Least One Miss Occurred**
- ▲ XL △ Xm ○ Xs □ Xss ◯ Xlcl ◆ Xpoh ▼ 2XL ▲ Xpod ◆ Xpodopt
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 0.766.

Warning: No false call analysis.

**CASE 2** - 90/95 Xpod is reached at a class length. Further VALIDATION is required. Recommend satisfying XL and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod Reached Anywhere?</td>
<td>Reached</td>
</tr>
<tr>
<td>Classwidth @ 90/95 Xpod</td>
<td>0.0520 inch</td>
</tr>
<tr>
<td>Classlength @ 90/95 Xpod</td>
<td>0.2620 inch</td>
</tr>
<tr>
<td>Lower Confidence Bound @ 95% LCL</td>
<td>0.9050 inch</td>
</tr>
<tr>
<td>Best LCL</td>
<td>0.5200 inch</td>
</tr>
<tr>
<td>Classlength @ Best LCL</td>
<td>0.155 inch</td>
</tr>
<tr>
<td>User Provided a 90/95 POD</td>
<td>0.903 inch</td>
</tr>
<tr>
<td>User's Maximum Allowed Classlength</td>
<td>0.900 inch</td>
</tr>
<tr>
<td>Inspector Classwidth @ Xp</td>
<td>0.407 inch</td>
</tr>
<tr>
<td>POD @ Xpod</td>
<td>0.300 inch</td>
</tr>
</tbody>
</table>

**NTIAC 90% POD** = 0.903 @ 0.155 inch
**NTIAC 90/95 POD** = 0.900 @ 0.295 inch

**False Call Rate** with UCL @ 95%:
- Largest Classlength, XL = 0.407 inch
- Samples Needed @ XL = 58
- Classlength Mid-point, Xm = 0.300 inch
- Samples Needed @ Xm = 18
- Smallest Classlength, Xs = inch
- Samples Needed @ Xs = inch
- New Smaller Classlength, Xss = inch
- BestLCL Classlength, Xlcl = inch
- Samples Needed @ Xlcl = inch
- POD Classlength, Xpoh = inch
- Samples Needed @ Xpoh = inch
- Opt. POD classlength, Xpodopt = inch
- New Largest classlength, 2XL = inch
- Xn is Near Verification Point = inch
- Opt. POD classlength, Xpodopt = inch
- Samples Needed @ Xpodopt = inch

Analysis file name: DOEPOD_v.1.2.01_PC_C08a2010_Win7.xlsx
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### Directed DOE Options

#### TABLE A*
**Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.**

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.407</td>
<td>58</td>
</tr>
<tr>
<td>0.300</td>
<td>18</td>
</tr>
</tbody>
</table>

#### TABLE B*
**Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.**

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.407</td>
<td>58</td>
</tr>
<tr>
<td>0.370</td>
<td>52</td>
</tr>
<tr>
<td>0.355</td>
<td>51</td>
</tr>
<tr>
<td>0.3520</td>
<td>35</td>
</tr>
</tbody>
</table>

---

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
**Detection Probability** (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 0.786.

**Warning:** No false call analysis.

<table>
<thead>
<tr>
<th>File Name</th>
<th>C1003CXLXS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Set Name</td>
<td>C1003CCLRK</td>
</tr>
</tbody>
</table>

| Date & Time | 6/4/15 9:14 PM |
| REACHED | |
| Xpod 90/95 Reached Anywhere? | |
| Classwidth @ 90/95 Xpod | |
| Lower Confidence Bound | |
| Best LCL | |
| Classlength @ Best LCL | |
| User Provided a 90/95 POD @ | |
| User's Maximum Allowed Classlength | |
| Inspector Classwidth @ Xp | |
| POD @ Xpod | 1.0000 |

| Classwidth @ 90/95 Xpod Reached Anywhere? | |
| Classwidth @ Best LCL | |
| Classlength @ Best LCL | |
| User Provided a 90/95 POD @ | |
| User's Maximum Allowed Classlength | |
| Inspector Classwidth @ Xp | |
| POD @ Xpod | 1.0000 |

**CASE 2 - 90/95 Xpod is reached at a class length. Further VALIDATION is required. Recommend satisfying XL and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.**

| Survey/Optimum Xpoh = | 0.000 | Inch | Samples |
| NTIAC 90% POD = | 0.902 | @ | 0.155 | inch |
| NTIAC 90/95 POD = | 0.900 | @ | 0.305 | inch |

| False Call Rate = | with UCL @ 95% = |
| Largest Classlength , XL = | 0.407 | inch |
| Samples Needed @ XL = | 58 |
| Classlength Mid-point , Xm = | 0.300 | inch |
| Samples Needed @ Xm = | 18 |
| Smallest Classlength, Xs = | inch |
| Samples Needed @ Xs = | |
| New Smaller Classlength, Xss = | inch |
| Best LCL Classlength, Xcl = | |
| Samples Needed @ Xcl = | |
| POD Classlength, Xpoh = | inch |
| Samples Needed @ Xpoh = | |
| New Largest Classlength , 2XL = | inch |
| Xn is Near Verification Point = | |
| Opt. POD classlength, Xpodopt = | inch |
| Samples Needed @ Xpodopt = | |
| Xp = | inch |

**Analysis file name:** DOEPOD x1.2.0.1.PC.xlsm.01/10/2010/W7.xlsm

**Warning:** No false call analysis.

Large flaw validation failure. Extend flaw size range to 0.786.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**TABLE C**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Warning: No false call analysis.

File Name = C400011.xls
Data Set Name = C400011(hole no.)
Date & Time = 6/4/15 9:15 PM
Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.0730 inch
Best LCL = 0.1752 inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod =

Largest Classlength, XL = 0.8074 inch
Smallest Classlength, Xs = 0.0730 inch
New Smaller Classlength, Xss = 0.130 inch
BestLCL Classlength, Xlcl = 0.195 inch
POH Classlength, Xpoh = 0.257 inch
New Largest Classlength, 2XL = 0.515 inch

Opt. POD classlength, Xpodopt = inch
Samples Needed @ Xpodopt =

Survey/Optimum Xpoh = 0.1898 inch
False Call Rate with UCL @ 95% = 0.010 inch
Samples = 28

False Call Rate =
Largest Classlength , XL = 0.257 inch
Samples Needed @ XL = 24
Classlength Mid-point , Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xlcl = inch
Samples Needed @ Xlcl =
POH Classlength, Xpoh = 0.257 inch
Samples Needed @ Xpoh = 24
New Largest Classlength, 2XL = 0.515 inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @ Xpodopt =

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Property of Hit (POH), Lower Confidence Limit, LCL
Although Xpod appears to have been reached at a point, there are misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 5 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and Xpoh.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

CASE 5 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and Xpoh.

Survey/Optimum Xpoh = 0.0858 - 0.007 inch Samples

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = 0.257 inch 28
Samples Needed @ XL =
Classlength Mid-point, Xm =
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh = 0.086 inch 27
Samples Needed @ Xpoh =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =
Xp =

NTIAC 90% POD = 0.903 @ 0.100 inch
NTIAC 90/95 POD = 0.903 @ 0.185 inch

CTT, POD @ Xpod =

CTT, Xp, 90/95 POD =
MLE(Mean) POD =
MLE(95%) LCL =
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths, indicating that the POH function may be oscillatory. This needs to be checked. The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first. **Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement. ***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

<table>
<thead>
<tr>
<th>TABLE C</th>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.257</td>
<td>19</td>
</tr>
<tr>
<td>Xm</td>
<td>0.193</td>
<td>12</td>
</tr>
<tr>
<td>Xs</td>
<td>0.193</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm** = Xpodopt =

<table>
<thead>
<tr>
<th>TABLE A*</th>
<th>Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod, Class Length</td>
<td>No. Need</td>
</tr>
<tr>
<td>0.257</td>
<td>19</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TABLE B*</th>
<th>Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod, Class Length</td>
<td>No. Need</td>
</tr>
<tr>
<td>0.257</td>
<td>19</td>
</tr>
</tbody>
</table>

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked. The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first. **Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement. ***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
<table>
<thead>
<tr>
<th>Probability of Hit (POH), Lower Confidence Limit, LCL</th>
<th>Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class Length, POD</td>
<td>Probability of Hit (POH) in Class Range</td>
</tr>
<tr>
<td>Lower Confidence Bound @ 95%</td>
<td>Hit/Miss</td>
</tr>
<tr>
<td>Xp, 90/95 POD</td>
<td>MLE(Mean) POD</td>
</tr>
<tr>
<td>MLE(95%) LCL</td>
<td>Utilization of DOEPOD results requires approval of Engineering Authority</td>
</tr>
</tbody>
</table>

**Classwidth @ 90/95 Xpod**

**Classlength @ 90/95 Xpod**

**Lower Confidence Bound**

**Best LCL**

**Classwidth @ Best LCL**

**Classlength @ Best LCL**

**User Provided a 90/95 POD @**

**User's Maximum Allowed Classlength**

**Inspector Classwidth @ Xp**

**POD @ Xp**

**False Call Rate**

**Survey/Optimum Xpoh**

**Warning: No false call analysis.**

**CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.**

**DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsm Analysis file name:**

**File Name:**

**Data Set Name:**

**Date & Time:**

**Xpod 90/95 Reached Anywhere?**

**Classwidth @ 90/95 Xpod**

**Classlength @ 90/95 Xpod**

**Lower Confidence Bound**

**Best LCL**

**Classwidth @ Best LCL**

**Classlength @ Best LCL**

**User Provided a 90/95 POD @**

**User's Maximum Allowed Classlength**

**Inspector Classwidth @ Xp**

**POD @ Xp**

**Classlength  Mid-point , Xm**

**Samples Needed @ Xm**

**Smallest Classlength, Xs**

**Samples Needed @ Xs**

**New Smaller Classlength, Xss**

**BestLCL Classlength, Xlcl**

**Samples Needed @ Xlcl**

**POH Classlength, Xpoh**

**Samples Needed @ Xpoh**

**New Largest Classlength , 2XL**

**Xm is Near Verification Point**

**Opt. POD classlength, Xpodopt**

**Samples Needed @Xpodopt**
Although Xpod appears to have been reached at a point, there are misses at larger class lengths, which indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.
**Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.**

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

---

**Directed DOE Options**

### TABLE C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.090</td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td>0.090</td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td>0.180</td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td>0.180</td>
</tr>
</tbody>
</table>

**Alternate Xm:**

**Xpodopt:**

---

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

---

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>4</td>
<td>XL</td>
<td>4</td>
</tr>
<tr>
<td>Xm</td>
<td></td>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td>29</td>
<td>Xlcl</td>
<td>29</td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td>29</td>
<td>2XL</td>
<td>29</td>
</tr>
</tbody>
</table>

---

* No Misses Observed  □ At Least One Miss Occurred  △ XL  ⊙ Xm  ⊙ Xs  ⊙ Xss  ⊗ Xlcl  ⊖ Xpoh  ⊘ 2XL  ⊞ Xpod  ⊟ Xpodopt

---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Warning: No false call analysis.

Survey/Optimum Xpoh = 1.6030 -0.300 Inch  Samples = 28

False Call Rate = 0.000 with UCL @ 95% = 0.0100 Inch

Largest Classlength, XL = 2.403 Inch
Samples Needed @ XL = 28

Classlength Mid-point, Xm = 1.603 Inch
Samples Needed @ Xm = 28

Smallest Classlength, Xs = 0.7942 Inch
Samples Needed @ Xs = 28

New Smaller Classlength, Xss = 0.100 Inch
Samples Needed @ Xss = 28

BestLCL Classlength, Xlcl = 0.7942 Inch
Samples Needed @ Xlcl = 28

POH Classlength, Xpoh = 1.603 Inch
Samples Needed @ Xpoh = 28

New Largest Classlength, 2XL = 4.806 Inch
Xm is Nearest Verification Point

Opt. POD classlength, Xpodopt = 1.603 Inch
Samples Needed @ Xpodopt = 28

Xp = 2.403 Inch

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Warning: No false call analysis.

Survey/Optimum Xpoh = 1.6030 -0.300 Inch  Samples = 28

False Call Rate = 0.000 with UCL @ 95% = 0.0100 Inch

Largest Classlength, XL = 2.403 Inch
Samples Needed @ XL = 28

Classlength Mid-point, Xm = 1.603 Inch
Samples Needed @ Xm = 28

Smallest Classlength, Xs = 0.7942 Inch
Samples Needed @ Xs = 28

New Smaller Classlength, Xss = 0.100 Inch
Samples Needed @ Xss = 28

BestLCL Classlength, Xlcl = 0.7942 Inch
Samples Needed @ Xlcl = 28

POH Classlength, Xpoh = 1.603 Inch
Samples Needed @ Xpoh = 28

New Largest Classlength, 2XL = 4.806 Inch
Xm is Nearest Verification Point

Opt. POD classlength, Xpodopt = 1.603 Inch
Samples Needed @ Xpodopt = 28

Xp = 2.403 Inch

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Warning: No false call analysis.

Survey/Optimum Xpoh = 1.6030 -0.300 Inch  Samples = 28

False Call Rate = 0.000 with UCL @ 95% = 0.0100 Inch

Largest Classlength, XL = 2.403 Inch
Samples Needed @ XL = 28

Classlength Mid-point, Xm = 1.603 Inch
Samples Needed @ Xm = 28

Smallest Classlength, Xs = 0.7942 Inch
Samples Needed @ Xs = 28

New Smaller Classlength, Xss = 0.100 Inch
Samples Needed @ Xss = 28

BestLCL Classlength, Xlcl = 0.7942 Inch
Samples Needed @ Xlcl = 28

POH Classlength, Xpoh = 1.603 Inch
Samples Needed @ Xpoh = 28

New Largest Classlength, 2XL = 4.806 Inch
Xm is Nearest Verification Point

Opt. POD classlength, Xpodopt = 1.603 Inch
Samples Needed @ Xpodopt = 28

Xp = 2.403 Inch
Although Xpod appears to have been reached at a point, there are misses at larger class lengths, this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**TABLE C**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.
CASE 6 - 90/95 Xp is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpoh = 1.6030 - 0.300 inch
False Call Rate = with UCL @ 95%

- Largest Classlength, XL = 2.403 inch
- Samples Needed @ XL = 28
- Classlength Mid-point, Xm = inch
- Samples Needed @ Xm = inch
- Smallest Classlength, Xs = inch
- Samples Needed @ Xs = inch
- New Smaller Classlength, Xss = inch
- Best LCL Classlength, Xlcl = inch
- Samples Needed @ Xlcl = inch
- POH Classlength, Xpoh = 1.603 inch
- Samples Needed @ Xpoh = 28
- New Largest Classlength, 2XL = 4.806 inch
- Xm is Near Verification Point = inch
- Opt. POD classlength, Xpodopt = inch
- Samples Needed @ Xpodopt = inch

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

### Directed DOE Options

#### TABLE C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>2.403</td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td>1.603</td>
</tr>
<tr>
<td>2XL</td>
<td>4.806</td>
</tr>
</tbody>
</table>
**Alternate Xm = Xpod opt = **

---

### Table A*

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**Table B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**No Misses Observed**

**At Least One Miss Occurred**

XL  ▲  Xm  ○  Xs  ●  Xss  ●  Xlcl  ●  Xpoh  ▲  2XL  ▲  Xpod  ●  Xpod opt

---

*Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

---

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>2.403</td>
</tr>
<tr>
<td>Xm</td>
<td>1.603</td>
</tr>
<tr>
<td>Xs</td>
<td>4.806</td>
</tr>
<tr>
<td>Xss</td>
<td>2XL</td>
</tr>
<tr>
<td>Xpoh</td>
<td>28</td>
</tr>
<tr>
<td>Xpopt</td>
<td>29</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =

---

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

---

File Name = C6001CL.XLS
Data Set Name = C6001CL(CRK #)

![Directed DOE Options Diagram](image-url)

### No Misses Observed
- At Least One Miss Occurred
- XL
- Xm
- Xs
- Xss
- Xlid
- Xpoh
- 2XL
- Xpod
- Xpodopt

---

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.*

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

*Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.*

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Large flaw validation failure. Need 20 more large flaws.

Warning: No false call analysis.

CASE 2: 90/95 Xpod is reached at a class length, Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**Alternate Xm = Xpodopt**
**Detection Probability**

Utilization of DOEPOD results requires approval of Engineering Authority.

Large flaw validation failure. Need 19 more large flaws.

Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: MLE Divergence Warning: initial results listed.

Warning: No false call analysis.

**FILE NAME**

C6002BL.XLS

**DATA SET NAME**

C6002BL(CRK #)

**DATE & TIME**

6/4/15 9:35 PM

**Xpod 90/95 Reached Anywhere?**

REACHED

**Classwidth @ 90/95 Xpod**

0.0400 inch

**Lower Confidence Bound**

0.0960 inch

**Best LCL**

0.9001 inch

**Classwidth @ Best LCL**

0.9001 inch

**Classlength @ Best LCL**

0.060 inch

**User Provided a 90/95 POD @**

0.080 inch

**User’s Maximum Allowed Classlength**

0.1800 inch

**POD @ Xpod**

1.0000

**Best LCL Classlength, Xlcl**

0.060 inch

**Samples Needed @ Xlcl**

1.0000

**POH Classlength, Xpoh**

0.1800 inch

**Samples Needed @ Xpoh**

1.0000

**New Largest Classlength, 2XL**

0.1800 inch

**Xm is Near Verification Point**

false

**Opt. POD classlength, Xpodopt**

0.080 inch

**Samples Needed @Xpodopt**

1.0000

**False Call Rate**

with UCL @ 95% = 0.000

**Survey/Optimum Xpoh**

0.000 inch

**Samples**

0.000

**NTIAC 90% POD**

0.907 @ 0.060 inch

**NTIAC 90/95 POD**

0.902 @ 0.080 inch

**Analysis File Name**

DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsm

**DISCLAIMER**

Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Large flaw validation failure. Need 20 more large flaws.

Note: Xpodopt is within one class width of Xpod.

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Class Length, inch

Probability of Hit (POH), Lower Confidence Limit, LCL

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.085 inch
Lower Confidence Bound = 0.0620 inch
Best LCL = 0.2370 inch
Classlength @ Best LCL = 0.9050 inch
User Provided a 90/95 POD @ 1.0000
User's Maximum Allowed Classlength =
POD @ Xpod =

CASE 18: 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Survey/Optimum Xpoh = 0.1283 inch 0.001 inch 27 Samples

False Call Rate = 0.1283 with UCL @ 95% =

Largest Classlength , XL = 2.403 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 1.603 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpoh = 0.194 inch
Samples Needed @Xpoh = 11

Xp = 0.2370 inch
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.
The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown
Follow sample selection priority in the DOEPOD Manual.
Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.
**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>2.403</td>
</tr>
<tr>
<td>Xm</td>
<td>1.603</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt = 0.194 11

TABLE A*
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

TABLE B*
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

K* No Misses Observed □ At Least One Miss Occurred △ XL ○ Xm □ Xs ○ Xss □ Xlcl × Xpoh □ 2XL ○ Xpod ◆ Xpodopt

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.
The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown
Follow sample selection priority in the DOEPOD Manual.
Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 2 - 90/95 Xpod is reached at a class length. Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.

Warning: No false call analysis.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Need 19 more large flaws.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

### TABLE A*
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2270</td>
<td>45</td>
</tr>
<tr>
<td>0.4600</td>
<td>59</td>
</tr>
<tr>
<td>0.4000</td>
<td>56</td>
</tr>
<tr>
<td>0.3700</td>
<td>36</td>
</tr>
</tbody>
</table>

### TABLE B*
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.6030</td>
<td>28</td>
</tr>
<tr>
<td>0.5320</td>
<td>28</td>
</tr>
<tr>
<td>0.5320</td>
<td>28</td>
</tr>
<tr>
<td>0.5320</td>
<td>28</td>
</tr>
</tbody>
</table>

*Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Warning: No false call analysis.

CASE 2 - 90/95 Xpod is reached at a class length. Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.

Survey/Optimum Xpoh = 0.000 Inch Samples
NTIAC 90% POD = 0.900 @ 0.155 Inch
NTIAC 90/95 POD = 0.900 @ 0.255 Inch
False Call Rate = with UCL @ 95% =
Largest Classlength, XL = 2.403 Inch
Samples Needed @ XL = 24
Classlength Mid-point, Xm = 1.603 Inch
Samples Needed @ Xm = 28
Smallest Classlength, Xs = Inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = Inch
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =
Xp = Inch
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 19 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpoh = 2.403</td>
<td></td>
</tr>
<tr>
<td>2XL = 1.603</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

Xpod, Class Length, No. Need

No. Misses Observed

At Least One Miss Occurred

XL, Xm, Xs, Xss, Xlcl, Xpoh, 2XL, Xpod, Xpodopt

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod, Class Length</td>
<td>No. Need</td>
</tr>
<tr>
<td>Xpod, Class Length</td>
<td>No. Need</td>
</tr>
</tbody>
</table>

File Name = C6003CL.XLS

Data Set Name = C6003CL(CRK # )
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

File Name = C7001L.XLS
Data Set Name = C7001L(Lpi-a)
Date & Time = 6/4/15 9:41 PM

NOT REACHED
Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.0040 inch
Best LCL = 0.0738 inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod =

CASE 5 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and Xpoh.

Survey/Optimum Xpod = 0.088 - 0.004 inch
Optimum Xpoh Available; Using Best LCL
Optimal POD classlength, Xpodopt =
Samples Needed @ Xpodopt =
False Call Rate =
with UCL @ 95% =
Largest Classlength, XL = 0.342 inch
Samples Needed @ XL = 28
Classlength Mid-point, Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
Best LCL Classlength, Xlcl = inch
Samples Needed @ Xlcl =
POH Classlength, Xpoh = 0.088 inch
Samples Needed @ Xpoh = 28
New Largest Classlength, 2XL = inch
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @ Xpodopt = Xp = inch
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.
Although $X_{pod}$ appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target $X_{pod}$ points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate $X_m$ requirement removes the need to meet the adjacent $X_m$ requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

---

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>$X_L = 0.342$</td>
<td>27</td>
</tr>
<tr>
<td>$X_m = 0.213$</td>
<td>11</td>
</tr>
<tr>
<td>$X_s = 0.199$</td>
<td>13</td>
</tr>
<tr>
<td>$X_{ss} = 0.199$</td>
<td></td>
</tr>
<tr>
<td>$X_{lcl} = 0.199$</td>
<td></td>
</tr>
<tr>
<td>$X_{poh} = 0.199$</td>
<td></td>
</tr>
<tr>
<td>$2XL = 0.396$</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate $X_m = X_{pod opt} = 0.342**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.*

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**Alternate Xm = Xpodopt**
CASE 2: 90/95 Xpod is reached at a class length. Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 0.828.

Warning: No false call analysis.

CASE 2 - 90/95 Xpod is reached at a class length. Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.

Survey/Optimum Xpoh = 0.0445 inch

False Call Rate = with UCL @ 95%

Largest Classlength , XL = 0.684 inch
Samples Needed @ XL = 23
Classlength Mid-point , Xm = 0.579 inch
Samples Needed @ Xm = 17
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xlcl = inch
Samples Needed @ Xlcl =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength, 2XL = inch
Xm is Near Verification Point = inch
Opt. POD classlength, Xpodopt = inch
Samples Needed @Xpodopt =

Xp = inch
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths, this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

<table>
<thead>
<tr>
<th>XL</th>
<th>Xm</th>
<th>Xs</th>
<th>Xss</th>
<th>Xlcl</th>
<th>Xpoh</th>
<th>2XL</th>
<th>Xpod</th>
<th>Xpodopt</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.190</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt

* Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

<table>
<thead>
<tr>
<th>Additional Samples</th>
<th>Class Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>0.020</td>
</tr>
<tr>
<td>0.040</td>
<td>0.060</td>
</tr>
<tr>
<td>0.080</td>
<td>0.100</td>
</tr>
<tr>
<td>0.120</td>
<td>0.140</td>
</tr>
<tr>
<td>0.160</td>
<td>0.180</td>
</tr>
<tr>
<td>0.200</td>
<td>0.220</td>
</tr>
</tbody>
</table>

** Alternate Xm = Xpodopt

TABLE A*
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

TABLE B*
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
</table>

Data Set Name = C8002(3)D.xls
File Name = C8002(3)D(CK. NO.)
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 0.786.

WARNING: No false call analysis.

CASE 2 - 90/95 Xpod is reached at a class length. Further VALIDATION is required. Recommend satisfying XL and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Table A*
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.684</td>
<td>26</td>
</tr>
<tr>
<td>0.476</td>
<td>23</td>
</tr>
</tbody>
</table>

* Table B*
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.6120</td>
<td>25</td>
</tr>
<tr>
<td>0.5930</td>
<td>32</td>
</tr>
<tr>
<td>0.5790</td>
<td>35</td>
</tr>
<tr>
<td>0.5780</td>
<td>38</td>
</tr>
</tbody>
</table>
Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.204.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Large flaw validation failure. Extend flaw size range to 0.204.

Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.204.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Large flaw validation failure. Extend flaw size range to 0.204.

Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.204.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Large flaw validation failure. Extend flaw size range to 0.204.

Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.204.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Large flaw validation failure. Extend flaw size range to 0.204.

Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.204.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Large flaw validation failure. Extend flaw size range to 0.204.

Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.204.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Large flaw validation failure. Extend flaw size range to 0.204.

Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.204.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Large flaw validation failure. Extend flaw size range to 0.204.

Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.204.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Large flaw validation failure. Extend flaw size range to 0.204.

Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.204.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Large flaw validation failure. Extend flaw size range to 0.204.

Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.204.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Large flaw validation failure. Extend flaw size range to 0.204.

Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.204.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Large flaw validation failure. Extend flaw size range to 0.204.

Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.204.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Large flaw validation failure. Extend flaw size range to 0.204.

Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.204.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Large flaw validation failure. Extend flaw size range to 0.204.

Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.204.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Large flaw validation failure. Extend flaw size range to 0.204.

Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.204.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

### Directed DOE Options

<table>
<thead>
<tr>
<th>File Name = C8003(3)D.xls</th>
<th>Data Set Name = C8003(3)D(CK.NO.)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TABLE A</strong></td>
<td><strong>TABLE B</strong></td>
</tr>
</tbody>
</table>

| Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed. || Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed. |
|---|---|
| Xl = 0.095 | Xlcl = 0.095 |
| Xm = 0.076 | Xpodopt = 0.067 |
| Xs = | 29 |
| Xss = | 29 |
| Xpoh = | 29 |
| 2XL = | 29 |

**Alternate Xm = Xpodopt = 0.067**

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
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</thead>
<tbody>
<tr>
<td>XL = 0.095</td>
<td></td>
</tr>
<tr>
<td>Xm = 0.076</td>
<td></td>
</tr>
<tr>
<td>Xs =</td>
<td></td>
</tr>
<tr>
<td>Xss =</td>
<td></td>
</tr>
<tr>
<td>Xlcl =</td>
<td></td>
</tr>
<tr>
<td>Xpoh =</td>
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</tr>
<tr>
<td>2XL =</td>
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</tbody>
</table>

### Number of Additional Samples Needed

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.067</td>
<td>29</td>
</tr>
</tbody>
</table>

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* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Large flaw validation failure. Extend flaw size range to 1.737.

Warning: No false call analysis.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

---

**Directed DOE Options**

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL  = 0.684</td>
<td></td>
</tr>
<tr>
<td>Xm  = 0.612</td>
<td></td>
</tr>
<tr>
<td>Xs  =</td>
<td></td>
</tr>
<tr>
<td>Xss =</td>
<td></td>
</tr>
<tr>
<td>Xlcl =</td>
<td></td>
</tr>
<tr>
<td>Xpoh =</td>
<td></td>
</tr>
<tr>
<td>2XL =</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm =**

Xpodopt = 0.291

---

**TABLE A**

*Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.*

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE B**

*Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.*

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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File Name = C8003(3).xls
Data Set Name = C8003(3) (CK NO.)

---

* Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**Directed DOE Options**

| TABLE C | TABLE A* | TABLE B*
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Class Length</td>
<td>Additional Samples</td>
<td>Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.</td>
</tr>
<tr>
<td>XL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Alternate Xm</strong> = Xpodopt</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**No Misses Observed**

**At Least One Miss Occurred**

Δ XL  ○ Xm  ○ Xs  ○ Xss  ✱ Xlcl  ✱ Xpoh  ✱ 2XL  ✱ Xpod  ✱ Xpodopt

---

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
**Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.**

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

---

### Directed DOE Options

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
<tr>
<td><strong>Alternate Xm</strong></td>
<td><strong>Xpodopt</strong></td>
</tr>
</tbody>
</table>

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Add. Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Add. Samples</th>
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</thead>
<tbody>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked. The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first. **Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement. **The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths, this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

### TABLE A

Selected class lengths with existing misses.
Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
<td></td>
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<tr>
<td>Xs</td>
<td></td>
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</tr>
<tr>
<td>Xss</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XLd</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
<td></td>
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<tr>
<td>2XL</td>
<td></td>
<td></td>
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<tr>
<td><strong>Altimate Xm</strong></td>
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<td></td>
</tr>
<tr>
<td>Xpodopt</td>
<td></td>
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</tr>
</tbody>
</table>

### TABLE B

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
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<tr>
<td>Xm</td>
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<td>Xs</td>
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<td><strong>Altimate Xm</strong></td>
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</table>

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
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</thead>
<tbody>
<tr>
<td>XL</td>
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<td>Xm</td>
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<td>Xs</td>
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<td>Xpoh</td>
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<td>2XL</td>
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<tr>
<td><strong>2.542</strong></td>
<td>29</td>
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</table>

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths, this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

**File Name =** C9004[3]L.xls  
**Data Set Name =** C9004[3][NO.]  
**Date & Time =** 6/4/15 10:03 PM

- Xpod 90/95 Reached Anywhere?  
  - NOT REACHED

- Classwidth @ 90/95 Xpod = 0.965 inch
- Classlength @ 90/95 Xpod = 0.005 inch
- Lower Confidence Bound = 0.8931 inch
- Best LCL = 0.7080 inch
- Classwidth @ Best LCL = 0.0260 inch
- Classlength @ Best LCL = 0.7080 inch
- User Provided a 90/95 POD @ =
- User's Maximum Allowed Classlength =
- Inspector Classwidth @ Xp =
- POD @ Xpod =

- Survey/Optimum Xpoh = 1.1750 - 0.016 inch
- 26 Samples

- NTIAC 90% POD = 0.965 @ 0.005 inch
- NTIAC 90/95 POD =

- **False Call Rate**

- Largest Classlength, XL = 1.271 inch
- Samples Needed @ XL = 23
- Classlength Mid-point, Xm =
- Samples Needed @ Xm =
- Smallest Classlength, Xs =
- Samples Needed @ Xs =
- New Smaller Classlength, Xss =
- BestLCL Classlength, Xcl =
- Samples Needed @ Xcl =
- POD Classlength, Xpoh = 1.210 inch
- Samples Needed @ Xpoh = 23
- New Largest Classlength, 2XL = 2.543 inch
- Xn is Near Verification Point =
- Opt. POD classlength, Xpodopt =
- Samples Needed @ Xpodopt =
- Xp =

**Warning:** No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

---

### Directed DOE Options

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>1.271</td>
</tr>
<tr>
<td>Xm</td>
<td>1.210</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td>2.542</td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =

---

### Table A*

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table B*

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

* *Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.*

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

---

369
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Need 15 more large flaws.

Warning: No false call analysis.

CASE 2 - 90/95 Xpod is reached at a class length. Further VALIDATION is required. Recommend satisfying XL and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.

File Name = CA001(3)L.xls
Data Set Name = CA001(3)(CRACK)
Date & Time = 6/4/15 10:04 PM

- Xpod 90/95 Reached Anywhere?
- Class Length @ 90/95 Xpod
- Lower Confidence Bound
- Best LCL
- Class Length @ Best LCL
- User Provided a 90/95 POD
- User's Maximum Allowed Class Length
- POD @ Xpod

- 1.000 inch
- 0.0210 inch
- 0.1200 inch
- 0.9050 inch
- 1.0000 inch

- 0.000 inch
- 0.000 inch
- 0.000 inch
- 0.000 inch
- 0.000 inch

- 6/4/15 10:04 PM
- REACHED
- 0.0210 inch
- 0.1200 inch
- 0.9050 inch
- 1.0000 inch

- NTIAC 90% POD = 0.000
- NTIAC 90/95 POD = 0.000
- False Call Rate = 0.000

- 1.188 inch
- 43 inch
- 0.493 inch
- 23 inch
- Opt. POD class length, Xpodopt = 0.000 inch
- New Largest Class length, 2XL = 0.000 inch
- Xn is Near Verification Point = 0.000 inch
- Xp = 1.188 inch

- Analysis file name: DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsm
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpoh = 0.9950 - 0.004 inch
26 Samples

False Call Rate = with UCL @ 95% =

- Largest Classlength, XL = 1.188 inch
- Samples Needed @ XL = 26
- Classlength Mid-point, Xm = inch
- Samples Needed @ Xm = inch
- Smallest Classlength, Xs = inch
- Samples Needed @ Xs = inch
- New Smaller Classlength, Xss = inch
- BestLCL Classlength, Xlcl = inch
- Samples Needed @ Xlcl = inch
- Opt. POD classlength, Xpodopt = inch
- Samples Needed @Xpodopt = inch

Xp = inch
Largest Classlength, XL = 1.188 inch
0.9950 - 0.004 inch
26 Samples

0.900 0.800 0.700 0.600 0.500 0.400 0.300 0.200 0.100 0.000
0.900 0.800 0.700 0.600 0.500 0.400 0.300 0.200 0.100 0.000
0.7206 inch
0.0060 inch
0.1000 inch

CA002(3)L.xls
CA002(3)L(CRACK)
6/4/15 10:05 PM
NOT REACHED

Classwidth @ 90/95 Xpod = inch
Lower Confidence Bound = 0.7206 inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod = inch

File Name = CA002(3)L.xls
Data Set Name = CA002(3)L(CRACK)
Date & Time = 6/4/15 10:05 PM

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = inch
Lower Confidence Bound = 0.7206 inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod = inch
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**TABLE C**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

File Name = CA0023L.xls
Data Set Name = CA0023L(CRACK)

Directed DOE Options

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>1.188</td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td>1.188</td>
</tr>
<tr>
<td>2XL</td>
<td>2.376</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No Misses Observed  At Least One Miss Occurred  XL  Xm  Xs  Xss  Xld  Xpoh  2XL  Xpod  Xpodopt

* No Misses Observed  At Least One Miss Occurred  XL  Xm  Xs  Xss  Xld  Xpoh  2XL  Xpod  Xpodopt

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 20 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

FILE NAME = CA003[3].L.xls
Data Set Name = CA003[3](LCK. NO.)

Date & Time = 6/4/15 10:06 PM
Reached
Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod
Classlength @ 90/95 Xpod
Lower Confidence Bound
Best LCL
Classwidth @ Best LCL
Classlength @ Best LCL
User Provided a 90/95 POD @
User's Maximum Allowed Classlength
Inspector Classwidth @ Xp
POD @ Xpod

Best LCL Classlength, Xlcl
Xpoh
False Call Rate @ with UCL @ 95%
Largest Classlength, XL
Samples Needed @ XL
Classlength Mid-point, Xm
Samples Needed @ Xm
Smallest Classlength, Xs
Samples Needed @ Xs
New Smaller Classlength, Xss
Opt. POD classlength, Xpodopt
Samples Needed @ Xpodopt

Warning: No false call analysis.

CASE 1 - 90/95 Xpod is reached. Xp used to satisfy XL and alternate Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Need 14 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.

Survey/Optimum Xpoh = 0.000 Inch Samples

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = 1.435 Inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 0.519 Inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =

Xp = 0.4780 Inch

File Name = CB001[3]L.xls
Data Set Name = CB001[3](L.CK. NO.)
Date & Time = 6/4/15 10:07 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod =
Lower Confidence Bound =
Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD @
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod = 1.0000

CB001(3)L.xls
Warning: No false call analysis.

Large flaw validation failure. Need 14 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 16 more large flaws.

Note: Xpodopt is within one class width of Xpod.

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Survey/Optimum Xpoh = 0.2730 inch ± 0.012 inch 26 Samples

NTIAC 90% POD = 0.906 ± 0.150 inch
NTIAC 90/95 POD = 0.904 ± 0.195 inch

False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 1.435 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.992 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength , Xcl =
Samples Needed @ Xcl =
POH Classlength , Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.295 inch
Samples Needed @Xpodopt = 2
Xp = 0.3060 inch

Xp, 90/95 POD
MLE(Mean) POD
MLE(95%) LCL

Warning: No false call analysis.

File Name = CB002(3)l.xls
Data Set Name = CB002(3)(L, NO.)
Date & Time = 6/4/15 10:08 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0330 inch
Lower Confidence Bound = 0.295 inch
Best LCL = 0.3060 inch
Classwidth @ Best LCL =
Classlength @ Best LCL =
user Provided a 90/95 POD @
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod = 1.0000

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
**Detection Probability** (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 16 more large flaws. Any highlighted Misses are RED and shown in Column A of this data sheet.

**Warning:** No false call analysis.

### Case 1
- **90/95 Xpod is reached.** Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.

### Survey/Inferential Xpod

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTIAC 90% POD</td>
<td>0.902 @ 0.210</td>
</tr>
<tr>
<td>NTIAC 90/95 POD</td>
<td>0.900 @ 0.345</td>
</tr>
</tbody>
</table>

### False Call Rate

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>False Call Rate (with UCL @ 95%)</td>
<td>0.000</td>
</tr>
</tbody>
</table>

### Sample Calculations

- **Largest Classlength, XL:** 1.435 inch
- **Samples Needed @ XL:**
- **Classlength Mid-point, Xm:** 0.992 inch
- **Samples Needed @ Xm:**
- **Smallest Classlength, Xs:**
- **Samples Needed @ Xs:**
- **New Smaller Classlength, Xss:**
- **Best LCL Classlength, Xlcl:**
- **Samples Needed @ Xlcl:**
- **POH Classlength, Xpoh:**
- **Samples Needed @ Xpoh:**
- **Opt. POD classlength, Xpodopt:**
- **Samples Needed @ Xpodopt:**
- **Xp:** 0.4980 inch

### Analysis File Name:

- **DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsm**
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Alternate Xm = Xpodopt**

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 5 more large flaws.

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

CASE 2 - 90/95 Xpod is reached at a class length. Further VALIDATION is required. Recommend satisfying XL and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.

File Name = CC001(3).xls
Data Set Name = CC001(3)(LCR. NO.)
Date & Time = 6/4/15 10:10 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0230 inch
Classlength @ 90/95 Xpod = 0.0830 inch
Lower Confidence Bound = 0.9050 inch
Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD @
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod = 1.0000 inch

Case:

Survey/Optimum Xpoh = 1.000 @ 0.005 inch
NTIAC 90% POD = 1.000 @ 0.005 inch
NTIAC 90/95 POD = 0.904 @ 0.075 inch
False Call Rate = 0.000 with UCL @ 95% =
Largest Classlength, XL = 1.562 inch
Samples Needed @ XL = 26
Classlength Mid-point , Xm = 0.616 inch
Samples Needed @ Xm = 20
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
Xp = 0.616 inch

Large flaw validation failure. Need 5 more large flaws.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resloved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

### Directed DOE Options

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>1.562</td>
</tr>
<tr>
<td>Xm</td>
<td>0.616</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

---

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2890</td>
<td>43</td>
</tr>
<tr>
<td>1.1190</td>
<td>37</td>
</tr>
<tr>
<td>1.1100</td>
<td>37</td>
</tr>
<tr>
<td>0.8950</td>
<td>40</td>
</tr>
</tbody>
</table>

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5620</td>
<td>26</td>
</tr>
<tr>
<td>1.1760</td>
<td>26</td>
</tr>
<tr>
<td>1.1760</td>
<td>26</td>
</tr>
<tr>
<td>0.9370</td>
<td>26</td>
</tr>
</tbody>
</table>
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Need 5 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet
MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the P0H function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Large flaw validation failure. Need 5 more large flaws.

Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

**Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)**

**Larger flaw validation failure. Need 5 more large flaws.**

Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.

**CASE 1**: 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.

**False Call Rate =**

- NTIAC 90% POD = 0.906 @ 0.040 inch
- NTIAC 90/95 POD = 0.904 @ 0.065 inch

**Sampling and Testing:**

- Xp = 1.562 inch
- Xm = 1.119 inch
- XL = 1.000 inch
- Xs = 0.065 inch
- Xlcl = 0.905 inch
- Xpoh = 0.904 inch
- Xpodopt = 0.906 inch

**Samples Needed:**

- XL = 386
- Xm = 178
- Xs = 109
- Xlcl = 178
- Xpoh = 178
- Xpodopt = 178
Although Xpod appears to have been reached at a point, there are misses at larger class lengths; this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

### Directed DOE Options

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 1.562</td>
<td></td>
</tr>
<tr>
<td>Xm = 1.119</td>
<td></td>
</tr>
<tr>
<td>Xs =</td>
<td></td>
</tr>
<tr>
<td>Xss =</td>
<td></td>
</tr>
<tr>
<td>Xpoh =</td>
<td></td>
</tr>
<tr>
<td>2XL =</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

### TABLE A*

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

### TABLE B*

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

#### TABLE C

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 0.705.

MLE Divergence Warning: Initial results listed.

Warning: No false call analysis.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Survey/Optimum Xpoh = 0.1380 - 0.0570 Inch
26 Samples

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = 0.495 Inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 0.308 Inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.138 Inch
Samples Needed @ Xpodopt = 26
Xp = 0.2350 Inch

File Name = CD0013L.xls
Data Set Name = CD0013L(CK. NO.)
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

### Directed DOE Options

<table>
<thead>
<tr>
<th>Table C</th>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.495</td>
<td>26</td>
</tr>
<tr>
<td>Xm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td>0.308</td>
<td>5</td>
</tr>
<tr>
<td>Xpod</td>
<td>0.297</td>
<td>8</td>
</tr>
<tr>
<td>2XL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

### Table A*

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

### Table B*

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

Xpod, Class Length No. Need

### Selected class lengths

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

### Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Table C</th>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.495</td>
<td>26</td>
</tr>
<tr>
<td>Xm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td>0.308</td>
<td>5</td>
</tr>
<tr>
<td>Xpod</td>
<td>0.297</td>
<td>8</td>
</tr>
<tr>
<td>2XL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

### Additional Samples Needed

<table>
<thead>
<tr>
<th>No Misses Observed</th>
<th>At Least One Miss Occurred</th>
<th>XL</th>
<th>Xm</th>
<th>Xs</th>
<th>Xss</th>
<th>Xlcl</th>
<th>Xpoh</th>
<th>2XL</th>
<th>Xpod</th>
<th>Xpodopt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.

**Warning:** No false call analysis.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

**Survey/Optimum Xpoh = 0.2350 @ 0.010 inch**
**23 Samples**

**False Call Rate =**

- **Largest Classlength, XL = 0.2350 inch**
- **Samples Needed @ XL = 26**
- **Classlength Mid-point, Xm =**
- **Samples Needed @ Xm =**
- **Smallest Classlength, Xs =**
- **Samples Needed @ Xs =**
- **New Smaller Classlength, Xss =**
- **Best LCL Classlength, Xlcl = 0.2350 inch**
- **Samples Needed @ Xlcl = 8**
- **POH Classlength, Xpoh = 0.2350 inch**
- **Samples Needed @ Xpoh = 8**
- **New Largest Classlength, 2XL =**
- **Xn is Near Verification Point =**
- **Opt. POD classlength, Xpodopt =**
- **Samples Needed @ Xpodopt =**
- **Xp = inches**
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 2 - 90/95 Xpod is reached at a class length. Further VALIDATION is required. Recommend satisfying XL and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.

Survey/Optimum Xpoh = 0.000 Inch Samples

<table>
<thead>
<tr>
<th>NTIAC 90% POD</th>
<th>0.916 @ 0.030 Inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTIAC 90/95 POD</td>
<td>0.907 @ 0.040 Inch</td>
</tr>
</tbody>
</table>

False Call Rate = with UCL @ 95% =

<table>
<thead>
<tr>
<th>Largest Classlength, XL</th>
<th>0.069 Inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samples Needed @ XL</td>
<td>43</td>
</tr>
<tr>
<td>Classlength Mid-point, Xm</td>
<td>0.049 Inch</td>
</tr>
<tr>
<td>Samples Needed @ Xm</td>
<td>14</td>
</tr>
<tr>
<td>Smallest Classlength, Xs</td>
<td>Inch</td>
</tr>
<tr>
<td>Samples Needed @ Xs</td>
<td></td>
</tr>
<tr>
<td>New Smaller Classlength, Xss</td>
<td>Inch</td>
</tr>
<tr>
<td>BestLCL Classlength, Xcl</td>
<td>Inch</td>
</tr>
<tr>
<td>Samples Needed @ Xcl</td>
<td></td>
</tr>
<tr>
<td>POD Classlength, Xpoh</td>
<td>Inch</td>
</tr>
<tr>
<td>Samples Needed @ Xpoh</td>
<td></td>
</tr>
<tr>
<td>New Largest Classlength, 2XL</td>
<td>Inch</td>
</tr>
<tr>
<td>Xn is Near Verification Point</td>
<td>Inch</td>
</tr>
<tr>
<td>Opt. POD classlength, Xpodopt</td>
<td>Inch</td>
</tr>
<tr>
<td>Samples Needed @Xpodopt</td>
<td>Inch</td>
</tr>
<tr>
<td>Xp</td>
<td>Inch</td>
</tr>
</tbody>
</table>
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the PoH function may be oscillatory. This needs to be checked. The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate Xpod target points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

<table>
<thead>
<tr>
<th>TABLE C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class Length</td>
</tr>
<tr>
<td>XL = 0.069</td>
</tr>
<tr>
<td>Xm = 0.049</td>
</tr>
</tbody>
</table>

**Alternate Xm =**

$X_{podopt} = \text{Xpod}$

**Directed DOE Options**

- TABLE A*
  - Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.
  - Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod,Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0590</td>
<td>43</td>
</tr>
<tr>
<td>0.0670</td>
<td>38</td>
</tr>
<tr>
<td>0.0660</td>
<td>39</td>
</tr>
<tr>
<td>0.0650</td>
<td>38</td>
</tr>
</tbody>
</table>

No Misses Observed ▲ At Least One Miss Occurred △ XL ○ Xm ○ Xs □ Xss × Xlcl × Xpod × 2XL × Xpodopt

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the PoH function may be oscillatory. This needs to be checked. The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.**

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 0.39.

MLE Divergence Warning: Initial results listed.

Warning: No false call analysis.

CASE 2 - 90/95 Xpod is reached at a class length. Further VALIDATION is required. Recommend satisfying XL and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.

Survey/Optimum Xpoh =

NTIAC 90% POD =

NTIAC 90/95 POD =

False Call Rate =

with UCL @ 95% =

Largest Classlength , XL =

Samples Needed @ XL =

Classlength Mid-point , Xm =

Samples Needed @ Xm =

Smallest Classlength, Xs =

Samples Needed @ Xs =

New Smaller Classlength, Xss  =

BestLCL Classlength, Xlcl =

Samples Needed @ Xlcl =

Opt. POD classlength, Xpodopt =

New Largest Classlength , 2XL =

Xm is Near Verification Point =

POH Classlength, Xpoh =

Samples Needed @ Xpoh =

XL is Near Verification Point =

Opt. POD classlength, Xpodopt =

Samples Needed @ Xpodopt =

Xp =

probability of hit (POH), lower confidence limit, LCL

class length,

detection probability (utilization of DOEPPOD results requires approval of engineering authority)
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.*

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Large flaw validation successful.

Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

File Name = CE012(6).xls
Data Set Name = CE012(6)(OCRK #)
Date & Time = 6/4/15 10:33 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.020
Classlength @ 90/95 Xpod = 0.010
Lower Confidence Bound = 0.9129
Best LCL = inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod = 1.000

Large flaw validation successful.

Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

Class Width, inch

Class Length, inch

Probability of Hit (POH) in Class Range

Analysis file name: DOEPOD.x1.2.0.1.PC.OCRk2010.Win7.dot

Probability of Hit (POH) in Class Range

Lower Confidence Bound @ 95%
Hit/Miss
Xp, 90/95 POD
MLE(Mean) POD
MLE(95%) LCL

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = 0.069 inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 0.028 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =
Xp = 0.010 inch

NTIAC 90% POD = 0.917 @ 0.005 inch
NTIAC 90/95 POD = 0.949 @ 0.010 inch

Survey/Optimum Xpoh = 0.000 inch Samples
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

---

File Name = CE01260D.xls
Data Set Name = CE01260D(CRK #)

**Directed DOE Options**

<table>
<thead>
<tr>
<th>TABLE C</th>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.069</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td>0.028</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

---

**Table A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
</table>

**Table B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
</table>

---

* Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Case 1: 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Validation gap exists. Xp may validate between Xp and XL when causes of misses are understood and corrected.

Warning: No false call analysis.

Large flaw validation failure. Need 1 more large flaws. Any highlighted misses are RED and shown in Column A of this data sheet.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

* **Alternate Xm =**
  
  **Xpodopt =**

*Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.*

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

**Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.**

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

*Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

---

### Directed DOE Options

| File Name | Data Set Name | CE021\(6L\)xls | CE021\(6\)\(6\)\(CRK\) # |

### Table A *

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
</table>

**Alternate Xm = Xpodopt**

### Table B *

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>No. Need</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Value**

<table>
<thead>
<tr>
<th>Content</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.700</td>
<td>29</td>
</tr>
</tbody>
</table>

---

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.*

*The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.*

*The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.*

*Follow sample selection priority in the DOEPOD Manual.*

*Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.*

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.*

---

*Graph showing the number of additional samples needed for different class lengths.*

---

*Table showing the additional samples required for different class lengths.*

---

*Graph showing the directed DOE options with different class lengths.*

---

*Graph showing the relationship between Xpod and class length.*
CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 1 more large flaws.

Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.*

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.*
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.423.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

File Name = CE022(6).xls
Data Set Name = CE022(6)(CRK #)
Date & Time = 6/4/15 10:51 PM
REACHED
Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.1410 inch
Lower Confidence Bound = 0.9050 inch
Best LCL =
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ inch
User Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp =
POD @ Xpod = 1.000

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xp and XL when causes of highlighted Misses are understood and corrected.

Survey/Optimum Xpoh = 0.000 inch Samples

False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 0.350 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.250 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
Opt. POD classlength, Xpodopt =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Samples Needed @ Xpodopt =

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses, and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
</table>

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
</table>
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpoh = 0.000 Inch Samples

NTIAC 90% POD = @ inch
NTIAC 90/95 POD = @ inch
False Call Rate = with UCL @ 95% =

Largest Classlength , XL = inch
Samples Needed @ XL =
Classlength Mid-point , Xm = inch
Samples Needed @ Xm =
Smallest Classlength , Xs = inch
Samples Needed @ Xs =
New Smaller Classlength , Xss = inch
Best LCL Classlength , Xcl = inch
Samples Needed @ Xcl =
POH Classlength , Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength , 2XL = inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @ Xpodopt =
Xp = inch
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.165.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

CASE 2 - 90/95 Xpod is reached at a class length. Xp used to satisfy XL requirements. Further VALIDATION is required.
Recommend satisfying Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in T

Survey/Optimum Xpod = 0.000 inch Samples

NTIAC 90% POD = 0.912 @ 0.025 inch
NTIAC 90/95 POD = 0.938 @ 0.035 inch

False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 0.069 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.062 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
Xp = 0.065 inch

Large flaw validation failure. Extend flaw size range to 0.165.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 0.78.

Note: Xpodopt is within one class width of Xpod.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**Satisfying the Alternate Xm requires to a extends to the Xpod listed.

No Misses Observed □ At least One Miss Occurred ▲ XL ○ Xm □ Xs □ Xss □ Xlcl □ Xpoh □ 2XL □ Xpod □ Xpodopt

File Name = CE032(6L.xls Data Set Name = CE032(6L)CRK #

Directed DOE Options

TABLE C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpoh</td>
<td>0.258</td>
</tr>
<tr>
<td>Xpodopt</td>
<td>29</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt = 0.258 29

** | **

TABLE A

| Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed. |
|---------------|------------------------------------------------|
| Xpod, Class Length | No. Need |
| No Misses Observed          | 0.350    |
| At least one Miss Occurred  | 0.285    |
| XL                          | 0.350    |
| Xm                          | 0.285    |
| Xs                          | 0.285    |
| Xss                         | 0.285    |
| Xlcl                        | 0.285    |
| Xpoh                        | 0.285    |
| 2XL                         | 0.285    |

TABLE B

| Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed. |
|---------------|------------------------------------------------|
| Xpod, Class Length | No. Need |
| No Misses Observed          | 0.350    |
| At least one Miss Occurred  | 0.285    |
| XL                          | 0.350    |
| Xm                          | 0.285    |
| Xs                          | 0.285    |
| Xss                         | 0.285    |
| Xlcl                        | 0.285    |
| Xpoh                        | 0.285    |
| 2XL                         | 0.285    |

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpod = 0.000 Inch Samples

NTIAC 90% POD = @ inch
NTIAC 90/95 POD = @ inch
False Call Rate = with UCL @ 95% =

Largest Classlength, XL = inch
Samples Needed @ XL =
Classlength Mid-point, Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
Best LCL Classlength, Xlcl = inch
Samples Needed @ Xlcl =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength, 2XL = inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @ Xpodopt =
Xp = inch
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

---

### Table A*

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpoh</th>
<th>2XL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.700</td>
<td>29</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =**

---

### Table B*

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpoh</th>
<th>2XL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.700</td>
<td>29</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =**

---

### Table C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =**

---

### Directed DOE Options

- **No Misses Observed**
- **At Least One Miss Occurred**
- **XL**
- **Xm**
- **Xs**
- **Xss**
- **Xlcl**
- **Xpoh**
- **2XL**
- **Xpodopt**

---

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**
### Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 0.162.

Warning: No false call analysis.

Any highlighted Misses are RED and shown in Column A of this data sheet.

<table>
<thead>
<tr>
<th>Probability of Hit (POH), Lower Confidence Limit, LCL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xp, 90/95 POD</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>0.000</td>
</tr>
<tr>
<td>0.010</td>
</tr>
<tr>
<td>0.020</td>
</tr>
<tr>
<td>0.030</td>
</tr>
<tr>
<td>0.040</td>
</tr>
<tr>
<td>0.050</td>
</tr>
<tr>
<td>0.060</td>
</tr>
<tr>
<td>0.070</td>
</tr>
<tr>
<td>0.080</td>
</tr>
</tbody>
</table>

### Class Length, inch

<table>
<thead>
<tr>
<th>Class Width @ 90/95 Xpod</th>
<th>Class Length @ 90/95 Xpod</th>
<th>Lower Confidence Bound @ 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0130</td>
<td>0.0540</td>
<td>0.9050</td>
</tr>
</tbody>
</table>

### User Provided a 90/95 POD @

<table>
<thead>
<tr>
<th>POD @ Xpod</th>
<th>Class Length @ Xp</th>
<th>Class Width @ Best LCL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>0.069</td>
<td>0.059</td>
</tr>
</tbody>
</table>

### Classwidth @ 90/95 Xpod

<table>
<thead>
<tr>
<th>Classwidth @ 90/95 Xpod</th>
<th>Classlength @ 90/95 Xpod</th>
<th>Lower Confidence Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0110</td>
<td>0.0530</td>
<td>0.9020</td>
</tr>
</tbody>
</table>

### User Provided a 90/95 POD @

<table>
<thead>
<tr>
<th>POD @ Xpod</th>
<th>Class Length @ Xp</th>
<th>Class Width @ Best LCL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>0.069</td>
<td>0.059</td>
</tr>
</tbody>
</table>

### Survey/Optimum Xpoh @

<table>
<thead>
<tr>
<th>NTIAC 90% POD</th>
<th>NTIAC 90/95 POD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.933</td>
<td>0.900</td>
</tr>
</tbody>
</table>

### False Call Rate @ with UCL @ 95%

<table>
<thead>
<tr>
<th>Largest Classlength, XL</th>
<th>Samples Needed @ XL</th>
<th>Classlength Mid-point, Xmn</th>
<th>Samples Needed @ Xmn</th>
<th>Smallest Classlength, Xs</th>
<th>Samples Needed @ Xs</th>
<th>New Smaller Classlength, Xss</th>
<th>Samples Needed @ Xss</th>
<th>Opt. POD classlength, Xpodopt</th>
<th>Samples Needed @Xpodopt</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.069</td>
<td>1.0000</td>
<td>0.059</td>
<td>1.0000</td>
<td>0.040</td>
<td>1.0000</td>
<td>0.040</td>
<td>1.0000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### CASE 1 - 90/95 Xpod is reached. Xp used to satisfy XL and alternate Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.

### Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.786.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

File Name = CED042[6].xls
Data Set Name = CED042[6\(\text{LRK NO.} \) ]
Date & Time = 6/4/15 11:05 PM
Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.0420 inch
Classlength @ 90/95 Xpod = 0.2620 inch
Lower Confidence Bound = 0.9001 inch
Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD @
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod = 0.9783

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

Warning: No false call analysis.

Survey/Optimum Xpoh = 0.2480 - 0.002 Inch 26 Samples
NTIAC 90% POD = 0.904 @ 0.185 inch
NTIAC 90/95 POD = 0.901 @ 0.125 inch
False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 0.350 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.301 inch
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Opt. POD classlength, Xpodopt =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Xp = 0.2630 inch
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

Here is the table for directed DOE options:

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.350</td>
</tr>
<tr>
<td>Xm</td>
<td>0.301</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpodopt</td>
<td></td>
</tr>
</tbody>
</table>

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpod = 0.0590 ± 0.002 Inch
28 Samples

NTIAC 90% POD = 0.907 @ 0.065 Inch
NTIAC 90/95 POD = 0.903 @ 0.115 Inch

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = inch
Samples Needed @ XL =
Classlength Mid-point, Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Large flaw validation successful.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.
Although $X_{pod}$ appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target $X_{pod}$ points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate $X_{m}$ requirement removes the need to meet the adjacent $X_{m}$ requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.758.
Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
### Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 0.189.

**Warning:** No false call analysis.

### DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsm Analysis file name:

- **File Name:** CE061(6).xls
- **Data Set Name:** CE061(6)(CRK NO.)
- **Date & Time:** 6/4/15 11:14 PM
- **Xpod 90/95 Reached Anywhere?** REACHED

- **Classwidth @ 90/95 Xpod:** 0.0900 inch
- **Lower Confidence Bound:** 0.0090 inch
- **Best LCL:** 0.0630 inch
- **User Provided a 90/95 POD @:**
- **User's Maximum Allowed Classlength:** inch
- **Classlength @ Best LCL:** inch
- **Inspector Classwidth @ Xp:** inch
- **POD @ Xpod:** 1.0000

### Table A

| NTIAC 90% POD | ∅ | 0.912 @ 0.040 inch |
| NTIAC 90/95 POD | ∅ | 0.903 @ 0.055 inch |

### False Call Rate with UCL @ 95%

- **Largest Classlength, XL:** 0.069 inch
- **Samples Needed @ XL:** 33
- **Classlength Mid-point, Xm:** 0.066 inch
- **Samples Needed @ Xm:** 29
- **Smallest Classlength, Xs:** inch
- **Samples Needed @ Xs:**
- **New Smaller Classlength, Xss:** inch
- **Best LCL Classlength, Xlcl:** inch
- **Samples Needed @ Xlcl:**
- **Opt. POD classlength, Xpodopt:** inch
- **New Largest Classlength, 2XL:** inch
- **Xm is Near Verification Point:**
- **Opt. POD classlength, Xpodopt:**
- **Samples Needed @Xpodopt:**

### Class Width

- **Class Width @ 90/95 POD:** 0.069 inch
- **Class Width @ MLE(Mean) POD:** 0.066 inch
- **Class Width @ MLE(95%) LCL:** inch
- **Class Width @ Xp:** inch
- **Class Width @ Defined POD:** inch

### Case 2 - 90/95 Xpod is reached at a class length. Further VALIDATION is required. Recommend satisfying XL and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and reolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probability of Hit (POH) in Class Range</td>
<td></td>
</tr>
<tr>
<td>Lower Confidence Limit</td>
<td></td>
</tr>
<tr>
<td>Probability of Hit (POH), Lower Confidence Limit</td>
<td></td>
</tr>
<tr>
<td>Xp, 90/95 POD</td>
<td></td>
</tr>
<tr>
<td>MLE(Mean) POD</td>
<td></td>
</tr>
<tr>
<td>MLE(95%) LCL</td>
<td></td>
</tr>
<tr>
<td>Class Length, inch</td>
<td>0.8829 inch</td>
</tr>
<tr>
<td>Class Length, inch</td>
<td>0.2460 inch</td>
</tr>
<tr>
<td>Best LCL</td>
<td>0.185 inch</td>
</tr>
<tr>
<td>Largest LCL, XL</td>
<td>0.185 inch</td>
</tr>
<tr>
<td>Smallest LCL, Xs</td>
<td>0.0940 inch</td>
</tr>
<tr>
<td>New Smaller LCL, Xss</td>
<td></td>
</tr>
<tr>
<td>Opt. POD classlength, Xpodopt</td>
<td></td>
</tr>
<tr>
<td>User Provided a 90/95 POD @</td>
<td></td>
</tr>
<tr>
<td>User's Maximum Allowed Closslength</td>
<td></td>
</tr>
<tr>
<td>POD @ Xpod</td>
<td></td>
</tr>
<tr>
<td>Survey/Optimum Xp</td>
<td>0.3300 inch</td>
</tr>
<tr>
<td>False Call Rate</td>
<td></td>
</tr>
<tr>
<td>with UCL @ 95%</td>
<td></td>
</tr>
<tr>
<td>Largest Classlength, XL</td>
<td>inch</td>
</tr>
<tr>
<td>Samples Needed @ XL</td>
<td>inch</td>
</tr>
<tr>
<td>Classlength Mid-point, Xm</td>
<td>inch</td>
</tr>
<tr>
<td>Samples Needed @ Xm</td>
<td>inch</td>
</tr>
<tr>
<td>Smallest Classlength, Xs</td>
<td>inch</td>
</tr>
<tr>
<td>Samples Needed @ Xs</td>
<td>inch</td>
</tr>
<tr>
<td>New Smaller Classlength, Xss</td>
<td>inch</td>
</tr>
<tr>
<td>BestLCL Classlength, Xicl</td>
<td>inch</td>
</tr>
<tr>
<td>Samples Needed @ Xicl</td>
<td>inch</td>
</tr>
<tr>
<td>POD Classlength, Xpod</td>
<td>inch</td>
</tr>
<tr>
<td>Samples Needed @ Xpod</td>
<td>inch</td>
</tr>
<tr>
<td>New Largest Classlength, 2XL</td>
<td>inch</td>
</tr>
<tr>
<td>Xn is Near Verification Point</td>
<td>inch</td>
</tr>
<tr>
<td>Opt. POD classlength, Xpodopt</td>
<td>inch</td>
</tr>
<tr>
<td>Samples Needed @ Xpodopt</td>
<td>inch</td>
</tr>
<tr>
<td>Xp</td>
<td>inch</td>
</tr>
</tbody>
</table>

**Warning: No false call analysis.**

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Large flaw validation failure. Need 1 more large flaws.

Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Class Length, inch

Probability of Hit (POH)

MLE(Mean) POD

MLE(95%) LCL

POH Classlength, Xpoh =

Samples Needed @ Xpoh =

New Largest Classlength, 2XL =

Xm is Near Verification Point =

Opt. POD classlength, Xpodopt =

Samples Needed @ Xpodopt =

Case 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = 0.069 inch

Samples Needed @ XL =

Classlength Mid-point, Xm = 0.055 inch

Samples Needed @ Xm =

Smallest Classlength, Xs =

New Smaller Classlength, Xss =

BestLCL Classlength, Xlcl =

Samples Needed @ Xlcl =

POH Classlength, Xpoh =

Samples Needed @ Xpoh =

Survey/Optimum Xpoh =

False Call Rate =

NTIAC 90% POD = 0.932 @ 0.015 inch

NTIAC 90/95 POD = 0.923 @ 0.020 inch

Warning: No false call analysis.

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

False Call Rate =

Largest Classlength, XL = 0.069 inch

Samples Needed @ XL =

Classlength Mid-point, Xm = 0.055 inch

Samples Needed @ Xm =

Smallest Classlength, Xs =

New Smaller Classlength, Xss =

BestLCL Classlength, Xlcl =

Samples Needed @ Xlcl =

POH Classlength, Xpoh =

Samples Needed @ Xpoh =

Survey/Optimum Xpoh =

False Call Rate =

NTIAC 90% POD = 0.932 @ 0.015 inch

NTIAC 90/95 POD = 0.923 @ 0.020 inch

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths indicating that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

Table A*
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

Table B*
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

### TABLE A*
<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xl</td>
<td>0.069</td>
</tr>
<tr>
<td>Xm</td>
<td>0.055</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

### TABLE B*
<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
</table>

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

---

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Need 2 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

CASE 1*: 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.

File Name = CED62[6].xls
Data Set Name = CED62[6](LRK NO. )
Date & Time = 6/4/15 11:20 PM
Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.0180 inch
Classlength @ 90/95 Xpod = 0.0980 inch
Lower Confidence Bound = 0.9001 inch
Best LCL = 0.902 inch
Classwidth @ Best LCL = 0.070 inch
Classlength @ Best LCL = 0.090 inch
User Provided a 90/95 POD @
User's Maximum Allowed Classlength = 0.000 inch
POD @ Xpod = 1.0000

Xpod 90/95 Reached Anywhere?
Classwidth @ Xp = 0.350 inch
Classlength @ Xp = 0.256 inch
Lower Confidence Bound @ 95% = 0.0190 inch
Best LCL = 0.0300 inch
Classwidth @ Best LCL = 0.056 inch
Classlength @ Best LCL = 0.090 inch
Inspectors Classwidth @ X0 = 0.0000 inch
POD @ Xp = 0.0000

Survey/Optimum Xpoh = 0.000 Inch
False Call Rate = 0.000 with UCL @ 95% = 0.000
NTIAC 90% POD = 0.902 @ 0.070 inch
NTIAC 90/95 POD = 0.904 @ 0.090 inch
Largest Classlength , XL = 0.350 Inch
Samples Needed @ XL = 0.068
Classlength Mid-point , Xm = 0.256 inch
Samples Needed @ Xm = 0.043
Smallest Classlength, Xs = 0.000 inch
Samples Needed @ Xs = 0.010
New Smaller Classlength, Xss = 0.000 inch
BestLCL Classlength, Xlcl = 0.000 inch
Samples Needed @ Xlcl = 0.000
Opt. POD classlength, Xpodopt = 0.000 inch
New Largest Classlength , 2XL = 0.000 inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
Xp = 0.1050 inch

Analysis file name: DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsm
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

** Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

*** The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

Xpod, Class Length
Additional Samples

**Alternate Xm = Xpod opt**

### Table C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.138</td>
<td>29</td>
</tr>
</tbody>
</table>

### Table A*

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

### Table B*

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpoh = 0.3470 ± 0.016 inch
28 Samples

NTIAC 90% POD = 0.901 @ 0.310 inch
NTIAC 90/95 POD = 0.900 @ 0.455 inch

False Call Rate = with UCL @ 95% =

- Largest Classlength, XL = 0.350 inch
- Samples Needed @ XL = 27
- Classlength Mid-point, Xn = inch
- Samples Needed @ Xn =
- Smallest Classlength, Xs = inch
- Samples Needed @ Xs =
- New Smaller Classlength, Xss = inch
- Best LCL Classlength, Xlcl = inch
- Samples Needed @ Xlcl = 28
- POH Classlength, Xpoh = 0.347 inch
- Samples Needed @ Xpoh =
- New Largest Classlength, 2XL = 0.700 inch
- Xn is Near Verification Point =
- Opt. POD classlength, Xpodopt = inch
- Samples Needed @ Xpodopt =
- Xp = inch
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
### Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 1 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

**Warning:** No false call analysis.

**CASE 1** - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

**Survey/Optimum Xpoh** = 0.000 Inch Samples

- **NTIAC 90% POD** = 0.917 @ 0.015 Inch
- **NTIAC 90/95 POD** = 0.925 @ 0.020 Inch

**False Call Rate** = with UCL @ 95%

- Largest Classlength, XL = 0.069 Inch
- Samples Needed @ XL =
- Classlength Mid-point, Xm = 0.035 Inch
- Samples Needed @ Xm =
- Smallest Classlength, Xs =
- Samples Needed @ Xs =
- New Smaller Classlength, Xss =
- BestLCL Classlength, Xlcl =
- Samples Needed @ Xlcl =
- Opt. POD classlength, Xpodopt =
- New Largest Classlength, 2XL =
- Xn is Near Verification Point =

**Xp** = 0.020 Inch

---

**POH Classlength, Xpoh**

**Largest Classlength**, XL = 0.069 Inch
 satisfying XL and Xm

**Survey/Optimum Xpoh** = 0.000 Inch Samples

- **NTIAC 90% POD** = 0.917 @ 0.015 Inch
- **NTIAC 90/95 POD** = 0.925 @ 0.020 Inch

**False Call Rate** = with UCL @ 95%

- Largest Classlength, XL = 0.069 Inch
- Samples Needed @ XL =
- Classlength Mid-point, Xm = 0.035 Inch
- Samples Needed @ Xm =
- Smallest Classlength, Xs =
- Samples Needed @ Xs =
- New Smaller Classlength, Xss =
- BestLCL Classlength, Xlcl =
- Samples Needed @ Xlcl =
- Opt. POD classlength, Xpodopt =
- New Largest Classlength, 2XL =
- Xn is Near Verification Point =

**Xp** = 0.020 Inch
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 1*: 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### Table A

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.350</td>
<td></td>
</tr>
<tr>
<td>0.250</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =

### Table B

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table C

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.
Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpoh = 0.000 Inch  Samples

NTIAC 90% POD = @ Inch

NTIAC 90/95 POD = @ Inch

False Call Rate = with UCL @ 95% =

Largest Classlength , XL = Inch

Samples Needed @ XL =

Classlength Mid-point , Xm = Inch

Samples Needed @ Xm =

Smallest Classlength, Xs = Inch

Samples Needed @ Xs =

New Smaller Classlength, Xss = Inch

Best LCL Classlength, Xlcl = Inch

Samples Needed @ Xlcl =

POH Classlength, Xpoh = Inch

Samples Needed @ Xpoh =

New Largest Classlength, 2XL = Inch

Xm is Near Verification Point =

Opt. POD classlength, Xpodopt = Inch

Samples Needed @ Xpodopt =

Xp = Inch
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### Directed DOE Options

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt = 0.138

**Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

* The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

* The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

* Follow sample selection priority in the DOEPOD Manual.

* Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

* Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

* The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

**Warning:** No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 10 more large flaws.

Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.

CASE 1*: 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

Survey/Optimum Xpoh = 0.901 @ 0.025 inch
NTIAC 90% POD = 0.921 @ 0.035 inch
False Call Rate = with UCL @ 95% = 0.000

Analysis file name: DOEPOD_v.1.2.01.PC.Office2010.Win7.xlsm

Xp, 90/95 POD
MLE(Mean) POD
MLE(95%) LCL

File Name = D1001AD.XLS
Data Set Name = D1001AD(CRACK #)

Date & Time = 6/4/15 11:36 PM
REACHED
Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.0040 inch
Classlength @ 90/95 Xpod = 0.0380 inch
Lower Confidence Bound = 0.9050 inch
Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =

User Provided a 90/95 POD @
User's Maximum Allowed Classlength =

POD @ Xp =
Best LCL Classlength, Xlcl =
POH Classlength, Xpoh =
New Largest Classlength, 2XL =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =

Xm is Near Verification Point =

Xp = 0.178 inch
Xm = 0.111 inch
XL = 0.178 inch
Xs = 0.111 inch

XL = 0.0040 inch
XS = 0.0380 inch
New Smaller Classlength, Xss  =

Largest Classlength , XL =
Smallest Classlength, Xs =
Sample Needed @ Xs =
Classlength Mid-point , Xm =
Smallest Classlength, Xs =

Warning:  No false call analysis.

Any highlighted Misses are RED and shown in Column A of this data sheet.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resloved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### TABLE A*
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
<tr>
<td><strong>Alternate Xm</strong></td>
<td>Xpodopt</td>
</tr>
</tbody>
</table>

### TABLE B*
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

### Table C
Selected class lengths with existing misses.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.178</td>
<td></td>
</tr>
<tr>
<td>Xm = 0.111</td>
<td></td>
</tr>
<tr>
<td>Xs =</td>
<td></td>
</tr>
<tr>
<td>Xss =</td>
<td></td>
</tr>
<tr>
<td>Xlcl =</td>
<td></td>
</tr>
<tr>
<td>Xpoh =</td>
<td></td>
</tr>
<tr>
<td>2XL =</td>
<td></td>
</tr>
<tr>
<td><strong>Alternate Xm</strong> = Xpodopt</td>
<td></td>
</tr>
</tbody>
</table>

---

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resloved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 10 more large flaws. Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

\[
\begin{array}{|c|c|c|c|c|c|c|}
\hline
\text{File Name} & \text{Data Set Name} & \text{Directed DOE Options} & \text{No Misses Observed} & \text{At Least One Miss Occurred} & \text{XL} & \text{Xm} & \text{Xs} & \text{Xss} & \text{Xlcl} & \text{Xpoh} & \text{2XL} & \text{Xpod} & \text{Xpodopt} \\
\hline
\text{D1001AL.XLS} & \text{D1001AL(CRACK #)} & \text{TABLE A*} & \text{Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.} & \text{XL} & 0.979 & \text{Xm} & 0.523 & \text{Xs} & \text{Xss} & \text{Xlcl} & \text{Xpoh} & \text{2XL} & \text{Xpod} & \text{Xpodopt} \\
\hline
\text{TABLE B*} & \text{Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.} & \text{Xpod, Class Length} & \text{Need} & \text{Xpod, Class Length} & \text{Need} \\
\hline
\hline
\end{array}
\]

\[
\begin{array}{|c|c|c|c|c|c|c|c|}
\hline
\text{Table C} & \text{Class Length} & \text{Additional Samples} \\
\hline
\text{XL} = 0.979 & \text{Xm} = 0.523 & \text{Xs} & \text{Xss} & \text{Xlcl} & \text{Xpoh} & \text{2XL} & \text{Xpod} & \text{Xpodopt} \\
\hline
\end{array}
\]

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 10 more large flaws.

Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Although $X_{pod}$ appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target $X_{pod}$ points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate $X_m$ requirement removes the need to meet the adjacent $X_m$ requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the $X_{pod}$ listed.

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the $X_{pod}$ listed.

TABLE C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.979</td>
<td></td>
</tr>
<tr>
<td>$X_m$ = 0.345</td>
<td></td>
</tr>
<tr>
<td>$X_s$ =</td>
<td></td>
</tr>
<tr>
<td>$X_{ss}$ =</td>
<td></td>
</tr>
<tr>
<td>$X_{lcl}$ =</td>
<td></td>
</tr>
<tr>
<td>$X_{poh}$ =</td>
<td></td>
</tr>
<tr>
<td>$2XL$ =</td>
<td></td>
</tr>
<tr>
<td>$X_{podot}$ =</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate $X_m$ = $X_{podot}$**

No Misses Observed
At Least One Miss Occurred

0.00 0.200 0.400 0.600 0.800 1.000 1.200 inch

0.00 5.00 10.00 15.00 20.00 25.00 30.00 35.00
CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Warning: No false call analysis.

Large flaw validation failure. Need 10 more large flaws.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POM function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POM function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POM function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POM function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

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Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

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Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

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Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

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The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POM function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POM function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 10 more large flaws.

Note: Xpodopt is within one class width of Xpod.

Warning: No false call analysis.

File Name = D1001CL.XLS
Data Set Name = D1001CL(Crack #)
Date & Time = 6/4/15 11:45 PM

Xpod 90/95 Reached Anywhere?
Class Length @ 90/95 Xpod
Class Width @ 90/95 Xpod
Lower Confidence Bound
Best LCL
Class Width @ Best LCL
Class Length @ Best LCL
User Provided a 90/95 POD @
User's Maximum Allowed Class Length

POH Class Length, Xpoh
New Largest Class Length, 2XL

Survey/Optimum Xpoh = 0.1170 @ 0.090 inch 27 Samples

NTIAC 90% POD = 0.911 @ 0.090 inch
NTIAC 90/95 POD = 0.907 @ 0.105 inch

False Call Rate = 0.017 inch with UCL @ 95% =

Largest Class Length, XL = 0.979 inch
Samples Needed @ XL =
Class Length Mid-point, Xm = 0.523 inch
Samples Needed @ Xm =
Smallest Class Length, Xs =
Samples Needed @ Xs =
New Smaller Class Length, Xss =
BestLCL Class Length, Xcl =
Samples Needed @ Xcl =
POH Class Length, Xph =
Samples Needed @ Xph =
Opt. POD class length, Xpodopt = 0.152 inch
New Largest Class Length, 2XL =
Xm is Near Verification Point =

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL Xp
used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Warning: No false call analysis.

Xpod 90/95 Reached Anywhere?
- NOT REACHED

Classwidth @ 90/95 Xpod = 0.178 inch
Classlength @ 90/95 Xpod = 0.149 inch
Lower Confidence Bound = 0.060 inch
Best LCL = 0.0356 inch
Classlength @ Best LCL = 0.0440 inch
User Provided a 90/95 POD at = 0.060 inch
User's Maximum Allowed Classlength = 0.0080 inch
Inspector Classwidth @ Xp = 0.904 inch
POD @ Xpod = 0.904

File Name = D1002AD.XLS
Data Set Name = D1002AD(CRACK #)
Date & Time = 6/4/15 11:48 PM

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Probability of Hit (POH), Lower Confidence Limit, LCL

Class Length, inch

Probability of Hit (POH) in Class Range, Lower Confidence Bound @ 95%

Survey/Optimum Xpoh = 0.149 - 0.022 inch
Opt. POD classlength, Xpodopt = 0.1490 - 0.022 inch
False Call Rate = with UCL @ 95% = 0.178 inch
Largest Classlength, XL = 0.178 inch
Samples Needed @ XL = 28
Classlength Mid-point, Xm = 0.149 inch
Samples Needed @ Xm = 28
Smallest Classlength, Xs = 0.0080 inch
Samples Needed @ Xs = 28
New Smaller Classlength, Xss = 0.0080 inch
Best LCL Classlength, Xlcl = 0.0440 inch
Samples Needed @ Xlcl = 28
POH Classlength, Xpoh = 0.149 inch
Samples Needed @ Xpoh = 28
New Largest Classlength, 2XL = 0.356 inch
Xm is Near Verification Point = 0.0080 inch
Opt. POD classlength, Xpodopt = 0.1490 - 0.022 inch
Samples Needed @ Xpodopt = 28
Xp = 0.904 inch
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 13 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

CASE 1: 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

Survey/Optimum Xpoh = 0.000 inch Samples

NTIAC 90% POD = 0.901 inch @ 0.170 inch

NTIAC 90/95 POD = 0.900 inch @ 0.265 inch

False Call Rate = False Call Rate with UCL @ 95% =

Largest Classlength , XL = 0.979 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.489 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =

Xp = 0.979 inch

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### Directed DOE Options

**Table C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.979</td>
<td></td>
</tr>
<tr>
<td>Xm = 0.489</td>
<td></td>
</tr>
<tr>
<td>Xs =</td>
<td></td>
</tr>
<tr>
<td>Xss =</td>
<td></td>
</tr>
<tr>
<td>Xlcl =</td>
<td></td>
</tr>
<tr>
<td>Xpoh =</td>
<td></td>
</tr>
<tr>
<td>2XL =</td>
<td></td>
</tr>
<tr>
<td><strong>Alternate Xm = Xpodopt =</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Table A*

Selected class lengths with existing misses. Each point requires additional samples to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length No. Need</th>
<th>Xpod, Class Length No. Need</th>
</tr>
</thead>
</table>

### Table B*

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
</table>

File Name = D1002AL.XLS
Data Set Name = D1002AL(CRACK #)
CASE 2 - 90/95 Xpod is reached at a class length. Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.*
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 13 more large flaws.

Warning: No false call analysis.

CASE 2: 90/95 Xpod is reached at a class length. Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.

Survey/Optimum Xpoh =

- NTIAC 90% POD = 0.901 @ 0.125 inch
- NTIAC 90/95 POD = 0.900 @ 0.295 inch

False Call Rate =

- Largest Classlength, XL = 0.979 inch
- Samples Needed @ XL = 27
- Classlength Mid-point, Xm = 0.489 inch
- Samples Needed @ Xm = 24
- Smallest ClassLength, Xs =
- Samples Needed @ Xs =
- New Smaller Classlength, Xss =
- BestLCL Classlength, Xlcl =
- Samples Needed @ Xlcl =
- POH Classlength, Xpoh =
- Samples Needed @ Xpoh =
- New Largest Classlength, 2XL =
- Xm is Near Verification Point =
- Opt. POD classlength, Xpodopt =
- Samples Needed @ Xpodopt =
- Xp =

False Call Rate = with UCL @ 95% =

- Largest Classlength, XL = 0.979 inch
- Samples Needed @ XL = 27
- Classlength Mid-point, Xm = 0.489 inch
- Samples Needed @ Xm = 24
- Smallest Classlength, Xs =
- Samples Needed @ Xs =
- New Smaller Classlength, Xss =
- BestLCL Classlength, Xlcl =
- Samples Needed @ Xlcl =
- POH Classlength, Xpoh =
- Samples Needed @ Xpoh =
- New Largest Classlength, 2XL =
- Xm is Near Verification Point =
- Opt. POD classlength, Xpodopt =
- Samples Needed @ Xpodopt =
- Xp =
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POM function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
### Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

**Large flaw validation failure. Need 13 more large flaws.**

*Any highlighted Misses are RED and shown in Column A of this data sheet*  

Warning: No false call analysis.

---

<table>
<thead>
<tr>
<th>Probability of Hit (POH), LCL</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Class</strong> Length, <strong>Xp</strong></td>
<td><strong>MLE(Mean) POD</strong></td>
</tr>
<tr>
<td><strong>POH Classlength, Xpoh</strong></td>
<td><strong>New Larger Classlength, 2XL</strong></td>
</tr>
<tr>
<td><strong>XL</strong></td>
<td><strong>Xm</strong></td>
</tr>
<tr>
<td><strong>New Smaller Classlength, Xss</strong></td>
<td><strong>BestLCL Classlength, Xcl</strong></td>
</tr>
<tr>
<td><strong>Best LCL</strong></td>
<td><strong>Classwidth @ Best LCL</strong></td>
</tr>
<tr>
<td><strong>Best POD @ Xp</strong></td>
<td><strong>Best POD @ Xp</strong></td>
</tr>
</tbody>
</table>

---

**CASE 1** - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.

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**Summary**

- **File Name:** D1002CD.XLS  
- **Data Set Name:** D1002CD(CRACK #)  
- **Date & Time:** 6/4/15 11:54 PM  
- **XL Reached Anywhere?** REACHED  
- **Classwidth @ 90/95 Xpod**  
- **Lower Confidence Bound**  
- **Best LCL**  
- **Classwidth @ Best LCL**  
- **Classlength @ Best LCL**  
- **User Provided a 90/95 POD**  
- **User's Maximum Allowed Classlength**  
- **POD @ Xp**  
- **Best LCL**  
- **POH Classlength, Xpoh**  
- **New Larger Classlength, 2XL**  
- **Opt. POD classlength, Xpodopt**  
- **Xm**  

---

**Analysis file name:** DOEPOD_v.1.2.01.PC.Office2010.Win7.xlsm

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**False Call Rate** with UCL @ 95%:

- **Largest Classlength, XL =** 0.178 inch
- **Samples Needed @ XL =** 0.105 inch
- **Classlength Mid-point, Xm =** 0.117 inch
- **Samples Needed @ Xm =** 0.057 inch
- **Smallest Classlength, Xs =** 0.105 inch
- **Samples Needed @ Xs =** 0.025 inch
- **New Smaller Classlength, Xss =** 0.105 inch
- **BestLCL Classlength, Xcl =** 0.105 inch
- **Samples Needed @ Xcl =** 0.040 inch
- **POH Classlength, Xpoh =** 0.105 inch
- **Samples Needed @ Xpoh =** 0.025 inch
- **New Larger Classlength, 2XL =** 0.105 inch
- **Xm is Near Verification Point =** 0.105 inch
- **Opt. POD classlength, Xpodopt =** 0.105 inch
- **Samples Needed @Xpodopt =** 0.025 inch

---

**Warning:** No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

<table>
<thead>
<tr>
<th>TABLE A*</th>
<th>Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.178</td>
</tr>
<tr>
<td>Xm</td>
<td>0.117</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =

<table>
<thead>
<tr>
<th>TABLE B*</th>
<th>Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod, Class Length</td>
<td>No. Need</td>
</tr>
</tbody>
</table>

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.987.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

**CASE 1** - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

**Survey/Optimum Xpoh**
- NTIAC 90% POD = 0.901 @ 0.090 inch
- NTIAC 90/95 POD = 0.902 @ 0.125 inch

**False Call Rate**
- with UCL @ 95% =
  - Largest Classlength, XL = 0.979 inch
  - Samples Needed @ XL =
  - Classlength Mid-point, Xm = 0.543 inch
  - Samples Needed @ Xm =
  - Smallest Classlength, Xs =
  - Samples Needed @ Xs =
  - New Smaller Classlength, Xss =
  - MLE(95%) LCL, Xlcl =
  - Samples Needed @ Xlcl =
  - POH Classlength, Xpoh =
  - Samples Needed @ Xpoh =
  - New Largest Classlength, 2XL =
  - Xm is Near Verification Point =
  - Opt. POD classlength, Xpodopt =
  - Samples Needed @Xpodopt =

**Xp = 0.3290 inch**

**Date & Time** = 6/4/15 11:55 PM
**File Name** = D1002CL.XLS
**Data Set Name** = D1002CL(Crack #)
**Warning:** No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Note: Xpodopt is within one class width of Xpod.

Warning: No false call analysis.

CASE 1 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

---

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**TABLE C**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

Xpod, Class Length

No. Additional Samples

- **XL**
- **Xm**
- **Xs**
- **Xss**
- **Xlcl**
- **Xpoh**
- **2XL**
- **Alternate Xm**
- **Xpodopt**

**Alternate Xm = 0.038**

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---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Large flaw validation failure. Need 5 more large flaws.

Note: Xpodopt is within one class width of Xpod.

Warning: No false call analysis.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths, which indicates that the P0H function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

---

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**TABLE C**

Selected class lengths with existing misses.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.610</td>
</tr>
<tr>
<td>Xm</td>
<td>0.262</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
<tr>
<td><strong>Alternate Xm</strong></td>
<td>0.102</td>
</tr>
<tr>
<td>Xpodopt</td>
<td>29</td>
</tr>
</tbody>
</table>
Large flaw validation failure. Need 11 more flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

CASE 1 - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

File Name = D100380.XLS
Data Set Name = D100380(CRACK #)
Date & Time = 6/5/15 12:02 AM

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.0350 inch
Classlength @ 90/95 Xpod = 0.9077 inch
Lower Confidence Bound = 0.0350 inch
Best LCL = 0.0030 inch
Classwidth @ Best LCL = 0.9077 inch
Classlength @ Best LCL = 0.0030 inch
User Provided a 90/95 POD @ = 1.0000
POD @ Xp = 1.0000

User's Maximum Allowed Classlength =
POD @ Xp =

Best LCL Classlength, Xlcl =
Opt. POD classlength, Xpodopt =

Classlength  Mid-point , Xm =
New Smaller Classlength, Xss =
POH Classlength, Xpoh =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =

Survey/Optimum Xpoh =
False Call Rate =
False Call Rate =
False Call Rate =

Largest Classlength , XL = 0.178 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.110 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xm is Near Verification Point =

0.931
0.920
0.000
0.020
0.025
0.0350
0.178
0.110
0.078
0.110
0.078
0.0350
**Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.**

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

---

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.178</td>
<td></td>
</tr>
<tr>
<td>Xm = 0.110</td>
<td></td>
</tr>
<tr>
<td>Xs =</td>
<td></td>
</tr>
<tr>
<td>Xss =</td>
<td></td>
</tr>
<tr>
<td>Xlcl =</td>
<td></td>
</tr>
<tr>
<td>Xpoh =</td>
<td></td>
</tr>
<tr>
<td>2XL =</td>
<td></td>
</tr>
<tr>
<td><strong>Alternate Xm =</strong></td>
<td></td>
</tr>
<tr>
<td>Xpodopt =</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**TABLE C**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

Xpod, Class Length | No. Need |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths; this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

---

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Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 4 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

MLE Divergence Warning: initial results listed.
Warning: No false call analysis.

File Name = D1003BL.XLS
Data Set Name = D1003BL(CRACK #)
Date & Time = 6/5/15 12:05 AM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0830 inch
Lower Confidence Bound = 0.0830 inch
Best LCL = 0.0000 inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ User’s Maximum Allowed Classlength = inch
POD @ Xpod = 1.0000

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

Survey/Optimum Xpoh = @ 0.035 inch
NTIAC 90% POD = @ 0.035 inch
NTIAC 90/95 POD = @ 0.045 inch
False Call Rate = with UCL @ 95% =

Largest Classlength , XL = 0.610 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.0830 inch
Samples Needed @ Xm = 0.262 inch
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength , Xss = inch
Best LCL Classlength, Xcl = inch
Samples Needed @ Xcl =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength , 2XL = inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @Xpodopt =

Xp = 0.0830 inch

Analysis file name: DOEPOD v1.2.01 PC 06052010 Win7.xlsm

Probability of Hit (POH) in Class Range
- Lower Confidence Bound @ 95%
- Hit/Miss
- Xp, 90/95 POD
- ---- MLE(Mean) POD
- --- MLE(95%) LCL
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Large flaw validation failure. Need 11 more large flaws.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POM function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
**Detection Probability** (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 0.87.

MLE Divergence Warning: Initial results listed.

Warning: No false call analysis.

**CASE 2 - 90/95 Xpod is reached at a class length. Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.**

**Survey/Optimum Xpoh =** 0.000 inch Samples

<table>
<thead>
<tr>
<th>NTIAC 90% POD =</th>
<th>0.901 @ 0.095 inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTIAC 90/95 POD =</td>
<td>0.901 @ 0.140 inch</td>
</tr>
</tbody>
</table>

**False Call Rate** = with UCL @ 95% =

| Largest Classlength , XL = | 0.610 inch |
| Samples Needed @ XL = | 18 |
| Classlength Mid-point , Xm = | 0.380 inch |
| Samples Needed @ Xm = | 17 |
| Smallest Classlength, Xs = | inch |
| Samples Needed @ Xs = | |
| New Smaller Classlength, Xss = | inch |
| Best LCL Classlength, Xcl = | inch |
| Samples Needed @ Xcl = | |
| POH Classlength, Xpoh = | inch |
| Samples Needed @ Xpoh = | |
| New Largest Classlength , 2XL = | inch |
| Xm is Near Verification Point = | |
| Opt. POD classlength, Xpodopt = | inch |
| Samples Needed @ Xpodopt = | |

**Xp** = inch

**POD @ Xpod =** 0.0000

**File Name** = D1003CL.XLS

**Data Set Name** = D1003CL(CRACK #)

**Date & Time** = 6/5/15 12:12 AM

REACHED

- **0.0490 inch**
- **0.2900 inch**
- **0.9001 inch**
- **1.0000 inch**
- **0.610 inch**
- **0.380 inch**
- **0.901 inch**
- **0.901 inch**
- **0.095 inch**
- **0.140 inch**

**MLE(Mean) POD**

**MLE(95%) LCL**

**Best LCL**

**Best Classwidth @ Best LCL**

**Classwidth @ Xp**

**Lower Confidence Bound**

**Best POD @ Xp**

**Inspection Classwidth @ Xp**

**User Provided a 90/95 POD @**

**User's Maximum Allowed Classlength =**

**NTIAC 90% POD =**

**NTIAC 90/95 POD =**

**MLE(95%) LCL**

**Probability of Hit (POH), Lower Confidence Limit, LCL**

**Class Length, inch**

**Probability of Hit (POH), Lower Confidence Limit, LCL**

**Probability of Hit (POH) in Class Range**

**Hit/Miss**

**Xp, 90/95 POD**

**MLE(Mean) POD**

**MLE(95%) LCL**

**Analysis file name:** DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsm
**Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.**

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
CASE 1: 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Large flaw validation failure. Extend flaw size range to 1.602.

Warning: No false call analysis.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Survey/Optimum Xpoh = 0.1490 -0.004 inch 28 Samples
False Call Rate =
with UCL @ 95% =
Largest Classlength , XL = 0.550 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.538 inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength , 2XL = inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.288 inch
Samples Needed @Xpodopt = 28
Xp = 0.5380 inch
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

### Directed DOE Options

#### Table A*

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.550</td>
<td></td>
</tr>
<tr>
<td>0.538</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.*

#### Table B*

<table>
<thead>
<tr>
<th>Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.288</td>
<td>28</td>
</tr>
</tbody>
</table>

*Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.*

#### Table C

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.550</td>
<td></td>
</tr>
</tbody>
</table>

*Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.*

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.*
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited Misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no Misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

---

**Directed DOE Options**

**TABLE A**

Selected class lengths with existing misses.

Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**TABLE C**

Selected class lengths with existing misses.

Each point requires additional samples in or to achieve the Xpod listed.

No Misses Observed

At Least One Miss Occurred

XL

Xm

Xs

Xss

Xlcl

Xpoh

2XL

Alternate Xm

Xpod opt

No.

Need

Xpod

Class Length

Additional Samples

XL = 0.144

Xm = 0.115

Xs =

Xss =

Xlcl =

Xpoh =

2XL =

Alternate Xm =

Xpod opt =

Number of Additional Samples Needed

0.000 0.020 0.040 0.060 0.080 0.100 0.120 0.140 0.160

0.00

0.05

0.10

0.15

0.20

0.25

0.30

0.35

30.00

25.00

20.00

15.00

10.00

5.00

0.00

**FILE NAME**

Data Set Name =

D2002BD XLS

D2002BD (CRACK #)

0.000 0.020 0.040 0.060 0.080 0.100 0.120 0.140 0.160

Number of Additional Samples Needed

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.*

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 1.602.

Warning: No false call analysis.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Survey/Optimum Xpoh = 0.1490 - 0.004 inch  28 Samples

NTIAC 90% POD = 0.901 @ 0.110 inch
NTIAC 90/95 POD = 0.902 @ 0.190 inch

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = 0.550 inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 0.538 inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Xp = 0.5340 inch

496
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths, this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Warning: No false call analysis.

Large flaw validation failure. Need 6 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Warning: No false call analysis.

Large flaw validation failure. Extend flaw size range to 1.602.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

File Name = D2002CL.XLS
Data Set Name = D2002(CLACK #)

Date & Time = 6/5/15 12:17 AM
REACHED
Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.550 inch
Classlength @ 90/95 Xpod = 0.538 inch
Lower Confidence Bound @ 95%
Best LCL = 0.3400 inch
Classwidth @ Best LCL = 0.0600 inch
Classlength @ Best LCL = 0.5340 inch
User Provided a 90/95 POD @ 0.901
User's Maximum Allowed Classlength = 1.0000 inch
POD @ Xpod =

D2002CL.XLS(CRACK #)

NTIAC 90% POD = 0.901 @ 0.085 inch
NTIAC 90/95 POD = 0.901 @ 0.145 inch
False Call Rate = 0.3400 - 0.005 inch
with UCL @ 95% = 23 Samples

Class Length, inch
Probability of Hit (POH) in Class Range
Lower Confidence Bound @ 95%
Hit/Miss
Xp, 90/95 POD
MLE(Mean) POD
MLE(95%) LCL

Analysis file name: DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsm

Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.426 inch
New Largest Classlength, 2XL = 0.538 inch
Samples Needed @ Xpodopt = 23
Samples Needed @ Xpoh =

XLargest Classlength, XL = 0.550 inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 0.538 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL classlength, Xlcl =
Samples Needed @ Xlcl =
POH classlength, Xpoh =
Samples Needed @ Xpoh =

Warning: No false call analysis.

Large flaw validation failure. Extend flaw size range to 1.602.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

File Name = D2002CL.XLS
Data Set Name = D2002(CLACK #)

Date & Time = 6/5/15 12:17 AM
REACHED
Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.550 inch
Classlength @ 90/95 Xpod = 0.538 inch
Lower Confidence Bound @ 95%
Best LCL = 0.3400 inch
Classwidth @ Best LCL = 0.0600 inch
Classlength @ Best LCL = 0.5340 inch
User Provided a 90/95 POD @ 0.901
User's Maximum Allowed Classlength = 1.0000 inch
POD @ Xpod =

D2002CL.XLS(CRACK #)

NTIAC 90% POD = 0.901 @ 0.085 inch
NTIAC 90/95 POD = 0.901 @ 0.145 inch
False Call Rate = 0.3400 - 0.005 inch
with UCL @ 95% = 23 Samples

Class Length, inch
Probability of Hit (POH) in Class Range
Lower Confidence Bound @ 95%
Hit/Miss
Xp, 90/95 POD
MLE(Mean) POD
MLE(95%) LCL

Analysis file name: DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsm

Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.426 inch
New Largest Classlength, 2XL = 0.538 inch
Samples Needed @ Xpodopt = 23
Samples Needed @ Xpoh =

XLargest Classlength, XL = 0.550 inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 0.538 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL classlength, Xlcl =
Samples Needed @ Xlcl =
POH classlength, Xpoh =
Samples Needed @ Xpoh =

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

**Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.**

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### Directed DOE Options

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE C**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

| XL = 0.407 |
| Xm = 0.265 |
| Xs =       |
| Xss =      |
| Xlcl =     |
| Xpoh =     |
| 2XL =      |

**Alternate Xm = Xpodopt**

---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.9.

Note: Xpodopt is within one class width of Xpod.

Warning: No false call analysis.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 0.75.

Note: Xpodopt is within one class width of Xpod.

Warning: No false call analysis.

File Name = D3001CL.XLS
Data Set Name = D3001CL(CRK #)

Date & Time = 6/5/15 12:20 AM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0450 inch
Classlength @ 90/95 Xpod = 0.2500 inch
Lower Confidence Bound = 0.9001 inch
Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD @
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod =

Best LCL Classlength, Xlcl =
POH Classlength, Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
New Smaller Classlength, Xss =
Largest Classlength, XL =
Smallest Classlength, Xs =
Classlength Mid-point, Xm =
Samples Needed @ XL =
Samples Needed @ Xs =
Samples Needed @ Xm =
Samples Needed @ Xlcl =
Samples Needed @ Xpoh =
Samples Needed @ Xss =
Samples Needed @ Xpodopt =

Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD @
User's Maximum Allowed Classlength =

False Call Rate = with UCL @ 95% =
Largest Classlength, XL = 0.407 inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 0.355 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
New Smaller Classlength, Xss =
Largest Classlength, XL =
Smallest Classlength, Xs =
Classlength Mid-point, Xm =
Samples Needed @ XL =
Samples Needed @ Xs =
Samples Needed @ Xm =
Samples Needed @ Xlcl =
Samples Needed @ Xpoh =
Samples Needed @ Xss =
Samples Needed @ Xpodopt =

Warning: No false call analysis.

CASE 18: 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart
Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Data File Name = D3003AL.XLS
Data Set Name = D3003AL(CRK #)

Date & Time = 6/5/15 12:21 AM
Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound LCL = 0.8444 inch
Best LCL = 0.0250 inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod =

Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound LCL = 0.8444 inch
Best LCL = 0.0250 inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod =

NTIAC 90% POD = 0.900 @ 0.265 inch
NTIAC 90/95 POD = 0.900 @ 0.555 inch

False Call Rate = with UCL @ 95% = 0.000 inch Samples

Largest Classlength , XL = inch
Samples Needed @ XL =
Classlength Mid-point , Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xcl = inch
Samples Needed @ Xcl =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength , 2XL = inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @Xpodopt =
Xp = inch

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Probability of Hit (POH), Lower Confidence Limit, LCL
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
**Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)**

Large flaw validation failure. Extend flaw size range to 0.648.

**MLE Divergence Warning:** Initial results listed.

**Warning:** No false call analysis.

---

### Probabilities of Hit (POH) and Lower Confidence Limit (LCL)

#### Parameters:
- **File Name:** D3003BL.XLS
- **Data Set Name:** D3003BL(CRK #)
- **Date & Time:** 6/5/15 12:22 AM
- **Xpod 90/95 Reached Anywhere?**
- **Best LCL**
- **Classwidth @ 90/95 Xpod**
- **Classlength @ 90/95 Xpod**
- **Lower Confidence Bound**
- **User Provided a 90/95 POD**
- **POD @ Xpod**
- **User’s Maximum Allowed Classlength**
- **Inspector Classwidth @ Xp**
- **POH Classlength, Xpoh**

#### Measurements:
- **D3003BL.XLS (Analysis file name: DOEPOD v.1.2.01 PC.Office2010.Win7.xlsm)**
- **Survey/Optimum Xpoh**
- **False Call Rate**

#### Results:
- **NTIAC 90% POD**
- **NTIAC 90/95 POD**
- **False Call Rate**

#### Dimensions:
- **Class Length, inch**
- **Classwidth @ 90/95 Xpod**
- **Classlength @ 90/95 Xpod**
- **Best LCL**
- **User Provided a 90/95 POD**
- **POD @ Xpod**

#### Calculations:
- **Largest Classlength**
- **Samples Needed @ XL**
- **Classlength Mid-point, Xm**
- **Opt. POD classlength, Xpodopt**

---

**CASE 18:** 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

---

**Graph Details:**
- **Probability of Hit (POH) in Class Range**
- **Lower Confidence Bound @ 95%**
- **Hit/Miss**
- **Xp, 90/95 POD**
- **MLE(Mean) POD**
- **MLE(95%) LCL**

---

510
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod</td>
<td></td>
<td>Xpod</td>
<td></td>
</tr>
<tr>
<td>XL</td>
<td></td>
<td>XL</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE A**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod</td>
<td></td>
<td>Xpod</td>
<td></td>
</tr>
<tr>
<td>XL</td>
<td></td>
<td>XL</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt = 0.176 15**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 0.648.

Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.
* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### Directed DOE Options

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.407</td>
</tr>
<tr>
<td>Xm</td>
<td>0.265</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

### TABLE A*
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TABLE B*
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TABLE C

<table>
<thead>
<tr>
<th>File Name = D3003CL.XLS</th>
<th>Data Set Name = D3003CL(CRK #)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked. The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
FILE NAME = D4004.XLS
DATA SET NAME = D4004(HOLE #)
DATE & TIME = 6/5/15 12:24 AM
XPOD 90/95 Reached Anywhere? = NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = Best LCL = 0.4729
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD = inch
User's Maximum Allowed Classlength @ Xp = inch
POD @ Xpod =

CASE 5 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and Xpoh.

D4004.v.1.2.01.PC.Office2010.Win7.xlsm Analysis file name:
-- Optimum Xpoh Available; Using Best LCL

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths; this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
**Detection Probability** (Utilization of DOEPOD results requires approval of Engineering Authority)

<table>
<thead>
<tr>
<th>Probability of Hit (POH), Lower Confidence Limit, LCL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Class Length</strong>, <strong>Detection Probability</strong></td>
</tr>
<tr>
<td><strong>MLE(Mean) POD</strong></td>
</tr>
<tr>
<td><strong>MLE(95%) LCL</strong></td>
</tr>
</tbody>
</table>

**Warning: No false call analysis.**

CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.

**Survey/Optimum Xpoh = 0.0681**, **@ 0.245 inch**

28 Samples

**False Call Rate =**

- **NTIAC 90% POD = 0.901 @ 0.245 inch**
- **NTIAC 90/95 POD = 0.900 @ 0.510 inch**

**Largest Classlength, XL = 0.090 inch**
**Samples Needed @ XL = 4**

**Classlength Mid-point, Xm = 0.090 inch**
**Samples Needed @ Xm = 4**

**Smallest Classlength, Xs = 0.090 inch**
**Samples Needed @ Xs = 4**

**New Smaller Classlength, Xss = 0.090 inch**
**Samples Needed @ Xss = 4**

**Best LCL Classlength, Xlcl = 0.090 inch**
**Samples Needed @ Xlcl = 4**

**POH Classlength, Xpoh = 0.090 inch**
**Samples Needed @ Xpoh = 4**

**New Largest Classlength, 2XL = 0.180 inch**
**Xn is Near Verification Point = 0.180 inch**

**Opt. POD classlength, Xpodopt = 0.180 inch**
**Samples Needed @ Xpodopt = 4**

**Xp = 0.090 inch**
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**SATISFYING THE ALTERNATE XM REQUIREMENT REMOVES THE NEED TO MEET THE ADJACENT XM REQUIREMENT.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

---

**Directed DOE Options**

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.090</td>
<td>4</td>
</tr>
<tr>
<td>Xm = 0.090</td>
<td></td>
</tr>
<tr>
<td>Xs = 0.090</td>
<td></td>
</tr>
<tr>
<td>Xss = 0.090</td>
<td></td>
</tr>
<tr>
<td>Xpoh = 0.180</td>
<td></td>
</tr>
<tr>
<td>2XL = 0.180</td>
<td>29</td>
</tr>
</tbody>
</table>

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.090</td>
<td>4</td>
</tr>
<tr>
<td>Xm = 0.090</td>
<td></td>
</tr>
<tr>
<td>Xs = 0.090</td>
<td></td>
</tr>
<tr>
<td>Xss = 0.090</td>
<td></td>
</tr>
<tr>
<td>Xpoh = 0.180</td>
<td></td>
</tr>
<tr>
<td>2XL = 0.180</td>
<td>29</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =**
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpoh = 1.6030 - 0.300
Xp = 2.403

Largest Classlength , XL = 2.403 inch
Samples Needed @ XL = 28

Classlength Mid-point , Xm = 1.603 inch
Samples Needed @ Xm = 28

Smallest Classlength, Xs = 1.603 inch
Samples Needed @ Xs = 28

New Smaller Classlength, Xss = 1.603 inch
Samples Needed @ Xss = 28

Opt. POD classlength, Xpodopt = 1.603 inch
Samples Needed @ Xpodopt = 28

New Largest Classlength , 2XL = 4.806 inch

XL is Near Verification Point = False

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Large flaw validation failure. Need 20 more large flaws.

**CASE 2 - 90/95 Xpod is reached at a class length. Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.**

**Warning: No false call analysis.**

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

**File Name =** D6001BL.XLS  
**Data Set Name =** D6001BL(CRK #)

- Xpod 90/95 Reached Anywhere?  
  - Classwidth @ 90/95 Xpod = 0.0700 inch  
  - Classlength @ 90/95 Xpod = 0.2500 inch
- Lower Confidence Bound = 0.9001 inch
- Best LCL = inch
- Classwidth @ Best LCL = inch
- Classlength @ Best LCL = inch
- User Provided a 90/95 POD @ = inch
- User's Maximum Allowed Classlength = inch
- POD @ Xp = 1.0000

- Xp = 2.403 inch
- Xp is Near Verification Point =
- Opt. POD classlength, Xpodopt = inch
- New Largest Classlength, 2XL = inch
- New Smaller Classlength, Xss = inch
- BestLCL Classlength, Xcl = inch
- Samples Needed @ Xcl =
- Samples Needed @ Xx =
- Smallest Classlength, Xs = inch
- Samples Needed @ Xs =
- Classlength Mid-point , Xm = 1.603 inch
- Samples Needed @ Xm = 28
- Largest Classlength , XL = 2.403 inch
- Samples Needed @ XL = 27

- POH Classlength, Xpoh = inch
- BestLCL Classlength, Xcl = inch
- Samples Needed @ Xcl =
- Samples Needed @ Xx =
- Smallest Classlength, Xs = inch
- Samples Needed @ Xs =
- Classlength Mid-point , Xm = 1.603 inch
- Samples Needed @ Xm = 28
- Largest Classlength , XL = 2.403 inch
- Samples Needed @ XL = 27

- NTIAC 90% POD = 0.901 at 0.315 inch
- NTIAC 90/95 POD =

**False Call Rate =**

- with UCL @ 95% =
- False Call Rate =

**Survey/Optimum Xpoh** =

- Samples @ 0.000 inch =
- Samples @ 0.315 inch =

**Large flaw validation failure. Need 20 more large flaws.**
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
**Detection Probability** (Utilization of DOEPOD results requires approval of Engineering Authority)

**Warning:** No false call analysis.

<table>
<thead>
<tr>
<th>POD @ Xpod</th>
<th>90/95 POD</th>
<th>90% POD</th>
<th>90/95 Xpod</th>
<th>90% Xpod</th>
</tr>
</thead>
<tbody>
<tr>
<td>False Call Rate</td>
<td>0.901</td>
<td>@ 0.330 inch</td>
<td>1.603</td>
<td>@ 0.300 inch</td>
</tr>
<tr>
<td>with UCL @ 95%</td>
<td>28 Samples</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>False Call Rate</td>
<td>28</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NTIAC 90% POD</td>
<td>0.901</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NTIAC 90/95 POD</td>
<td>0.901</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.**

<table>
<thead>
<tr>
<th>Analysis File name:</th>
<th>DOEPOD_v1.2.01_PC.Office2010.Win7.xlsm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date &amp; Time</td>
<td>6/5/15 12:31 AM</td>
</tr>
<tr>
<td>Xpod 90/95 Reached Anywhere?</td>
<td>NOT REACHED</td>
</tr>
<tr>
<td>Classwidth @ 90/95 Xpod</td>
<td>inch</td>
</tr>
<tr>
<td>Classlength @ 90/95 Xpod</td>
<td>inch</td>
</tr>
<tr>
<td>Lower Confidence Bound</td>
<td>0.8931</td>
</tr>
<tr>
<td>Best LCL</td>
<td>0.0800</td>
</tr>
<tr>
<td>Classwidth @ Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>Classlength @ Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>User Provided a 90/95 POD @</td>
<td>inch</td>
</tr>
<tr>
<td>User's Maximum Allowed Classlength</td>
<td>inch</td>
</tr>
<tr>
<td>Inspector Classwidth @ Xp</td>
<td>inch</td>
</tr>
<tr>
<td>POD @ Xp</td>
<td>inch</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>File Name =</th>
<th>D6001CL.XLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Set Name =</td>
<td>D6001CL(CRK #)</td>
</tr>
<tr>
<td>Date &amp; Time =</td>
<td>6/5/15 12:31 AM</td>
</tr>
<tr>
<td>Xp =</td>
<td>2.403 inch</td>
</tr>
<tr>
<td>Xp, 90/95 Reached Anywhere?</td>
<td>NOT REACHED</td>
</tr>
<tr>
<td>Classwidth @ Xp</td>
<td>inch</td>
</tr>
<tr>
<td>Classlength @ Xp</td>
<td>inch</td>
</tr>
<tr>
<td>Lower Confidence Bound</td>
<td>0.8931</td>
</tr>
<tr>
<td>Best LCL</td>
<td>0.0800</td>
</tr>
<tr>
<td>Classwidth @ Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>Classlength @ Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>User Provided a 90/95 POD @</td>
<td>inch</td>
</tr>
<tr>
<td>User's Maximum Allowed Classlength</td>
<td>inch</td>
</tr>
<tr>
<td>Inspector Classwidth @ Xp</td>
<td>inch</td>
</tr>
<tr>
<td>POD @ Xp</td>
<td>inch</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>POD @ Xpod</th>
<th>90/95 POD</th>
<th>90% POD</th>
<th>90/95 Xpod</th>
<th>90% Xpod</th>
</tr>
</thead>
<tbody>
<tr>
<td>False Call Rate</td>
<td>0.901</td>
<td>@ 0.330 inch</td>
<td>1.603</td>
<td>@ 0.300 inch</td>
</tr>
<tr>
<td>with UCL @ 95%</td>
<td>28 Samples</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>False Call Rate</td>
<td>28</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NTIAC 90% POD</td>
<td>0.901</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NTIAC 90/95 POD</td>
<td>0.901</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.**

<table>
<thead>
<tr>
<th>Analysis File name:</th>
<th>DOEPOD_v1.2.01_PC.Office2010.Win7.xlsm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date &amp; Time</td>
<td>6/5/15 12:31 AM</td>
</tr>
<tr>
<td>Xpod 90/95 Reached Anywhere?</td>
<td>NOT REACHED</td>
</tr>
<tr>
<td>Classwidth @ 90/95 Xpod</td>
<td>inch</td>
</tr>
<tr>
<td>Classlength @ 90/95 Xpod</td>
<td>inch</td>
</tr>
<tr>
<td>Lower Confidence Bound</td>
<td>0.8931</td>
</tr>
<tr>
<td>Best LCL</td>
<td>0.0800</td>
</tr>
<tr>
<td>Classwidth @ Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>Classlength @ Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>User Provided a 90/95 POD @</td>
<td>inch</td>
</tr>
<tr>
<td>User's Maximum Allowed Classlength</td>
<td>inch</td>
</tr>
<tr>
<td>Inspector Classwidth @ Xp</td>
<td>inch</td>
</tr>
<tr>
<td>POD @ Xp</td>
<td>inch</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>POD @ Xpod</th>
<th>90/95 POD</th>
<th>90% POD</th>
<th>90/95 Xpod</th>
<th>90% Xpod</th>
</tr>
</thead>
<tbody>
<tr>
<td>False Call Rate</td>
<td>0.901</td>
<td>@ 0.330 inch</td>
<td>1.603</td>
<td>@ 0.300 inch</td>
</tr>
<tr>
<td>with UCL @ 95%</td>
<td>28 Samples</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>False Call Rate</td>
<td>28</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NTIAC 90% POD</td>
<td>0.901</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NTIAC 90/95 POD</td>
<td>0.901</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

<table>
<thead>
<tr>
<th>TABLE C</th>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>2.403</td>
<td>28</td>
</tr>
<tr>
<td>Xm</td>
<td>1.603</td>
<td>28</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td>4.806</td>
<td>29</td>
</tr>
<tr>
<td><strong>Alternate Xm =</strong></td>
<td>Xpodopt =</td>
<td></td>
</tr>
</tbody>
</table>

### Directed DOE Options

**No Misses Observed**

**At Least One Miss Occurred**

<table>
<thead>
<tr>
<th>XL</th>
<th>2.403</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xm</td>
<td>1.603</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td>4.806</td>
</tr>
<tr>
<td><strong>Alternate Xm =</strong></td>
<td>Xpodopt =</td>
</tr>
</tbody>
</table>

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

---

File Name = D6001CL.XLS
Data Set Name = D6001CL(CRK #)

### TABLE A*

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

### TABLE B*

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

### TABLE C

Xpod, Class Length | No. Need | Xpod, Class Length | No. Need |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**No Misses Observed**

**At Least One Miss Occurred**

- XL
- Xm
- Xs
- Xss
- Xlcl
- Xpoh
- **2XL**
- **Xpod**
- **Xpodopt**

---

523
Warning: No false call analysis.

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpoh = 1.6030 - 0.300 inch
28 Samples

NTIAC 90% POD = 0.900 @ 0.575 inch

False Call Rate = with UCL @ 95%

Largest Classlength, XL = 2.403 inch
Samples Needed @ XL = 28

Classlength Mid-point, Xm = 1.603 inch
Samples Needed @ Xm = 28

Smallest Classlength, Xs = 1.1183 inch
Samples Needed @ Xs = 28

New Smaller Classlength, Xss = 1.1183 inch
 Samples Needed @ Xss = 28

Best LCL Classlength, Xlcl = 1.603 inch
Samples Needed @ Xlcl = 28

POH Classlength, Xpoh = 1.603 inch
New Largest Classlength, 2XL = 4.806 inch

Xn is Near Verification Point = inch
Opt. POD classlength, Xpodopt = inch
Samples Needed @ Xpodopt = inch

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
**Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.**

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

Table C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>2.403</td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xcl</td>
<td></td>
</tr>
<tr>
<td>Xpod</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td>4.806</td>
</tr>
</tbody>
</table>

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**Alternate Xm =**

Xpodopt =
### CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

#### False Call Rate

- **Survey/Optimum Xpoh**: 1.603 inch
- **Samples Needed @ Xpoh**: 28
- **Opt. POD classlength, Xpodopt**: 1.603 inch
- **Samples Needed @ Xpodopt**: 28

#### Summary

- **NTIAC 90% POD**: 0.901 inch
- **NTIAC 90/95 POD**: 0.300 inch
- **Largest Classlength, XL**: 2.403 inch
- **Samples Needed @ XL**: 28
- **Classlength Mid-point, Xm**: 1.603 inch
- **Samples Needed @ Xm**: 28
- **Smallest Classlength, Xs**: 0.901 inch
- **Samples Needed @ Xs**: 4.806 inch
- **New Smaller Classlength, Xss**: 0.2620 inch
- **Best LCL Classlength, Xlcl**: 0.0680 inch
- **Samples Needed @ Xlcl**: 28
- **POH Classlength, Xpoh**: 2.403 inch
- **Samples Needed @ Xpoh**: 28
- **New Largest Classlength, 2XL**: 4.806 inch
- **Opt. POD classlength, Xpodopt**: 1.603 inch
- **Samples Needed @ Xpodopt**: 28

#### Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POM function may be oscillatory. This needs to be checked.

Table A exhibited misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first. **Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.***

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

**Alternate Xm = Xpodopt =**

### TABLE C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>2.403</td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td>1.603</td>
</tr>
<tr>
<td>2XL</td>
<td>4.806</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =**

### Directed DOE Options

![Directed DOE Options Diagram](image)

- **FILE NAME = D6003BL.XLS**
- **DATA SET NAME = D6003BL(CRK # )**

- **TABLE A**
  - Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

- **TABLE B**
  - Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

- **TABLE C**
  - Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

- **No Misses Observed**
- **At Least One Miss Occurred**

- **XL, Xm, Xs, Xss, Xlcl, Xpoh, 2XL, Xpoh, Xpod, Xpodopt**

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POM function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first. **Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.***

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 6: 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 11 more large flaws.

Note: Xpodopt is within one class width of Xpod.

Warning: No false call analysis.

File Name = D7001L.XLS
Data Set Name = D7001(Uti-a-1)

Date & Time = 6/5/15 12:39 AM
Xpod 90/95 Reached Anywhere? REACHED
Class width @ 90/95 Xpod = 0.074 inch
Lower Confidence Bound = 0.0220 inch
Best LCL = 0.0833 inch
Class length @ 90/95 Xpod = 0.342 inch
Class length @ Best LCL = 0.169 inch
User provided a 90/95 POD = 0.074 inch
User’s maximum allowed class length = 0.115 inch
POD @ Xpod = 1.0000

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL Xp
used to satisfy XL and Xm requirements. An alternate 90/95 Xpod
is available if Xpodopt or optimum Xpoh (if listed) is also
satisfied.

Survey/Optimum Xpoh = 0.0532 with UCL @ 95%

| NTIAC 90% POD | 0.907 @ 0.115 inch |
| NTIAC 90/95 POD | 0.902 @ 0.155 inch |
| False Call Rate with UCL @ 95% |
| Largest Class Length, XL | 0.342 inch |
| Samples Needed @ XL | 26 |
| Class Length Mid-point, Xm | 0.169 inch |
| Samples Needed @ Xm | 1 |
| Smallest Class Length, Xs | 0.115 inch |
| Samples Needed @ Xs | 1 |
| New Smaller Class Length, Xss | 0.155 inch |
| Best LCL Class Length, Xlcl | 0.0833 inch |
| Samples Needed @ Xlcl | 3 |
| Opt. POD class length, Xpodopt | 0.0833 inch |
| Samples Needed @ Xpodopt | 3 |

Warning: No false call analysis.

Large flaw validation failure. Need 11 more large flaws.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.342</td>
</tr>
<tr>
<td>Xm</td>
<td>0.169</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpod = 0.074 3**

**TABLE C**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Number of Additional Samples Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.074</td>
<td></td>
<td>5</td>
</tr>
</tbody>
</table>
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 11 more large flaws.

Note: Xpodopt is within one class width of Xpod.

Warning: No false call analysis.

CASE 18: 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Warning: No false call analysis.

File Name = D7003L.XLS
Data Set Name = D7003L(Uti-c)
Date & Time = 6/5/15 12:41 AM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0220 inch
Classlength @ 90/95 Xpod = 0.0833 inch
Lower Confidence Bound = 0.9001 inch

Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
Best LCL =
Inpector Classwidth @ Xp =
POD @ Xpod = 1.0000

NTIAC 90% POD = 0.933 @ 0.065 inch
NTIAC 90/95 POD = 0.925 @ 0.075 inch
False Call Rate = 0.0575 with UCL @ 95% =

Largest Classlength , XL = 0.342 inch
Samples Needed @ XL =
Classlength Midpoint , Xm = 0.169 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xs =
Best LCL Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.078 inch
Samples Needed @ Xpodopt = 4

Xp = 0.0833 inch
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Warning: No false call analysis.

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Need 11 more large flaws.

Warning: No false call analysis.

CASE 2 - 90/95 Xpod is reached at a class length. Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.

Survey/Optimum Xpoh =
NTIAC 90% POD = 0.900 @ 0.340 inch
NTIAC 90/95 POD = 0.900 @ 0.510 inch

False Call Rate = with UCL @ 95%=
Largest Classlength , XL = 0.684 inch
Samples Needed @ XL = 23
Classlength Mid-point , Xm = 0.551 inch
Samples Needed @ Xm = 23
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
Xp =
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resloved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

| TABLE A* | Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed. |
| TABLE B* | Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed. |

| File Name = | D8002(3)D.xls | Data Set Name = | D8002(3)D(CK.NO.) |

Directed DOE Options

**Alternate Xm = Xpodopt**

0.095
0.057

### TABLE C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.095</td>
</tr>
<tr>
<td>Xm</td>
<td>0.057</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No Misses Observed</th>
<th>At Least One Miss Occured</th>
</tr>
</thead>
<tbody>
<tr>
<td>▲ XL</td>
<td>▲ Xm</td>
</tr>
<tr>
<td>▲ Xs</td>
<td>▲ Xss</td>
</tr>
<tr>
<td>▲ Xlcl</td>
<td>▲ Xpoh</td>
</tr>
<tr>
<td>▲ 2XL</td>
<td>▲ Xpod</td>
</tr>
<tr>
<td>▲ Xpodopt</td>
<td></td>
</tr>
</tbody>
</table>

### TABLE A*

| Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed. |
|--------------|--------------------|
| Xpod, Class Length | No. Need |
| 5.00         | 0.010             |
| 10.00        | 0.020             |
| 15.00        | 0.030             |
| 20.00        | 0.040             |
| 25.00        | 0.050             |
| 30.00        | 0.060             |
| 35.00        | 0.070             |

### TABLE B*

| Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed. |
|--------------|--------------------|
| Xpod, Class Length | No. Need |
| 5.00         | 0.010             |
| 10.00        | 0.020             |
| 15.00        | 0.030             |
| 20.00        | 0.040             |
| 25.00        | 0.050             |
| 30.00        | 0.060             |
| 35.00        | 0.070             |

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 12 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.

CASE 1: 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Warning: No false call analysis.

CASE 2 - 90/95 Xpod is reached at a class length. Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.

File Name = D8003(3).xls
Data Set Name = D8003(3)(CK.NO.)
Date & Time = 6/5/15 12:50 AM
Xpod 90/95 Reached Anywhere? = REACHED
Classwidth @ 90/95 Xpod = 0.925 inch
Classlength @ 90/95 Xpod = 0.913 inch
Lower Confidence Bound = 0.060 inch
Best LCL = 0.065 inch
Classwidth @ Best LCL = 0.995 inch
Classlength @ Best LCL = 0.990 inch
User Provided a 90/95 POD = 0.000 inch
User's Maximum Allowed Classlength = 0.126 inch
POD @ Xpod = 1.0000

NTIAC 90% POD = 0.935 @ 0.060 inch
NTIAC 90/95 POD = 0.933 @ 0.065 inch

False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 0.095 inch
Samples Needed @ XL = 2
Classlength Mid-point , Xm = 0.065 inch
Samples Needed @ Xm = 20
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =

Survey/Optimum Xpoh =

Probability of Hit (POH) in Class Range
Lower Confidence Bound @ 95%
Hit/Miss
Xp, 90/95 POD
MLE(Mean) POD
MLE(95%) LCL

Large flaw validation failure. Extend flaw size range to 0.126.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

### Directed DOE Options

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.095</td>
<td>2</td>
</tr>
<tr>
<td>Xm = 0.065</td>
<td>20</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

---

### TABLE A*

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0640</td>
<td>77</td>
</tr>
<tr>
<td>0.0630</td>
<td>117</td>
</tr>
<tr>
<td>0.0620</td>
<td>117</td>
</tr>
<tr>
<td>0.0610</td>
<td>64</td>
</tr>
</tbody>
</table>

### TABLE B*

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0640</td>
<td>26</td>
</tr>
<tr>
<td>0.0630</td>
<td>20</td>
</tr>
<tr>
<td>0.0620</td>
<td>20</td>
</tr>
<tr>
<td>0.0610</td>
<td>64</td>
</tr>
</tbody>
</table>

---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
**Detection Probability** (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

Large flaw validation failure. Extend flaw size range to 0.828.

**CASE 2** - 90/95 Xpod is reached at a class length. Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.

- **Survey/Optimum Xpoh**
  - NTIAC 90% POD = 0.902 @ 0.370 inch
  - NTIAC 90/95 POD = 0.900 @ 0.460 inch

- **False Call Rate**
  - with UCL @ 95% =
    - Largest Classlength, XL = 0.684 inch
    - Samples Needed @ XL = 13
    - Classlength Mid-point, Xm = 0.569 inch
    - Samples Needed @ Xm = 20
    - Smallest Classlength, Xs = inch
    - Samples Needed @ Xs =
    - New Smaller Classlength, Xss = inch
    - BestLCL Classlength, Xlcl = inch
    - Samples Needed @ Xlcl =
    - Opt. POD classlength, Xpodopt = inch
    - New Largest Classlength, 2XL = inch
    - Xm is Near Verification Point =
    - Samples Needed @ Xpoh =
    - Samples Needed @ Xpodopt =

- **Xp =**
  - inch
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Analysis File Name: DOEPOD.xlsm
Analysis File Date: 6/5/15 12:52 AM

File Name = D9001J3D.xls
Data Set Name = D9001J3D(CK. NO.)
Date & Time = 6/5/15 12:52 AM

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.0010 inch
Best LCL = 0.0130 inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod =

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpoh = 0.000 Inch Samples

NTIAC 90% POD = 0.320 Inch
NTIAC 90/95 POD =
False Call Rate = with UCL @ 95%
Largest Classlength, XL = inch
Samples Needed @ XL =
Classlength Mid-point, Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
Best LCL Classlength, Xlcl = inch
Samples Needed @ Xlcl =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength, 2XL = inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @Xpodopt =
Xp =
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Warning: No false call analysis.
Although Xpod appears to have reached a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

### Directed DOE Options

**TABLE A**

<table>
<thead>
<tr>
<th>XL</th>
<th>Xm</th>
<th>Xs</th>
<th>Xss</th>
<th>Xlcl</th>
<th>Xpoh</th>
<th>2XL</th>
<th>Xpodopt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.542</td>
<td></td>
</tr>
</tbody>
</table>

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod, Class Length</td>
<td>No. Need</td>
</tr>
</tbody>
</table>

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

---

- **Table C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

CASE 7 - 90/95 Xp is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xp = 0.000 Inch

False Call Rate = with UCL @ 95% =
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**Table A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**Table B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**Table C**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
**Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)**

**Warning:** No false call analysis.

**CASE 7 -** 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

- **Survey/Optimum Xpoh:** 0.000 inch
- **Samples Needed @ XL:** inch
- **False Call Rate with UCL @ 95%:**
  - Largest Classlength, XL = inch
  - Samples Needed @ XL = inch
  - Classlength Mid-point, Xm = inch
  - Samples Needed @ Xm = inch
  - Smallest Classlength, Xs = inch
  - Samples Needed @ Xs = inch
  - New Smaller Classlength, Xss = inch
  - BestLCL Classlength, Xlcl = inch
  - Samples Needed @ Xlcl = inch
  - Opt. POD classlength, Xpodopt = inch
  - Samples Needed @Xpodopt = inch
  - Xp = inch

**NOT REACHED**

- **Xpod 90/95 Reached Anywhere?**
  - Classwidth @ 90/95 Xpod = inch
  - Classlength @ 90/95 Xpod = inch
  - Lower Confidence Bound =
    - Best LCL = 0.7169 inch
    - Classlength @ Best LCL =
      - Classlength @ Best LCL = 0.0040 inch
    - User Provided a 90/95 POD =
      - Classlength @ Xp =
    - User's Maximum Allowed Classlength =
    - Inspector Classwidth @ Xp =
    - POD @ Xpod =
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**TABLE C**
Class Length Additional Samples

**No Misses Observed**

**At Least One Miss Occurred**

---

Excel Sheet:
- **D9002(3)l.xls**
- **D9002(3)l(CK.NO.)**

Graph:
- Directed DOE Options
- Selected class lengths with existing misses.
- Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths; this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Large flaw validation failure. Extend flaw size range to 2.064.
Any highlighted Misses are RED and shown in Column A of this data sheet.

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and alternate Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.

MLE Divergence Warning: initial results listed. Warning: No false call analysis.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 2.064.
Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

File Name = D9004(3)L.xls
Data Set Name = D9004(3) (CK. NO.)
Date & Time = 6/5/15 1:33 AM
Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod inch
Classlength @ 90/95 Xpod inch
Lower Confidence Bound 0.7791
Best LCL 0.0010
Classwidth @ Best LCL inch
Classlength @ Best LCL 0.2940
User Provided a 90/95 POD inch
User's Maximum Allowed Classlength inch
Inspector Classwidth @ Xp inch
POD @ Xpod

Probabiity of Hit (POH), Lower Confidence Limit, LCL

Xp, 90/95 POD
MLE(Mean) POD
MLE(95%) LCL

Best LCL Classlength, Xlcl inch
POH Classlength, Xpoh inch
New Largest Classlength, 2XL inch
Xp is Near Verification Point
Opt. POD classlength, Xpodopt inch
Samples Needed @ Xpoh

False Call Rate = with UCL @ 95% =
Although Xpod appears to have been reached at a point, there are misses at larger class lengths; this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

---

**Directed DOE Options**

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
<tr>
<td><strong>Alternate Xm =</strong></td>
<td>1.500 29</td>
</tr>
<tr>
<td>Xpodopt</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**Additional Samples Needed**

- **No Misses Observed**
- **At Least One Miss Occurred**
- XL
- Xm
- Xs
- Xss
- Xlcl
- Xpoh
- 2XL
- Xpod
- Xpodopt
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

**Warning: No false call analysis.**

- **File Name:** D9005[3]L.xls
- **Data Set Name:** D9005[3](LCK. NO.)
- **Date & Time:** 6/5/15 1:38 AM
- **NOT REACHED**
- **Xpod 90/95 Reached Anywhere?**
  - Class width @ 90/95 Xpod = inch
  - Class length @ 90/95 Xpod = inch
- **Lower Confidence Bound**
  - Best LCL = 0.7169 inch
  - Class width @ Best LCL = inch
  - Class length @ Best LCL = inch
- **User Provided a 90/95 POD @**
  - User’s Maximum Allowed Class length = inch
- **Inspector Class width @ Xp =**
  - POD @ Xpod =

**CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.**

- **Survey/Optimum Xpoh =** 1.245  \(-0.018\) inch
- **26 Samples**
- **False Call Rate =** with UCL @ 95% =
  - Largest Class length , XL = 1.271 inch
  - Samples Needed @ XL = 26 inch
  - Class length Mid-point , Xm =
  - Samples Needed @ Xm =
  - Smallest Class length, Xs =
  - Samples Needed @ Xs =
  - New Smaller Class length, Xss =
  - Best LCL Class length, Xlcl =
  - Samples Needed @ Xlcl =
  - POH Class length, Xpoh =
  - Samples Needed @ Xpoh =
  - New Largest Class length , 2XL =
  - Xm is Near Verification Point =
  - Opt. POD class length, Xpodopt =
  - Samples Needed @Xpodopt =
  - Xp =

**Analysis file name:** DOEPOD_1.2.01.PC.06a2010.Wat7.xlsx
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority) Large flaw validation failure. Extend flaw size range to 0.291.

MLE Divergence Warning: initial results listed. Warning: No false call analysis.

File Name = D9006(3).xls
Data Set Name = D9006(3)(CRACK)
Date & Time = 6/5/15 1:40 AM
REACHED
Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.160 inch
Classlength @ 90/95 Xpod = 1.000 inch
Lower Confidence Bound = 0.094 inch
Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
POD @ Xpod = 1.000

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL Xp used to satisfy XI and Xn requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Survey/Optimum Xpoh = 0.0940 inch
MSE Divergence Warning: initial results listed. Warning: No false call analysis.

False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 0.160 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.128 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, XL =
Samples Needed @ Xss =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
Opt. POD classlength, Xpodopt = 0.094 inch
New Largest Classlength , 2XL =
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt = 20

Large flaw validation failure. Extend flaw size range to 0.291.

False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 0.160 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.128 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, XL =
Samples Needed @ Xss =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
Opt. POD classlength, Xpodopt = 0.094 inch
New Largest Classlength , 2XL =
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt = 20

MSE Divergence Warning: initial results listed. Warning: No false call analysis.

False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 0.160 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.128 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, XL =
Samples Needed @ Xss =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
Opt. POD classlength, Xpodopt = 0.094 inch
New Largest Classlength , 2XL =
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt = 20

Large flaw validation failure. Extend flaw size range to 0.291.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 1.594.
Any highlighted Misses are RED and shown in Column A of this data sheet

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

File Name = D9006(3)L.xlsx
Data Name = D9006(3)L(CRACK)
Date & Time = 6/5/15 1:58 AM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0140 inch
Classlength @ 90/95 Xpod = 0.5180 inch
Lower Confidence Bound = 0.9050 inch
Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD @
User's Maximum Allowed Classlength =
POD @ Xpod = 1.0000

Xpod = 0.889 inch
Classwidth @ Xp =
Classlength @ Xp =
POH Classlength MEDIAN =
Samples Needed @ Xp =
Largest Classlength , XL = 0.918 inch
Sample Needed @ XL =
Classlength Mid-point , Xm = 0.903 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
False Call Rate = with UCL @ 95%
NTIAC 90% POD = 0.918 @ 0.030 inch
NTIAC 90/95 POD = 0.903 @ 0.100 inch

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### Directed DOE Options

<table>
<thead>
<tr>
<th>TABLE C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class Length</td>
</tr>
<tr>
<td>XL</td>
</tr>
<tr>
<td>Xm</td>
</tr>
<tr>
<td>Xs</td>
</tr>
<tr>
<td>Xss</td>
</tr>
<tr>
<td>Xlcl</td>
</tr>
<tr>
<td>Xpoh</td>
</tr>
<tr>
<td>2XL</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =

### TABLE A*

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

### TABLE B*

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**FILE NAME**

D9006E3L.xls

**DATA SET NAME**

D9006E3L(CRACK)
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

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Follow sample selection priority in the DOEPOD Manual.

*The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.
Warning: No false call analysis.

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpoh = 1.6920 - 0.500 inch  26 Samples

Largest Classlength , XL = 1.696 inch
Samples Needed @ XL = 23
Classlength Mid-point , Xm =
Samples Needed @ Xm =
Smallest Classlength, Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh = 1.692 inch
Samples Needed @ Xpoh = 26
New Largest Classlength, 2XL =
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =
Xp =

_FALSEcall Rate = with UCL @ 95% =
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

<table>
<thead>
<tr>
<th>TABLE A*</th>
<th>TABLE B*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.</td>
<td>Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>1.696</td>
<td>2XL</td>
<td>3.392</td>
</tr>
<tr>
<td>Xm</td>
<td>1.692</td>
<td>Xpoh</td>
<td>3.382</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
<td>2XL</td>
<td>3.382</td>
</tr>
<tr>
<td>Xss</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Alternate Xm</strong></td>
<td>Xpodopt</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths; this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Warning: No false call analysis.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

** Alternate Xm = Xpodopt =

### Directed DOE Options

#### TABLE A*

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>1.188</td>
</tr>
<tr>
<td>Xm</td>
<td>1.188</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td>1.188</td>
</tr>
<tr>
<td>2XL</td>
<td>2.376</td>
</tr>
</tbody>
</table>

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

#### TABLE B*

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod</td>
<td></td>
</tr>
<tr>
<td>Xpodopt</td>
<td></td>
</tr>
</tbody>
</table>

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

---

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Warning: No false call analysis.

CASE 2 - 90/95 Xpod is reached at a class length. Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 0.261.

File Name = DA003)(3D.xls
Data Set Name = DA003)(3D(CK. NO.)

Date & Time = 6/5/15 2:23 AM
REACHED
Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod
Classlength @ 90/95 Xpod
Lower Confidence Bound = Best LCL
Classwidth @ Best LCL
Classlength @ Best LCL
User Provided a 90/95 POD @ User's Maximum Allowed Classlength
POD @ Xpod = 1.0000

File Name = DA003)(3D.xls
Data Set Name = DA003)(3D(CK. NO.)

Date & Time = 6/5/15 2:23 AM
REACHED
Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.0220 inch
Classlength @ 90/95 Xpod = 0.0870 inch
Lower Confidence Bound = 0.9129 inch
Best LCL = inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ = 0.0000
POD @ Xpod = 1.0000

Warning: No false call analysis.
*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.
The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.
Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.
***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

<table>
<thead>
<tr>
<th>TABLE A*</th>
<th>Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.</th>
<th>TABLE B*</th>
<th>Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod, Class Length</td>
<td>No. Need</td>
<td>Xpod, Class Length</td>
<td>No. Need</td>
</tr>
<tr>
<td>0.1780</td>
<td>67</td>
<td>0.1780</td>
<td>67</td>
</tr>
<tr>
<td>0.1730</td>
<td>101</td>
<td>0.2150</td>
<td>20</td>
</tr>
<tr>
<td>0.1600</td>
<td>104</td>
<td>0.1730</td>
<td>101</td>
</tr>
<tr>
<td>0.1550</td>
<td>64</td>
<td>0.1600</td>
<td>104</td>
</tr>
</tbody>
</table>

---

![Directed DOE Options Diagram](image.png)
Large flaw validation failure. Need 15 more large flaws.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

Large flaw validation failure. Need 15 more large flaws.

File Name = DA003(3)L.xls
Data Set Name = DA003(3)L(CK. NO.)
Date & Time = 6/5/15 2:24 AM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0520 inch
Lower Confidence Bound = 0.9129 inch
Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD @ POD @ Xp =
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod = 1.0000 inch

CASE 2 - 90/95 Xpod is reached at a class length. Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.

Survey/Optimum Xpoh =
NTIAC 90% POD =
@ 0.900 inch
@ 0.350 inch
False Call Rate =
with UCL @ 95% =
Largest Classlength , XL = 1.696 inch
Samples Needed @ XL = 17
Classlength Mid-point , Xm = 0.560 inch
Samples Needed @ Xm = 11
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xs =
BestLCL Classlength, Xicl =
Samples Needed @ Xicl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xmax is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
Xp =

False Call Rate =
with UCL @ 95% =
Largest Classlength , XL = 1.696 inch
Samples Needed @ XL = 17
Classlength Mid-point , Xm = 0.560 inch
Samples Needed @ Xm = 11
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xs =
BestLCL Classlength, Xicl =
Samples Needed @ Xicl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xmax is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
Xp =
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### Directed DOE Options

#### TABLE A*

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.9950</td>
<td>77</td>
</tr>
<tr>
<td>0.9900</td>
<td>80</td>
</tr>
<tr>
<td>0.9840</td>
<td>40</td>
</tr>
<tr>
<td>0.5400</td>
<td>127</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpod opt

#### TABLE B*

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.696</td>
<td>17</td>
</tr>
<tr>
<td>0.560</td>
<td>11</td>
</tr>
</tbody>
</table>

### Table C

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.9950</td>
<td>77</td>
</tr>
<tr>
<td>0.9900</td>
<td>80</td>
</tr>
<tr>
<td>0.9840</td>
<td>40</td>
</tr>
<tr>
<td>0.5400</td>
<td>127</td>
</tr>
</tbody>
</table>

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

---

**Directed DOE Options**

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpoh</th>
<th>2XL</th>
<th>XL</th>
<th>Xs</th>
<th>Xss</th>
<th>Xlcl</th>
<th>怍impot</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.470</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpoh</th>
<th>2XL</th>
<th>XL</th>
<th>Xs</th>
<th>Xss</th>
<th>Xlcl</th>
<th>Xpohopt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE C**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>No. Need</th>
<th>Xpoh, Class Length No. Need</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>0.0</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>0.050</td>
<td>0.0</td>
<td>0.050</td>
<td>0.050</td>
</tr>
<tr>
<td>0.100</td>
<td>0.0</td>
<td>0.100</td>
<td>0.100</td>
</tr>
<tr>
<td>0.150</td>
<td>0.0</td>
<td>0.150</td>
<td>0.150</td>
</tr>
<tr>
<td>0.200</td>
<td>0.0</td>
<td>0.200</td>
<td>0.200</td>
</tr>
<tr>
<td>0.250</td>
<td>0.0</td>
<td>0.250</td>
<td>0.250</td>
</tr>
<tr>
<td>0.300</td>
<td>0.0</td>
<td>0.300</td>
<td>0.300</td>
</tr>
<tr>
<td>0.350</td>
<td>0.0</td>
<td>0.350</td>
<td>0.350</td>
</tr>
<tr>
<td>0.400</td>
<td>0.0</td>
<td>0.400</td>
<td>0.400</td>
</tr>
<tr>
<td>0.450</td>
<td>0.0</td>
<td>0.450</td>
<td>0.450</td>
</tr>
<tr>
<td>0.500</td>
<td>0.0</td>
<td>0.500</td>
<td>0.500</td>
</tr>
</tbody>
</table>

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
### Probability of Hit (POH) in Class Range

<table>
<thead>
<tr>
<th>Class Length, inch</th>
<th>Samples Needed</th>
<th>LCL</th>
<th>UCL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1000</td>
<td></td>
<td>0.8190</td>
<td>1.0760</td>
</tr>
<tr>
<td>1.0760</td>
<td></td>
<td>0.0000</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

**CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.**

**Warning:** No false call analysis.

**Analysis File name:** DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsm

**Survey/Optimum Xpod:**
- NTIAC 90% POD = inch
- NTIAC 90/95 POD = inch

**False Call Rate:**
- False Call Rate = @ inch with UCL @ 95%

- Largest Classlength, XL = inch
- Samples Needed @ XL = inch
- Classlength Midpoint, Xm = inch
- Samples Needed @ Xm = inch
- Smallest Classlength, Xs = inch
- Samples Needed @ Xs = inch
- New Smaller Classlength, Xss = inch
- Best LCL Classlength, Xcl = inch
- Samples Needed @ Xcl = inch
- POH Classlength, Xpoh = inch
- Samples Needed @ Xpoh = inch
- New Largest Classlength, 2XL = inch
- Xm is Near Verification Point = inch
- Opt. POD classlength, Xpodopt = inch
- Samples Needed @ Xpodopt = inch

**Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)**

- Xp, 90/95 POD = inch
- MLE(Mean) POD = inch
- MLE(95%) LCL = inch

**User Provided a 90/95 POD:**
- User's Maximum Allowed Classlength = inch
- Inspector Classwidth @ Xp = inch

**Date & Time:** 6/5/15 2:27 AM

**Warning:** No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.
Warning: No false call analysis.

CASE 2 - 90/95 Xpod is reached at a class length. Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.

Survey/Optimum Xpoh = 0.000 Inch

False Call Rate = with UCL @ 95% =

- Largest Classlength, XL = 0.235 Inch
- Samples Needed @ XL = 14
- Classlength Mid-point, Xm = 0.116 Inch
- Samples Needed @ Xm = 20
- Smallest Classlength, Xs = Inch
- Samples Needed @ Xs =
- New Smaller Classlength, Xss = Inch
- Best LCL Classlength, Xlcl = Inch
- Samples Needed @ Xlcl =
- OPT. POD classlength, Xpodopt = Inch
- Samples Needed @ Xpodopt =
- Xp = 0.235 Inch

Large flaw validation failure. Need 11 more large flaws.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Large flaw validation failure. Need 16 more large flaws.

Warning: No false call analysis.

CASE 2 - 90/95 Xp is reached at a class length. Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.

### Table A: Analysis Results

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classwid @ 90/95 Xpod</td>
<td>1.435 inch</td>
</tr>
<tr>
<td>Classlengh Mid-point, Xm</td>
<td>1.085 inch</td>
</tr>
<tr>
<td>Smallest Classlength, Xs</td>
<td>23 inch</td>
</tr>
<tr>
<td>Samples Needed @ Xm</td>
<td>17</td>
</tr>
<tr>
<td>New Smaller Classlength, Xss</td>
<td>17</td>
</tr>
<tr>
<td>Best LCL Classlength, Xlcl</td>
<td>17</td>
</tr>
<tr>
<td>Samples Needed @ Xlcl</td>
<td>17</td>
</tr>
<tr>
<td>Opt. POD classlength, Xpodopt</td>
<td>17</td>
</tr>
<tr>
<td>Samples Needed @ Xpodopt</td>
<td>17</td>
</tr>
<tr>
<td>Xp</td>
<td>1.0000 inch</td>
</tr>
</tbody>
</table>

### Table B: POD and LCL Results

<table>
<thead>
<tr>
<th>POD @ Xpod</th>
<th>0.000</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTIAC 90% POD</td>
<td>@ inch</td>
</tr>
<tr>
<td>NTIAC 90/95 POD</td>
<td>@ inch</td>
</tr>
<tr>
<td>False Call Rate</td>
<td>with UCL @ 95%</td>
</tr>
<tr>
<td>Largest Classlength, XL</td>
<td>1.435 inch</td>
</tr>
<tr>
<td>Samples Needed @ XL</td>
<td>17</td>
</tr>
<tr>
<td>Classlength Mid-point, Xm</td>
<td>1.085 inch</td>
</tr>
<tr>
<td>Samples Needed @ Xm</td>
<td>23</td>
</tr>
<tr>
<td>Smallest Classlength, Xs</td>
<td>23 inch</td>
</tr>
<tr>
<td>Samples Needed @ Xs</td>
<td>17</td>
</tr>
<tr>
<td>New Smaller Classlength, Xss</td>
<td>17</td>
</tr>
<tr>
<td>Best LCL Classlength, Xlcl</td>
<td>17</td>
</tr>
<tr>
<td>Samples Needed @ Xlcl</td>
<td>17</td>
</tr>
<tr>
<td>Opt. POD classlength, Xpodopt</td>
<td>17</td>
</tr>
<tr>
<td>Samples Needed @ Xpodopt</td>
<td>17</td>
</tr>
</tbody>
</table>
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

### Table A*

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod,Class Length</th>
<th>No. Need</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.9920</td>
<td>37</td>
<td>1.0320</td>
</tr>
<tr>
<td>0.5190</td>
<td>127</td>
<td>0.9300</td>
</tr>
<tr>
<td>0.5130</td>
<td>124</td>
<td>0.9300</td>
</tr>
<tr>
<td>0.4980</td>
<td>92</td>
<td>0.9300</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

### Table B*

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod,Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.9920</td>
<td>26</td>
</tr>
<tr>
<td>0.5190</td>
<td>26</td>
</tr>
<tr>
<td>0.5130</td>
<td>26</td>
</tr>
<tr>
<td>0.4980</td>
<td>26</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Warning: No false call analysis.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

File Name = D8003(3).xlsx
Data Set Name = D8003(3)(CK. NO.)

Date & Time = 6/5/15 2:30 AM

Xpod 90/95 Reached Anywhere? NOT REACHED

Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.7791 inch
Best LCL = 0.0010 inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod =

Best LCL Classlength, Xlcl =

Largest Classlength , XL = 0.235 inch
Samples Needed @ XL = 26
Classlength Mid-point , Xm =
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xp is Near Verification Point =

Survey/Optimum Xpoh = 0.2350 -0.041 inch

False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 0.235 inch
Samples Needed @ XL = 26
Classlength Mid-point , Xm =
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xp is Near Verification Point =

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

---

**Directed DOE Options**

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.235</td>
<td>26</td>
</tr>
<tr>
<td>Xm = 0.470</td>
<td>29</td>
</tr>
<tr>
<td>Xs =</td>
<td></td>
</tr>
<tr>
<td>Xss =</td>
<td></td>
</tr>
<tr>
<td>Xlcl =</td>
<td></td>
</tr>
<tr>
<td>Xpoh =</td>
<td></td>
</tr>
<tr>
<td>2XL =</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =**

---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpoh = 0.9920 -0.006 inch
NTIAC 90% POD = @ inch
NTIAC 90/95 POD = @ inch
False Call Rate = with UCL @ 95% =
Largest Class length, XL = 1.435 inch
Samples Needed @ XL = 26
Class length Mid-point, Xm = inch
Samples Needed @ Xm =
Smallest Class length, Xs = inch
Samples Needed @ Xs =
New Smaller Class length, Xss = inch
Best LCL Class length, Xlcl = inch
Samples Needed @ Xlcl =
POH Class length, Xpoh = 1.076 inch
Samples Needed @ Xpoh = 20
New Largest Class length, 2XL = 2.870 inch
Xm is Near Verification Point =
Opt. POD class length, Xpodopt = inch
Samples Needed @ Xpodopt =

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths; this indicates that the POM function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 3 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

Survey/Optimum Xpoh = 0.904 @ 0.030 inch
NTIAC 90% POD = 0.904 @ 0.030 inch
NTIAC 90/95 POD = 0.923 @ 0.040 inch
False Call Rate = with UCL @ 95% =
Largest Classlength, XL = 0.276 inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 0.215 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
Xp = 0.059 inch

Warning:  No false call analysis.

False Call Rate = with UCL @ 95% =
Largest Classlength, XL = 0.276 inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 0.215 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
Xp = 0.059 inch
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

*Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.*

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.*
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 7 more large flaws.

Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

CASE 1 - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

False Call Rate with UCL @ 95% =

- Largest Classlength, XL = 1.562 inch
- Samples Needed @ XL =
- Classlength Mid-point, Xm = 1.119 inch
- Samples Needed @ Xm =
- Smallest Classlength, Xs =
- New Smaller Classlength, Xss =
- Best LCL Classlength, Xlcl =
- Samples Needed @ Xlcl =
- Opt. POD classlength, Xpodopt =
- New Largest Classlength, 2XL =
- Xm is Near Verification Point =
- Opt. POD classlength, Xpodopt =
- Samples Needed @ Xpodopt =

Survey/Optimum Xpoh =

NTIAC 90% POD = 0.904 @ 0.180 inch
NTIAC 90/95 POD = 0.900 @ 0.215 inch

POH Classlength, Xpoh =

New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Large flaw validation failure. Need 3 more large flaws.

Warning: No false call analysis.

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod =
Lower Confidence Bound =
Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD @
User's Maximum Allowed Classlength =
POD @ Xpod =

Xp = 0.276 inch
MLE(Mean) POD = 0.0590 inch
MLE(95%) LCL = 0.9050 inch

File Name = DC002(3)D.xls
Data Set Name = DC002(3)D(CK. NO.)
Date & Time = 6/5/15 2:43 AM

CASE 2 - 90/95 Xpod is reached at a class length. Further VALIDATION is required. Recommend satisfying XL and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.

Survey/Optimum Xpoh =
NTIAC 90% POD = 0.903 @ 0.060 inch
NTIAC 90/95 POD = 0.902 @ 0.105 inch
False Call Rate = with UCL @ 95% =
Largest Classlength , XL =
Samples Needed @ XL =
Classlength Mid-point , Xm =
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### Directed DOE Options

| File Name = DC002[3]0.xls  | Data Set Name = DC002[3]0(CK. NO.) |

### TABLE A*  
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2390</td>
<td>43</td>
<td>0.2760</td>
<td>26</td>
</tr>
<tr>
<td>0.1870</td>
<td>55</td>
<td>0.1950</td>
<td>23</td>
</tr>
<tr>
<td>0.1820</td>
<td>64</td>
<td>0.1930</td>
<td>23</td>
</tr>
<tr>
<td>0.1790</td>
<td>37</td>
<td>0.1930</td>
<td>23</td>
</tr>
</tbody>
</table>

### TABLE B*  
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2760</td>
<td>26</td>
<td>0.2390</td>
<td>43</td>
</tr>
<tr>
<td>0.1950</td>
<td>23</td>
<td>0.1870</td>
<td>55</td>
</tr>
<tr>
<td>0.1930</td>
<td>23</td>
<td>0.1820</td>
<td>64</td>
</tr>
<tr>
<td>0.1930</td>
<td>23</td>
<td>0.1790</td>
<td>37</td>
</tr>
</tbody>
</table>

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Need 7 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

CASE 1*: 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.

Survey/Optimum Xpoh = 0.000 0.235 inch Samples
NTIAC 90% POD = 0.900 @ 0.235 inch
NTIAC 90/95 POD = 0.900 @ 0.360 inch

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = 1.562 inch
Samples Needed @ XL = 1.061 inch
Classlength Mid-point, Xm =
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
Opt. POD classlength, Xpodopt =
New Largest Classlength, 2XL =
Xm is Near Verification Point =

Large flaw validation failure. Need 7 more large flaws.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### Directed DOE Options

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>1.562</td>
</tr>
<tr>
<td>Xm</td>
<td>1.061</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

---

**Table A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**Table B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
</table>

---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 5 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

CASE 1*: 90/95 Xp is reached, Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xp and XL when causes of highlighted Misses are understood and corrected.

Survey/Optimum Xpoh = 0.000 inch Samples

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = 0.276 inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 0.215 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL, Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =

Xp = 0.0730 inch

NTIAC 90% POD = 0.901 @ 0.045 inch
NTIAC 90/95 POD = 0.902 @ 0.060 inch
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited Misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no Misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 7 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet.

Warning: No false call analysis.

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

---

### TABLE A*
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 1.562</td>
<td></td>
</tr>
<tr>
<td>Xm = 1.119</td>
<td></td>
</tr>
<tr>
<td>Xs =</td>
<td></td>
</tr>
<tr>
<td>Xss =</td>
<td></td>
</tr>
<tr>
<td>Xlcl =</td>
<td></td>
</tr>
<tr>
<td>Xpoh =</td>
<td></td>
</tr>
<tr>
<td>2XL =</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =**

### TABLE B*
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL =</td>
<td></td>
</tr>
<tr>
<td>Xm =</td>
<td></td>
</tr>
<tr>
<td>Xs =</td>
<td></td>
</tr>
<tr>
<td>Xss =</td>
<td></td>
</tr>
<tr>
<td>Xlcl =</td>
<td></td>
</tr>
<tr>
<td>Xpoh =</td>
<td></td>
</tr>
<tr>
<td>2XL =</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =**

---

*Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 6: 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xl</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td><strong>Alternate Xm</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Xpod opt</strong></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xl</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td><strong>2XL</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Xpod</strong></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE C**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.495</td>
</tr>
<tr>
<td>Xm</td>
<td>0.495</td>
</tr>
<tr>
<td>Xs</td>
<td>0.990</td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td><strong>Xlp</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Directed DOE Options**

**FILE NAME**

**DATA SET NAME**
**Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)**

Warning: No false call analysis.

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### Directed DOE Options

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xlcl</th>
<th>Xpoh</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.215</td>
<td>0.430</td>
</tr>
</tbody>
</table>

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xlcl</th>
<th>Xpoh</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.215</td>
<td>0.430</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =

### TABLE C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.215</td>
<td>26</td>
</tr>
<tr>
<td>Xm = 0.430</td>
<td>29</td>
</tr>
</tbody>
</table>

### Directed DOE Options

#### File Name = DD002(3)D.xls

#### Data Set Name = DD002(3)D(Ck. No.)

#### Directed DOE Options

<table>
<thead>
<tr>
<th>Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td>0.100</td>
</tr>
<tr>
<td>0.150</td>
<td>0.200</td>
</tr>
<tr>
<td>0.250</td>
<td>0.300</td>
</tr>
<tr>
<td>0.350</td>
<td>0.400</td>
</tr>
<tr>
<td>0.450</td>
<td>0.500</td>
</tr>
</tbody>
</table>

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
**Warning: No false call analysis.**

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### TABLE A*  
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.495</td>
<td>26</td>
<td>XL = 0.495</td>
<td>26</td>
</tr>
<tr>
<td>Xm = 0.495</td>
<td>26</td>
<td>Xs = 0.990</td>
<td>29</td>
</tr>
<tr>
<td>Xss = 0.990</td>
<td>29</td>
<td>Xlcl = 0.990</td>
<td>29</td>
</tr>
<tr>
<td>Xpoh = 0.990</td>
<td>29</td>
<td><strong>Alternate Xm = Xpodopt</strong></td>
<td></td>
</tr>
</tbody>
</table>

### TABLE B*  
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.495</td>
<td>26</td>
<td>XL = 0.495</td>
<td>26</td>
</tr>
<tr>
<td>Xm = 0.495</td>
<td>26</td>
<td>Xs = 0.990</td>
<td>29</td>
</tr>
<tr>
<td>Xss = 0.990</td>
<td>29</td>
<td>Xlcl = 0.990</td>
<td>29</td>
</tr>
<tr>
<td>Xpoh = 0.990</td>
<td>29</td>
<td><strong>Alternate Xm = Xpodopt</strong></td>
<td></td>
</tr>
</tbody>
</table>

*Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

---

**Directed DOE Options**

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**TABLE C**
Class Length  Additional Samples

- **XL**
- **Xm**
- **Xs**
- **Xss**
- **Xlcl**
- **Xpoh**
- **2XL**

**Alternate Xm = Xpodopt =** 0.430 29
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

File Name = D003(3)X.xls
Data Set Name = D003(3)L(CK. NO.)
Date & Time = 6/5/15 3:05 AM

Xpod 90/95 Reached Anywhere?
- NOT REACHED

Classwidth @ 90/95 Xpod = inch
Lower Confidence Bound = inch
Best LCL = inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod =

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpoh = inch
Samples Needed @ XL = inch
False Call Rate = with UCL @ 95% =
Largest Classlength, XL = inch
Samples Needed @ XL = inch
Classlength Mid-point, Xm = inch
Samples Needed @ Xm = inch
Smallest Classlength, Xs = inch
Samples Needed @ Xs = inch
New Smaller Classlength, Xss = inch
Best LCL Classlength, Xlcl = inch
Samples Needed @ Xlcl = inch
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh = inch
New Largest Classlength, 2XL = inch
Xm is Near Verification Point = inch
Opt. POD classlength, Xpodopt = inch
Samples Needed @ Xpodopt = inch
Xp = inch

Analysis file name: DOEPOD v.1.2.01.PC.Office2010.Win7.xlsm
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### Directed DOE Options

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.422</td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td>0.422</td>
</tr>
<tr>
<td>Xpoh</td>
<td>0.844</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

![Graph showing Directed DOE Options](chart.png)
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

- NTIAC 90% POD = 0.900 @ 0.595 inch
- NTIAC 90/95 POD =
- False Call Rate =
  - with UCL @ 95% =
    - Largest Classlength, XL = 0.422 inch
    - Samples Needed @ XL = 28
    - Classlength Mid-point, Xm =
    - Smallest Classlength, Xs =
    - Samples Needed @ Xs =
    - New Smaller Classlength, Xss =
    - Best LCL Classlength, Xlcl =
    - Samples Needed @ Xlcl =
    - POH Classlength, Xpoh = 0.422 inch
    - Samples Needed @ Xpoh = 28
    - New Largest Classlength, 2XL = 0.844 inch
    - Xm is Near Verification Point =
    - Opt. POD classlength, Xpodopt =
    - Samples Needed @ Xpodopt =
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths - this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

---

**Directed DOE Options**

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.422</td>
</tr>
<tr>
<td>Xm</td>
<td>0.422</td>
</tr>
<tr>
<td>Xs</td>
<td>0.844</td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
<tr>
<td><strong>Alternate Xm =</strong> Xpodopt =</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

Number of Additional Samples Needed

- At Least One Miss Occurred
- XL
- Xm
- Xs
- Xss
- Xlcl
- Xpoh
- 2XL
- Xpod
- Xpodopt

File Name = E1002AL.XLS
Data Set Name = E1002AL(CRACK #)

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths - this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

---

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CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

* Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

MLE Divergence Warning: initial results listed.
Warning: No false call analysis.

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpoh = 0.8091 -0.092 Inch 28 Samples

NTIAC 90% POD = @ inch
NTIAC 90/95 POD = @ inch

False Call Rate = with UCL @ 95% =
Largest Classlength, XL = 0.809 Inch
Samples Needed @ XL = 28
Classlength Mid-point, Xm =
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh = 0.809 Inch
Samples Needed @ Xpoh = 28
New Largest Classlength, 2XL = 1.618 Inch
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**Alternate Xm = Xpodopt =**

### TABLE A*

<table>
<thead>
<tr>
<th>Xl</th>
<th>Xm</th>
<th>Xs</th>
<th>Xss</th>
<th>Xlcl</th>
<th>Xpoh</th>
<th>2XL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.809</td>
<td>0.809</td>
<td>0.809</td>
<td>1.618</td>
<td>28</td>
<td>28</td>
<td>29</td>
</tr>
</tbody>
</table>

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

### TABLE B*

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
</table>

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**Alternate Xm = Xpodopt =**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpoh = 0.8091

False Call Rate = with UCL @ 95% = 0.8091

Analysis File Name: DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsm
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart...***
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

**Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.**

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

**Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.**

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 1.74999.

Note: Xpodopt is within one class width of Xpod.

Warning: No false call analysis.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Survey/Optimum Xpoh = 0.5182 - 0.001 Inch
26 Samples

False Call Rate = with UCL @ 95% =

Largest Classlength , XL = 0.809 Inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.650 Inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.578 Inch
Samples Needed @Xpodopt = 29
Xp = 0.5833 Inch

File Name = F10002AA.XLS
Data Set Name = F10002AA(CRACK #)
Date & Time = 6/5/15 3:17 AM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0660 inch
Classlength @ 90/95 Xpod = 0.5783 inch
Lower Confidence Bound = 0.9001
Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD @
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod = 1.0000

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths which indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths which indicates that the POH function may be oscillatory. This needs to be checked.*

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 2.03181.

Any highlighted Misses are RED and shown in Column A of this data sheet

**Warning:** No false call analysis.

CASE 1*: 90/95 Xpod is reached. Xp used to satisfy XL and alternate Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

### Detection Probability

<table>
<thead>
<tr>
<th>Xpod 90/95 Reached Anywhere?</th>
<th>Xp, 90/95 POD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classwidth @ 90/95 Xpod</td>
<td>Xp, 90/95 POD</td>
</tr>
<tr>
<td>Classlength @ Best LCL</td>
<td>MLE(95%) LCL</td>
</tr>
<tr>
<td>User Provided a 90/95 POD @</td>
<td>POD @ Xpod</td>
</tr>
<tr>
<td>User's Maximum Allowed Classlength</td>
<td></td>
</tr>
</tbody>
</table>

### Survey/Optimum PLA

<table>
<thead>
<tr>
<th>POD @ Xpodopt</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTIAC @ 90% POD</td>
</tr>
<tr>
<td>NTIAC @ 90/95 POD</td>
</tr>
</tbody>
</table>

### False Call Rate

<table>
<thead>
<tr>
<th>False Call Rate</th>
<th>with UCL @ 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Largest Classlength, XL</td>
<td>0.809 inch</td>
</tr>
<tr>
<td>Samples Needed @ XL</td>
<td></td>
</tr>
<tr>
<td>Classlength Mid-point, Xm</td>
<td>0.717 inch</td>
</tr>
<tr>
<td>Samples Needed @ Xm</td>
<td></td>
</tr>
<tr>
<td>Smallest Classlength, Xs</td>
<td></td>
</tr>
<tr>
<td>Samples Needed @ Xs</td>
<td></td>
</tr>
<tr>
<td>New Smaller Classlength, Xss</td>
<td></td>
</tr>
<tr>
<td>BestLCL Classlength, Xlcl</td>
<td></td>
</tr>
<tr>
<td>Samples Needed @ Xlcl</td>
<td></td>
</tr>
<tr>
<td>POH Classlength, Xpoh</td>
<td></td>
</tr>
<tr>
<td>Samples Needed @ Xpoh</td>
<td></td>
</tr>
<tr>
<td>New Largest Classlength, 2XL</td>
<td></td>
</tr>
<tr>
<td>Xn is Near Verification Point</td>
<td></td>
</tr>
<tr>
<td>Opt. POD classlength, Xpodopt</td>
<td></td>
</tr>
<tr>
<td>Samples Needed @Xpodopt</td>
<td></td>
</tr>
</tbody>
</table>

### POD Analysis

- **Class Length, inch**
  - XL: 0.900 inch
  - XL: 0.901 inch
  - Smallest Classlength, Xs: 0.6773 inch
  - Smallest Classlength, Xs: 0.717 inch
  - Classlength Mid-point, Xm: 0.809 inch
  - Classlength Mid-point, Xm: 0.809 inch
  - New Smaller Classlength, Xss: 0.6773 inch
  - New Smaller Classlength, Xss: 0.717 inch
  - Opt. POD classlength, Xpodopt: 0.6773 inch

### POD Analysis Parameters

- **Xp** = 0.809 inch
- **Xm** = 0.717 inch
- **XL** = 0.900 inch
- **XL** = 0.901 inch
- **Smallest Classlength, Xs** = 0.6773 inch
- **Smallest Classlength, Xs** = 0.717 inch
- **New Smaller Classlength, Xss** = 0.6773 inch
- **New Smaller Classlength, Xss** = 0.717 inch
- **Opt. POD classlength, Xpodopt** = 0.6773 inch

### POD Analysis File

- **File Name** = F10002BA.XLS
- **Data Set Name** = F10002BA(CRACK #)
- **Date & Time** = 6/5/15 3:19 AM
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Warning: No false call analysis.

For CASE 2 - 90/95 Xpod is reached at a class length. Further VALIDATION is required. Recommend satisfying XL and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.

Survey/Optimum Xpoh =

NTIAC 90% POD = 0.901 @ 0.595 inch

NTIAC 90/95 POD =

False Call Rate =

Largest Classlength , XL = 0.809 inch
Samples Needed @ XL = 45
Classlength Mid-point , Xm = 0.650 inch
Samples Needed @ Xm = 20
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength , Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =

Xp = 0.000 inch Samples
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths which indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths which indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**Directed DOE Options**

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm =**

Xpodopt =

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.618</td>
<td>29</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**TABLE C**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
</table>

---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Large flaw validation failure. Extend flaw size range to 1.51362.

Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are
Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.
The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.
The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown
Follow sample selection priority in the DOEPOD Manual.
Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**Directed DOE Options**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.809</td>
</tr>
<tr>
<td>Xm</td>
<td>0.600</td>
</tr>
<tr>
<td>Xs</td>
<td><strong>Alternate Xm = Xpodopt =</strong></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**TABLE C**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

- **F10003BA.XLS**
  - **F10003BA(CRACK #)**

<table>
<thead>
<tr>
<th>No. Need</th>
<th>Xpod, Class Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0.809</td>
</tr>
<tr>
<td>1</td>
<td>0.600</td>
</tr>
</tbody>
</table>

---

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.
The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.
The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown
Follow sample selection priority in the DOEPOD Manual.
Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 1.8.

Note: Xpodopt is within one class width of Xpod.
Warning: No false call analysis.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### Table C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.809</td>
</tr>
<tr>
<td>Xm</td>
<td>0.683</td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td><strong>Alternate Xm = Xpodopt</strong></td>
<td>0.592 29</td>
</tr>
</tbody>
</table>

### Table A*

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

### Table B*

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpod = 0.000 inch
Samples @ Xpod = 644

False Call Rate = 0.000 with UCL @ 95%

Largest Classlength, XL = 0.086 inch
Samples Needed @ XL = inch
Classlength Mid-point, Xm = inch
Samples Needed @ Xm = inch
Smallest Classlength, Xs = inch
Samples Needed @ Xs = inch
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xcll = inch
Samples Needed @ Xcll = inch
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh = inch
New Largest Classlength, 2XL = inch
Xm is Near Verification Point
Opt. POD classlength, Xpodopt = inch
Samples Needed @Xpodopt = inch

Prob. of Hit (POH) in Class Range
Lower Confidence Bound @ 95%
Hit/Miss
Xp, 90/95 POD
MLE(Mean) POD
MLE(95%) LCL
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
**Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)**

MLE Divergence Warning: Initial results listed.

Warning: No false call analysis.

**File Name:** F10601AL.XLS  
**Data Set Name:** F10601AL(Crack #)

- **Date & Time:** 6/5/15 3:30 AM
- **Xpod 90/95 Reached Anywhere?** NOT REACHED
- **Classwidth @ 90/95 Xpod** inch
- **Classlength @ 90/95 Xpod** inch
- **Lower Confidence Bound** inch
- **Best LCL** inch
- **Classwidth @ Best LCL** inch
- **Classlength @ Best LCL** inch
- **User Provided a 90/95 POD** inch
- **User’s Maximum Allowed Classlength** inch
- **Inspector Classwidth @ Xp** inch
- **POD @ Xpod** inch

**CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.**

- **Survey/Optimum Xpoh** = 0.000 Inch
- **Samples Needed @ XL** = inch
- **False Call Rate** = with UCL @ 95%
- **NTIAC 90% POD** = @ inch
- **NTIAC 90/95 POD** = @ inch
- **Opt. POD classlength, Xpodopt** = inch
- **Xp** = inch
**Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.**

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resloved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

---

### Table A*

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td><strong>0.684</strong></td>
</tr>
<tr>
<td><strong>Alternate Xm</strong></td>
<td><strong>Xpodopt</strong></td>
</tr>
</tbody>
</table>

### Table B*

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

### Table C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Misses Observed</td>
<td>At Least One Miss Occurred</td>
</tr>
<tr>
<td>XL</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
<tr>
<td><strong>Xpod,Class Length</strong></td>
<td><strong>No Need</strong></td>
</tr>
<tr>
<td><strong>Xpodopt</strong></td>
<td></td>
</tr>
</tbody>
</table>

---

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resloved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

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Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

File Name = F10601CD.XLS
Data Set Name = F10601CD(Crack #)
Date & Time = 6/5/15 3:35 AM

Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.0127 inch
Best LCL = 0.0010 inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD = inch
User's Maximum Allowed Classlength = inch
Inspection Classwidth @ Xp = inch
POD @ Xpod =

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpoh = 0.000 Inch
NTIAC 90% POD @ inch
NTIAC 90/95 POD @ inch
False Call Rate = with UCL @ 95% =
Largest Classlength, XL = inch
Samples Needed @ XL =
Classlength Mid-point, Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xcl = inch
New Samples Needed @ Xcl =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength, 2XL = inch
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @ Xpodopt =
Xp = inch

Probability of Hit (POH) in Class Range
Analysis file name: DOEPOD v 1.2 01 PC 08092010 Win7.xlsm

- Probability of Hit (POH) in Class Range
- Lower Confidence Bound @ 95%
- Hit/Miss
- Xp, 90/95 POD
- MLE(Mean) POD
- MLE(95%) LCL

652
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

---

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.086</td>
<td>29</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE C**

Class Length | Additional Samples
---|---
XL = | 
Xm = | 
Xs = | 
Xss = | 
Xlcl = | 
Xpoh = | 
2XL = | 

**Alternate Xm =**

Xpodopt =
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpoh = 0.000 Inch Samples

NTIAC 90% POD = @ inch
NTIAC 90/95 POD = @ inch
False Call Rate = with UCL @ 95% =

Largest Classlength , XL = inch
Samples Needed @ XL =
Classlength Mid-point , Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xcl = inch
Samples Needed @ Xcl =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength , 2XL = inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
Xp = inch
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths, this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

### Directed DOE Options

**TABLE A**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

**TABLE A**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td>0.684 29</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

**TABLE B**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths, this indicates that the POH function may be oscillatory. This needs to be checked. The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.**

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

---

### Figure

- **Directed DOE Options**
- **TABLE A**
- **TABLE B**
- **TABLE C**
- **File Name = F10601CL.XLS**
- **Data Set Name = F10601CL(CRACK #)**

---

655
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.129.

Note: Xpodopt is within one class width of Xpod.
Warning: No false call analysis.

CASE 1: 90/95 Xpod is reached at XL. Increase flaw sizes to exceed 0.129. Recommend satisfying alternate 90/95 Xpodopt or Optimum Xpoh (if listed).

File Name = F10602AD.XLS
Data Set Name = F10602AD(CRACK #)
Date & Time = 6/5/15 3:37 AM

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.043
Classlength @ 90/95 Xpod = 0.043
Lower Confidence Bound = 0.040
Best LCL = 0.055
Classwidth @ Best LCL = 0.043
Classlength @ Best LCL = 0.043
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp = 0.043
POD @ Xpod = 1.0000

Largest Classlength, XL = 0.043 inch
Samples Needed @ XL = 18 Samples

NTIAC 90% POD = 0.919 @ 0.040 inch
NTIAC 90/95 POD = 0.934 @ 0.055 inch

False Call Rate =

Survey/Optimum Xpoh = 0.0330 - 0.001 Inch

Opt. POD classlength, Xpodopt =
New Largest Classlength, 2XL =
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpoh =
Samples Needed @Xpodopt =

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths which indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

*Although Xpod appears to have been reached at a point, there are misses at larger class lengths this indicates that the POH function may be oscillatory.  This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 1.617.

Note: Xpodopt is within one class width of Xpod.

Warning: No false call analysis.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 0.129.

Note: Xpodopt is within one class width of Xpod.

Warning: No false call analysis.

CASE 1 - 90/95 Xpod is reached at XL. Increase flaw sizes to exceed 0.129. Recommend satisfying alternate 90/95 Xpodopt or Optimum Xpoh (if listed).

Survey/Optimum Xpoh = 0.0330 @ 0.001 inch 18 Samples

NTIAC 90% POD = 0.913 @ 0.040 inch
NTIAC 99/95 POD = 0.901 @ 0.055 inch

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = 0.043 inch
Samples Needed @ XL = 0
Classlength, Xm = 0.043 inch
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.042 inch
Samples Needed @Xpodopt = 29

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Case 4: 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited Misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no Misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

---

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.342</td>
<td>2</td>
</tr>
<tr>
<td>Xm = 0.342</td>
<td></td>
</tr>
<tr>
<td>Xs =</td>
<td></td>
</tr>
<tr>
<td>Xss = 0.342</td>
<td>2</td>
</tr>
<tr>
<td>Xpoh = 0.684</td>
<td></td>
</tr>
<tr>
<td>2XL = 0.684</td>
<td>29</td>
</tr>
</tbody>
</table>

**Alternate Xm =**

**Xpodopt =**
Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

File Name = F10603AD.XLS
Data Set Name = F10603AD(CRACK #)
Date & Time = 6/5/15 3:43 AM
Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod
Classlength @ 90/95 Xpod
Lower Confidence Bound = 0.8637 inch
Best LCL = 0.0120 inch
Classwidth @ Best LCL
Classlength @ Best LCL
User Provided a 90/95 POD @
User's Maximum Allowed Classlength
Inspector Classwidth @ Xp
POD @ Xpod

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Cases and class lengths:

Largest Classlength, XL = 0.086 inch
Samples Needed @ XL = 22
Classlength Mid-point, Xm = 0.035 inch
Samples Needed @ Xm = 22
Smallest Classlength, Xs = 0.012 inch
Samples Needed @ Xs = 22
New Smaller Classlength, Xss = 0.030 inch
Best LCL Classlength, Xlcl = 0.000 inch
Samples Needed @ Xlcl = 22
POH Classlength, Xpoh = 0.030 inch
Samples Needed @ Xpoh = 22
New Largest Classlength, 2XL = 0.086 inch
Xm is Near Verification Point = True
Opt. POD classlength, Xpodopt = 0.0350 -0.001 inch
Samples Needed @ Xpodopt = 22

Largest Classlength = 0.086 inch
Samples Needed = 22
Classlength Mid-point = 0.035 inch
Samples Needed = 22
Smallest Classlength = 0.012 inch
Samples Needed = 22
New Smaller Classlength = 0.030 inch
Best LCL Classlength = 0.000 inch
Samples Needed = 22
POH Classlength = 0.030 inch
Samples Needed = 22
New Largest Classlength = 0.086 inch
Xm is Near Verification Point = True
Opt. POD classlength = 0.0350 -0.001 inch
Samples Needed = 22

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited Misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no Misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Warning: No false call analysis.

CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 0.129.

Note: Xpodopt is within one class width of Xpod.

Warning: No false call analysis.

CASE 18 - 90/95 Xpod is reached at XL. Increase flaw sizes to exceed 0.129. Recommend satisfying alternate 90/95 Xpodopt or Optimum Xpoh (if listed).

Survey/Optimum Xpoh = 0.0330 inch

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = 0.043 inch
Samples Needed @ XL = 0
Classlength Mid-point, Xm = 0.043 inch
Samples Needed @ Xm = 0
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =

NTIAC 90% POD = 0.965 @ 0.025 inch
NTIAC 90/95 POD = 0.932 @ 0.025 inch
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**Directed DOE Options**

### TABLE C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.043</td>
</tr>
<tr>
<td>Xm</td>
<td>0.043</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
<tr>
<td><strong>Alternate Xm</strong></td>
<td><strong>Xpodopt</strong></td>
</tr>
<tr>
<td>0.043</td>
<td>29</td>
</tr>
</tbody>
</table>

---

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod,Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod,Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 0.861.

Note: No Midpoint evaluation; Xpod near XL. Meet 2XL to extend VALIDATION
Warning: No false call analysis.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
**Detection Probability** *(Utilization of DOEPOD results requires approval of Engineering Authority)*

**Large flaw validation failure. Extend flaw size range to 0.129.**

**Warning:** No false call analysis.

Note: Xpodopt is within one class width of Xpod.

<table>
<thead>
<tr>
<th>Xpod 90/95 Reached Anywhere?</th>
<th>Classwidth @ 90/95 Xpod</th>
<th>Lower Confidence Bound @ Best LCL</th>
</tr>
</thead>
<tbody>
<tr>
<td>REACHED</td>
<td>0.0110 inch</td>
<td>0.0430 inch</td>
</tr>
<tr>
<td>User Provided a 90/95 POD @</td>
<td>Classlength @ Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>POD @ Xpod</td>
<td>0.9001</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Best LCL Classlength, Xlcl</th>
<th>Samples Needed @ Xlcl</th>
</tr>
</thead>
<tbody>
<tr>
<td>inch</td>
<td>29</td>
</tr>
</tbody>
</table>

**POH Classlength, Xpoh**

<table>
<thead>
<tr>
<th>False Call Rate with UCL @ 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTIAC 90% POD = 0.901 @ 0.035 inch</td>
</tr>
<tr>
<td>NTIAC 90/95 POD = 0.902 @ 0.050 inch</td>
</tr>
</tbody>
</table>

**Status:**
- **CASE 18**: 90/95 Xpod is reached at XL. Increase flaw sizes to exceed 0.129. Recommend satisfying alternate 90/95 Xpodopt or Optimum Xpoh (if listed).

**Analysis File Name:** DOEPOD_v.1.2.01.PC.Office2010.Win7.xlsm

**Survey/Optimum Xpoh = 0.0330-0.001 inch**

**Warning:** No false call analysis.

**Note:** Xpodopt is within one class width of Xpod.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.

Warning: No false call analysis.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

**MLE Divergence Warning:** Initial results listed.

**Warning:** No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

**Survey/Optimum Xpoh =** 0.1190±0.001 inch 28 Samples

**False Call Rate =** with UCL @ 95%

- Largest Classlength, XL = inch
- Samples Needed @ XL =
- Classlength Mid-point, Xm = inch
- Samples Needed @ Xm =
- Smallest Classlength, Xs = inch
- Samples Needed @ Xs =
- New Smaller Classlength, Xss = inch
- Best LCL Classlength, Xlcl = inch
- Samples Needed @ Xlcl =
- POH Classlength, Xpoh = inch
- Samples Needed @ Xpoh =
- New Largest Classlength, 2XL = inch
- Xm is Near Verification Point =
- Opt. POD classlength, Xpodopt = inch
- Samples Needed @ Xpodopt =

**File Name =** F12201AD.XLS

**Data Set Name =** F12201AD(CRACK #)

**Date & Time =** 6/5/15 3:48 AM

**Xpod 90/95 Reached Anywhere?**

- NOT REACHED

**Classwidth @ 90/95 Xpod =** inch

**Classlength @ 90/95 Xpod =** inch

**Lower Confidence Bound =** 0.7206 inch

**Best LCL =** 0.0660 inch

**Classlength @ Best LCL =** inch

**User Provided a 90/95 POD @ =**

**User's Maximum Allowed Classlength =** inch

**Inspector Classwidth @ Xp =**

**POD @ Xpod =**

**Largest Classlength, XL =** inch

**Samples Needed @ XL =**

**Classlength Mid-point, Xm =** inch

**Samples Needed @ Xm =**

**Smallest Classlength, Xs =** inch

**Samples Needed @ Xs =**

**New Smaller Classlength, Xss =** inch

**Best LCL Classlength, Xlcl =** inch

**Samples Needed @ Xlcl =**

**POH Classlength, Xpoh =** inch

**Samples Needed @ Xpoh =**

**New Largest Classlength, 2XL =** inch

**Xm is Near Verification Point =**

**Opt. POD classlength, Xpodopt =** inch

**Samples Needed @ Xpodopt =**
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

MLE Divergence Warning: initial results listed.
Warning: No false call analysis.

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

NOT REACHED

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.7411 inch
Best LCL = 0.0250 inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ inch
User’s Maximum Allowed Classlength = inch
POD @ Xpod =

Xp = 0.610 inch

F12201AL.XLS File Name =
F12201AL(CRACK #) Data Set Name =
6/5/15 3:50 AM Date & Time =

MLE(95%) LCL 0.5000 inch
Best LCL = 0.0250 inch
Classlength @ Best LCL = inch

Largest Classlength , XL = inch
Samples Needed @ XL = 28
Classlength Mid-point , Xm = inch
Samples Needed @ Xm = 28
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss= inch
BestLCL Classlength, Xicl = inch
Samples Needed @ Xicl =
POH Classlength, Xpoh = 0.610 inch
Samples Needed @ Xpoh = 28
New Largest Classlength, 2XL = 1.958 inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @Xpodopt =

Classwidth @ 90/95 Xpod =
Classlength @ 90/95 Xpod =
Lower Confidence Bound =
Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD @
User’s Maximum Allowed Classlength =
POD @ Xpod =

0.979 inch
28
1.958 inch
0.610 inch
28
682 INCH
0.000 0.200 0.400 0.600 0.800 1.000 1.200
0.000 0.200 0.400 0.600 0.800 1.000 1.200

Probability of Hit (POH) in Class Range
Lower Confidence Bound @ 95%
Hit/Miss
Xp, 90/95 POD
MLE(Mean) POD
MLE(95%) LCL

Survey/Optimum Xpoh = 0.6100 -0.041 inch

False Call Rate =
with UCL @ 95% =
Largest Classlength , XL =
Samples Needed @ XL = 28
Classlength Mid-point , Xm =
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss=
BestLCL Classlength, Xicl =
Samples Needed @ Xicl =
POH Classlength, Xpoh = 0.610 inch
Samples Needed @ Xpoh = 28
New Largest Classlength, 2XL = 1.958 inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @Xpodopt =

MLE Divergence Warning: initial results listed.
Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.178</td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td>0.178</td>
</tr>
<tr>
<td>Xpoh</td>
<td>0.178</td>
</tr>
<tr>
<td>2XL</td>
<td>0.356</td>
</tr>
</tbody>
</table>

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE C**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod</td>
<td></td>
</tr>
</tbody>
</table>

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpoh = 0.5680 -0.008 inch 28 Samples

NTIAC 90% POD = 0.904 @ 0.625 inch
NTIAC 90/95 POD =

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = 0.979 inch
Samples Needed @ XL = 28
Classlength Mid-point, Xm =
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xicl =
Samples Needed @ Xicl =
POH Classlength, Xpoh = 0.610 inch
Samples Needed @ Xpoh = 28
New Largest Classlength, 2XL = 1.958 inch
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
Xp =

0.904 0.625
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths; this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

### TABLE A

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpoh</th>
<th>X pod</th>
<th>X posl</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.979</td>
<td>5.000</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>22</td>
<td></td>
</tr>
</tbody>
</table>

### TABLE B

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpoh</th>
<th>X pod</th>
<th>X posl</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.610</td>
<td>5.000</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>1.958</td>
<td>5.000</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>22</td>
<td></td>
</tr>
</tbody>
</table>
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
**Although Xpod appears to have been reached at a point, there are Misses at larger class lengths; this indicates that the POH function may be oscillatory. This needs to be checked.**

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first. **Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

---

**Directed DOE Options**

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
<tr>
<td><strong>Alternate Xm</strong></td>
<td><strong>Xpodopt</strong></td>
</tr>
</tbody>
</table>

**0.356 29**

**TABLE A**

| Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed. |

**TABLE B**

| Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed. |

---

**File Name = F12201CD.XLS**

**Data Set Name = F12201CD(CRACK #)**
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpho, and 2XL.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>x</th>
<th>Xpoh</th>
<th>2XL</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.979</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>Xm = 0.610</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>Xs = 1.958</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>Xlcl =</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xpoh =</td>
<td></td>
<td></td>
</tr>
<tr>
<td>**Alternate Xm = Xpodopt =</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Warning: No false call analysis.

CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

**Warning:** No false call analysis.

**CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.**

**File Name =** F12202AL.XLS  
**Data Set Name =** F12202AL(CRACK #)

**Date & Time =** 6/5/15 3:59 AM

- Xpod 90/95 Reached Anywhere? NOT REACHED
- Classwidth @ 90/95 Xpod
- Classlength @ 90/95 Xpod
- Lower Confidence Bound
- Best LCL
- Classwidth @ Best LCL
- Classlength @ Best LCL
- User Provided a 90/95 POD
- User's Maximum Allowed Classlength
- Inspector Classwidth @ Xp
- POD @ Xpod

**Survey/Optimum Xpod =** 0.4990 -0.003 inch

**False Call Rate =** with UCL @ 95% =

- Largest Classlength , XL = 0.979 inch
- Samples Needed @ XL = 28
- Classlength Mid-point , Xm = inch
- Samples Needed @ Xm = inch
- Smallest Classlength, Xs = inch
- Samples Needed @ Xs = inch
- New Smaller Classlength, Xss = inch
- Best LCL Classlength, Xlcl = 0.568 inch
- Samples Needed @ Xlcl = 9
- POH Classlength, Xpoh = 0.568 inch
- Samples Needed @ Xpoh = 9
- New Largest Classlength, 2XL = inch
- Xm is Near Verification Point = inch
- Opt. POD classlength, Xpodopt = inch
- Samples Needed @Xpodopt = inch

**Probability of Hit (POH) in Class Range**
- Probability of Hit (POH) in 90/95 POD
- Lower Confidence Bound @ 95%
- Hit/Miss
- Xp, 90/95 POD
- MLE(Mean) POD
- MLE(95%) LCL
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths; this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
**Detection Probability** (Utilization of DOEPOD results requires approval of Engineering Authority)

**Warning:** No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

**Survey/Optimum Xpoh** = 0.1110 - 0.001 Inch 25 Samples

**False Call Rate** with UCL @ 95% =
- Largest Class Length, XL = inch
- Samples Needed @ XL =
- Class Length Mid-point, Xm = inch
- Samples Needed @ Xm =
- Smallest Class Length, Xs = inch
- Samples Needed @ Xs =
- New Smallest Class Length, Xs = inch
- Best LCL Class Length, Xlcl = inch
- Samples Needed @ Xlcl =
- Opt. POD class length, Xpodopt = inch
- Samples Needed @ Xpodopt =
- xi = inch

**Largest POD in Class Width** = 0.356
**Largest POD in Class Length** = 0.8739

**Hit/Miss**
- Xp, 90/95 POD =
- MLE(Mean) POD =
- MLE(95%) LCL =

**File Name:** F12202BD.XLS
**Data Set Name:** F12202BD(CRACK #)
**Date & Time:** 6/5/15 4:01 AM

**Xpod 90/95 Reached Anywhere?**
- NOT REACHED

**Class Width @ 90/95 Xpod** = inch
**Class Length @ 90/95 Xpod** = inch
**Lower Confidence Bound @ 95%** = 0.0750 inch
**Best LCL** = 0.0750 inch
**Class Length @ Best LCL** = inch
**User Provided a 90/95 POD** = inch
**User's Maximum Allowed Class Length** = inch
**Inspector Class Width @ Xp** = inch
**POD @ Xpod** =

**File Name =** F12202BD.XLS
**Data Set Name =** F12202BD(CRACK #)
**Date & Time =** 6/5/15 4:01 AM

**Xpod 90/95 Reached Anywhere?**
- NOT REACHED

**Class Width @ 90/95 Xpod** = inch
**Class Length @ 90/95 Xpod** = inch
**Lower Confidence Bound =** 0.0750 inch
**Best LCL =** 0.0750 inch
**Class Length @ Best LCL =** inch
**User Provided a 90/95 POD =** inch
**User's Maximum Allowed Class Length =** inch
**Inspector Class Width @ Xp =** inch
**POD @ Xpod =**
**Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.**

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Large flaw validation failure. Extend flaw size range to 1.617.

Warning: No false call analysis.

CASE 18: 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

File Name: F12202BL.XLS
Data Set Name: F12202BL(CRACK #)
Date & Time: 6/5/15 4.02 AM

POH Classlength, Xpoh = 0.979 inch
Samples Needed @ Xpoh = 29

New Largest Classlength, 2XL =

Xm is Near Verification Point =

Opt. POD classlength, Xpodopt = 0.537 inch
Samples Needed @Xpodopt = 29

False Call Rate =

with UCL @ 95% =

Largest Classlength , XL = 0.979 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.710 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =

Survey/Optimum Xpoh = 0.900 @ 0.3400 -0.001 Inch 28 Samples

NTIAC 90% POD = 0.900 @ 0.345 inch
NTIAC 90/95 POD = 0.900 @ 0.465 inch

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**Directed DOE Options**

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.537</td>
<td>29</td>
</tr>
</tbody>
</table>

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE C**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.710</td>
<td></td>
</tr>
</tbody>
</table>

---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.
The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.
The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.
Follow sample selection priority in the DOEPOD Manual.
Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.
**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpoh = 0.000 Inch Samples

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = inch
Samples Needed @ XL =
Classlength Mid-point, Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
Best LCL Classlength, Xlcl = inch
Samples Needed @ Xlcl =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength, 2XL = inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @Xpodopt =
Xp = inch
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpoh = 0.499 - 0.002 inch Samples = 28

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### Directed DOE Options

#### Table C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.979</td>
<td>28</td>
</tr>
<tr>
<td>0.499</td>
<td>28</td>
</tr>
<tr>
<td>1.958</td>
<td>29</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =

#### Table A*

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

#### Table B*

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

*Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths, this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.
The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.
The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown
Follow sample selection priority in the DOEPOD Manual.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 0.357.

Note: Xpodopt is within one class width of Xpod.

Warning: No false call analysis.

<table>
<thead>
<tr>
<th>Class Length, inch</th>
<th>Probability of Hit (POH) in Class Range</th>
<th>Lower Confidence Bound @ 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>0.050</td>
<td>0.908</td>
<td></td>
</tr>
<tr>
<td>0.100</td>
<td>0.804</td>
<td></td>
</tr>
<tr>
<td>0.150</td>
<td>0.702</td>
<td></td>
</tr>
<tr>
<td>0.200</td>
<td>0.602</td>
<td></td>
</tr>
</tbody>
</table>

File Name = F12203BD.XLS
Data Set Name = F12203BD(CRACK #)
Date & Time = 6/5/15 4:10 AM

Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.030 inch
Classlength @ 90/95 Xpod = 0.906 inch
Lower Confidence Bound = 0.001 inch
Best LCL = Classwidth @ Best LCL = Classlength @ Best LCL = 0.001 inch
User Provided a 90/95 POD @ POD @ Xpod = 1.0000
User's Maximum Allowed Classlength
Inspector Classwidth @ Xp = 0.178 inch
POD @ Xpod = 0.149 inch

CASE 1E: 90/95 Xpod may be VALIDATED from Xpod to XL when Xm is satisfied. Xp used to satisfy XL requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Survey/ Optimum Xpoh = 0.0760 - 0.001 inch 28 Samples
NTIAC 90% POD = 0.906 @ 0.080 inch
NTIAC 90/95 POD = 0.908 @ 0.105 inch
False Call Rate = with UCL @ 95% =
Largest Class Length, XL = 0.178 inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 0.149 inch
Samples Needed @ Xm = 29
Smallest Class Length, Xs =
Samples Needed @ Xs =
New Smaller Class Length, Xss =
BestLCL Class Length, Xlcl =
Samples Needed @ Xlcl =
POH Class Length, Xpoh =
Samples Needed @ Xpoh =
New Largest Class Length, 2XL =
Xm is Near Verification Point =
Opt. POD class length, Xpodopt = 0.118 inch
Samples Needed @Xpodopt = 29

Xp = 0.1190 inch
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**Alternate Xm** = Xpod

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

---

### Directed DOE Options

### TABLE C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.118</td>
</tr>
<tr>
<td>Xm</td>
<td>0.149</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
<tr>
<td>Xpod</td>
<td>0.118</td>
</tr>
<tr>
<td>Xpodopt</td>
<td>29</td>
</tr>
</tbody>
</table>

### TABLE A*

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

### TABLE B*

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

---

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 1.605.

Note: Xpodopt is within one class width of Xpod.
Warning: No false call analysis.

CASE 1# - 90/95 Xpod may be VALIDATED from Xpod to XL Xp used to satisfy XL requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited Misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no Misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**TABLE A**
Selected class lengths with existing Misses.
Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**
Selected class lengths with no Misses. Additional samples at these class lengths will achieve the Xpod listed.

**Alternate Xm =**

Xpodopt = 0.529 29

---

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.610</td>
<td></td>
</tr>
<tr>
<td>Xm = 0.568</td>
<td></td>
</tr>
<tr>
<td>Xs =</td>
<td></td>
</tr>
<tr>
<td>Xss =</td>
<td></td>
</tr>
<tr>
<td>Xlcl =</td>
<td></td>
</tr>
<tr>
<td>Xpoh =</td>
<td></td>
</tr>
<tr>
<td>2XL =</td>
<td></td>
</tr>
</tbody>
</table>

NoMissesObserved  AtLeastOneMissOccurred  XL  Xm  Xs  Xss  Xlcl  Xpoh  2XL  Xpod  Xpodopt
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
**Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)**

Large flaw validation failure. Extend flaw size range to 1.557.

**Warning:** No false call analysis.

**Note:** Xpodopt is within one class width of Xpod.

**File Name:** F12203C.XLS
**Data Set Name:** F12203C(CRACK #)
**Date & Time:** 6/5/15 4:14 AM
**Xpod 90/95 Reached Anywhere?** REACHED
**Classwidth @ 90/95 Xpod**
**Classlength @ 90/95 Xpod**
**Lower Confidence Bound @ 95%**
**Best LCL**
**Classwidth @ Best LCL**
**Classlength @ Best LCL**
**User Provided a 90/95 POD @**
**User's Maximum Allowed Classlength**
**Inspector Classwidth @ Xp**
**POD @ Xpod**

<table>
<thead>
<tr>
<th>POD @ Xpod</th>
<th>Classwidth @ Xp</th>
<th>Classlength @ Xp</th>
<th>Lowest POD</th>
<th>Highest POD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000 inch</td>
<td>0.200 inch</td>
<td>0.519 inch</td>
<td>0.200 inch</td>
<td>0.519 inch</td>
</tr>
</tbody>
</table>

**NTIAC 90% POD =** 0.901 @ 0.300 inch
**NTIAC 90/95 POD =** 0.902 @ 0.415 inch

**False Call Rate =** with UCL @ 95% =

**Largest Classlength , XL =** 0.610 inch
**Samples Needed @ XL =**
**Classlength Mid-point , Xm =** 0.543 inch
**Samples Needed @ Xm =**
**Smallest Classlength, Xs =**
**Samples Needed @ Xs =**
**New Smaller Classlength, Xss =**
**BestLCL Classlength, Xcl =**
**Samples Needed @ Xcl =**
**POH Classlength, Xpoh =**
**Samples Needed @ Xpoh =**
**Opt. POD classlength, Xpodopt =** 0.519 inch
**New Largest Classlength , 2XL =**
**Xn is Near Verification Point =**
**Samples Needed @Xpodopt =** 29
**Xp =** 0.519 inch

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp used to satisfy XL requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Analysis file name: DOEPOD_v.1.2.01.PC.Office2010.Win7.xlsm

Largest flaw validation failure. Extend flaw size range to 1.557. Note: Xpodopt is within one class width of Xpod.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
## Detection Probability

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

**Warning:** No false call analysis.

### CASE 4 - 90/95 Xpod is not reached anywhere.
Recommend satisfying XL and the greater of Xpoh or Xlcl.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probability of Hit (POH) in Class Range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Confidence Limit, LCL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class Length, inch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Detection Probability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xp, 90/95 POD</td>
<td>0.655</td>
<td>inch</td>
</tr>
<tr>
<td>MLE(Mean) POD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MLE(95%) LCL</td>
<td>0.6518</td>
<td>inch</td>
</tr>
<tr>
<td>MLE(95%) LCL</td>
<td>0.6545</td>
<td>inch</td>
</tr>
<tr>
<td>Classwidth @ 90/95 Xpod</td>
<td>NOT REACHED</td>
<td></td>
</tr>
<tr>
<td>Classlength @ 90/95 Xpod</td>
<td></td>
<td>inch</td>
</tr>
<tr>
<td>Lower Confidence Bound</td>
<td>0.6518</td>
<td>inch</td>
</tr>
<tr>
<td>Best LCL</td>
<td>0.6518</td>
<td>inch</td>
</tr>
<tr>
<td>Classwidth @ Best LCL</td>
<td>0.6545</td>
<td>inch</td>
</tr>
<tr>
<td>Classlength @ Best LCL</td>
<td>0.6545</td>
<td>inch</td>
</tr>
<tr>
<td>User Provided a 90/95 POD</td>
<td></td>
<td>inch</td>
</tr>
<tr>
<td>User's Maximum Allowed Classlength</td>
<td></td>
<td>inch</td>
</tr>
<tr>
<td>Inspector Classwidth @ Xp</td>
<td></td>
<td>inch</td>
</tr>
<tr>
<td>POD @ Xpod</td>
<td></td>
<td>inch</td>
</tr>
<tr>
<td>Xp @ 90/95 POD</td>
<td></td>
<td>inch</td>
</tr>
<tr>
<td>F200028A(CRACK #)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date &amp; Time</td>
<td>6/5/15 4:17 AM</td>
<td></td>
</tr>
<tr>
<td>File Name</td>
<td>F200028A.XLS</td>
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</tr>
<tr>
<td>Data Set Name</td>
<td>F200028A(CRACK #)</td>
<td></td>
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<tr>
<td>File Name</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Set Name</td>
<td></td>
<td></td>
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<tr>
<td>File Name</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Set Name</td>
<td></td>
<td></td>
</tr>
<tr>
<td>File Name</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Set Name</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### False Call Rate

- **Determined by:** with UCL @ 95%
- **Survey/Optimum Xpoh:** 0.5636 - 0.040 inch
  - 28 Samples

### NTIAC 90% POD

- **Largest Classlength, XL:** 0.655 inch
- **Samples Needed @ XL:** 22

### NTIAC 90/95 POD

- **Classwidth Mid-point, Xm:**
- **Samples Needed @ Xm:**
- **Smallest Classlength, Xs:**
- **Samples Needed @ Xs:**

### New Smaller Classlength, Xss

- **Classlength Mid-point @ Xss:**
- **Samples Needed @ Xss:**

### Best LCL Classlength, Xlcl

- **Classwidth @ Best LCL:**
- **Samples Needed @ Xlcl:**

### POD @ Xpod

- **Survey/Optimum POD:**
- **Classwidth Mid-point @ Xp:**
- **Samples Needed @ Xp:**

### Opt. POD classlength, Xpodopt

- **Classwidth @ Opt. POD:**
- **Samples Needed @ Xpodopt:**
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

---

### Directed DOE Options

<table>
<thead>
<tr>
<th>Directed DOE Options</th>
<th>TABLE A*</th>
<th>TABLE B*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class Length</td>
<td>Additional Samples</td>
<td>Class Length</td>
</tr>
<tr>
<td>0.655</td>
<td>22</td>
<td>0.665</td>
</tr>
<tr>
<td>0.618</td>
<td>23</td>
<td>1.309</td>
</tr>
</tbody>
</table>

**Alternate Xm** = Xpodopt

---

*Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.*

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

MLE Divergence Warning: Initial results listed.

Warning: No false call analysis.

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpoh = 0.5636 - 0.040 inch

False Call Rate = with UCL @ 95% =

NTIAC 90% POD = 0.655 inch

NTIAC 90/95 POD = 0.564 inch

Opt. POD classlength, Xpodopt = 1.309 inch

Samples Needed @ Xpodopt = 28

Xp = inch

Samples Needed @ Xp = 28

POH classlength, Xpoh = 0.564 inch

Samples Needed @ Xpoh = 28

New Largest classlength, 2XL = 1.309 inch

Xn is Near Verification Point =

Xm is Near Verification Point =

Smallest Classlength, Xs = inch

Samples Needed @ Xs = 27

Classlength Mid-point, Xm = inch

Xm is Near Verification Point =

Best LCL Classlength, Xlcl =

Samples Needed @ Xlcl = 28

Best LCL = 0.5182 inch

Classwidth @ Best LCL = 0.0370 inch

User Provided a 90/95 POD =

User’s Maximum Allowed Classlength =

POD @ Xp =

Inspector Classwidth @ Xp =

Classlength @ Best LCL = 0.0370 inch

Lower Confidence Bound = 0.7616 inch

Classwidth @90/95 Xpod =

MLE(95%) LCL =

MLE(Mean) POD =

MLE Divergence Warning: Initial results listed.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**TABLE A**

<table>
<thead>
<tr>
<th>Xlcl</th>
<th>Xpodopt</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.655</td>
<td>27</td>
</tr>
<tr>
<td>0.564</td>
<td>28</td>
</tr>
<tr>
<td>1.309</td>
<td>29</td>
</tr>
</tbody>
</table>

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

---

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.655</td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xld</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td>0.564</td>
</tr>
<tr>
<td>2XL</td>
<td>1.309</td>
</tr>
</tbody>
</table>
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpoh = 0.0540 -0.005 inch 28 Samples

File Name = F20852AD.XLS
Data Set Name = F20852AD(CRACK #)
Date & Time = 6/5/15 4:20 AM
Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.3684 inch
Best LCL = 0.0310 inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ inch
User's Maximum Allowed Classlength @ inch
POD @ Xpod = inch

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

---

**Directed DOE Options**

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.054</td>
<td>28</td>
</tr>
<tr>
<td>Xm = 0.054</td>
<td></td>
</tr>
<tr>
<td>Xs =</td>
<td></td>
</tr>
<tr>
<td>Xss =</td>
<td></td>
</tr>
<tr>
<td>Xlcl =</td>
<td></td>
</tr>
<tr>
<td>Xpoh = 0.054</td>
<td>28</td>
</tr>
<tr>
<td>2XL = 0.108</td>
<td>29</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =**

---

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.054</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>0.054</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.108</td>
<td>29</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.054</td>
<td></td>
<td>0.054</td>
<td></td>
</tr>
<tr>
<td>0.108</td>
<td></td>
<td>0.108</td>
<td></td>
</tr>
</tbody>
</table>

---

*Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.*

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

### Table A*
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xs</td>
<td>0.768</td>
</tr>
<tr>
<td>XsS</td>
<td>29</td>
</tr>
</tbody>
</table>

### Table B*
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod</td>
<td>0.768</td>
</tr>
<tr>
<td>Xpodopt</td>
<td>29</td>
</tr>
</tbody>
</table>

---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

```plaintext
# Table C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
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<tr>
<td>XsS</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td>0.768</td>
</tr>
<tr>
<td>xpodopt</td>
<td>29</td>
</tr>
</tbody>
</table>
```

---

* File Name = F20852AL.XLS
  Data Set Name = F20852AL(CRACK #)
Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td>0.108 29</td>
</tr>
<tr>
<td><strong>Alternate Xm</strong></td>
<td>Xpodopt</td>
</tr>
</tbody>
</table>
CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

File Name = F20852CD.XLS
Data Set Name = F20852CD(CRACK #)
Date & Time = 6/5/15 4:23 AM

Warning: No false call analysis.

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = Best LCL = 0.5619 inch
Classwidth @ Best LCL = 0.0120 inch
Classlength @ Best LCL = 0.0540 inch
User Provided a 90/95 POD = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod =

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpoh = 0.0480 - 0.001 Inch
Samples = 28

False Call Rate = with UCL @ 95% =
Largest Classlength , XL = inch
Samples Needed @ XL =
Classlength Mid-point , Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xcl = inch
Samples Needed @ Xcl =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength , 2XL = inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @Xpodopt =
Xp = inch

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### Directed DOE Options

#### TABLE A*

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xl</th>
<th>Xm</th>
<th>Xs</th>
<th>Xss</th>
<th>Xlcl</th>
<th>Xpoh</th>
<th>2XL</th>
<th><strong>Alternate Xm</strong></th>
<th>Xpodopt</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.080</td>
<td>0.108</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### TABLE B*

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
</table>

**FILE NAME = F20852CD.XLS**

**DATA SET NAME = F20852CD(CRACK #)**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

**Warning:** No false call analysis.

**CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.**

- **Survey/Optimum Xpod:** 0.3840 - 0.011 inch
- **Samples Needed @ XL:** 28
- **False Call Rate with UCL @ 95%:**
  - **Largest Classlength, XL:** inch
  - **Samples Needed @ XL:** inch
  - **Classlength Mid-point, Xm:** inch
  - **Samples Needed @ Xm:** inch
  - **Smallest Classlength, Xs:** inch
  - **Samples Needed @ Xs:** inch
  - **New Smaller Classlength, Xss:** inch
  - **Best LCL Classlength, Xlcl:** inch
  - **Samples Needed @ Xlcl:** inch
  - **POH Classlength, Xpoh:** inch
  - **Samples Needed @ Xpoh:** inch
  - **New Largest Classlength, 2XL:** inch
  - **Xm is Near Verification Point:** inch
  - **Opt. POD classlength, Xpodopt:** inch
  - **Samples Needed @ Xpodopt:** inch

- **File Name:** F20852CL.XLS
- **Data Set Name:** F20852CL(CRACK #)
- **Date & Time:** 6/5/15 4:24 AM
- **Xpod 90/95 Reached Anywhere?:** NOT REACHED
  - **Classlength @ 90/95 Xpod:** inch
  - **Lower Confidence Bound:** 0.6383 inch
  - **Best LCL:** 0.2000 inch
  - **Classlength @ Best LCL:** 0.3840 inch
  - **User Provided a 90/95 POD @ Xpod:** inch
  - **User’s Maximum Allowed Classlength:** inch
  - **Inspector Classwidth @ Xp:** inch
  - **POD @ Xpod:**

**Analysis File Name:** DOEPOD v.1.2.01.1C.PC.OBI2010.Win7.xlsm
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

### Directed DOE Options

<table>
<thead>
<tr>
<th>TABLE C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class Length</td>
</tr>
<tr>
<td>XL</td>
</tr>
<tr>
<td>Xm</td>
</tr>
<tr>
<td>Xs</td>
</tr>
<tr>
<td>Xss</td>
</tr>
<tr>
<td>Xlcl</td>
</tr>
</tbody>
</table>

**Alternate Xm =**

<table>
<thead>
<tr>
<th>TABLE A*</th>
</tr>
</thead>
</table>
| Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>TABLE B*</th>
</tr>
</thead>
</table>
| Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

### Additional Samples Needed

| File Name = F20852CL.XLS  |
| Data Set Name = F20852CL(CRACK #) |

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
**Warning:** No false call analysis.

CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.

Survey/ Optimum Xpoh = 0.1240 - 0.008 inch

False Call Rate = with UCL @ 95% =

- Largest Classlength, XL = 0.144 inch
- Samples Needed @ XL = 22
- Classlength Midpoint, Xm = inch
- Samples Needed @ Xm = inch
- Smallest Classlength, Xs = inch
- Samples Needed @ Xs = inch
- New Smaller Classlength, Xss = inch
- Best LCL Classlength, Xlcl = 0.136 inch
- Samples Needed @ Xlcl = inch
- POH Classlength, Xpoh = 0.144 inch
- Samples Needed @ Xpoh = 23
- New Largest Classlength, 2XL = 0.288 inch
- Xn is Near Verification Point = inch
- Opt. POD classlength, Xpodopt = inch
- Samples Needed @ Xpodopt = inch

File Name = F22202AD.XLS
Data Set Name = F22202AD(CRACK #)
Date & Time = 6/5/15 4:25 AM

Xpod 90/95 Reached Anywhere? = NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.0200 inch
Best LCL = 0.0300 inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xp = inch

Analysis file name: DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsm
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POM function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resloved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.144</td>
<td>22</td>
</tr>
<tr>
<td>Xm = 0.144</td>
<td>22</td>
</tr>
<tr>
<td>Xs = 0.136</td>
<td>23</td>
</tr>
<tr>
<td>Xss = 0.288</td>
<td>29</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.*

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Warning: No false call analysis.

Survey/Optimum Xpoh = 0.1240 @ 0.008 inch
Samples = 28

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = inch
Samples Needed @ XL =
Classlength Mid-point, Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =
Xp = inch
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the alternate Xm requirement removes the need to meet the adjacent Xm requirement.

*** The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

<table>
<thead>
<tr>
<th>TABLE A*</th>
<th>Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>Xm</td>
</tr>
<tr>
<td>1.100</td>
<td>29</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =

<table>
<thead>
<tr>
<th>TABLE B*</th>
<th>Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod, Class Length</td>
<td>No. Need</td>
</tr>
</tbody>
</table>

Xpod, Class Length | No. Need |

* Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the alternate Xm requirement removes the need to meet the adjacent Xm requirement.

*** The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpoh = 0.1240 - 0.008 inch with UCL @ 95% = 0.150 inch
Samples Needed = 28

NTIAC 90% POD = 0.904 @ 0.150 inch
NTIAC 90/95 POD =

False Call Rate = 0.1240 - 0.008 inch

Largest Classlength, XL = inch
Opt. POD classlength, Xpodopt = inch
New Largest Classlength, 2XL = inch
Xp is near verification point = inch

Samples Needed @ XL =
Samples Needed @ Xn =
Samples Needed @ Xs =
Samples Needed @ Xss =

New Smaller Classlength, Xss =
Best LCL Classlength, Xcl =
POH Classlength, Xpoh =

Analysis file name: DOEPOD.v1.2.51.PC.Office2010.Win7.xlsm

<table>
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<tr>
<th>x</th>
<th>0.00</th>
<th>0.02</th>
<th>0.04</th>
<th>0.06</th>
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<th>0.10</th>
<th>0.12</th>
<th>0.14</th>
<th>0.16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probability of Hit (POH) in Class Range:</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Confidence Bound @ 95%:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hit/Miss:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xp, 90/95 POD:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MLE(Mean) POD:</td>
<td></td>
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<td></td>
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<tr>
<td>MLE(95%) LCL:</td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CASE Length, inch

<table>
<thead>
<tr>
<th>File Name</th>
<th>F2202JO.XLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Set Name</td>
<td>F2202JO(CRACK #)</td>
</tr>
<tr>
<td>Date &amp; Time</td>
<td>6/5/15 4:30 AM</td>
</tr>
<tr>
<td>Xpod 90/95 Reached Anywhere?</td>
<td>NOT REACHED</td>
</tr>
<tr>
<td>Classwidth @ 90/95 Xpod</td>
<td>inch</td>
</tr>
<tr>
<td>Classlength @ 90/95 Xpod</td>
<td>inch</td>
</tr>
<tr>
<td>Lower Confidence Bound</td>
<td>0.7699</td>
</tr>
<tr>
<td>Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>Classwidth @ Best LCL</td>
<td>0.0380</td>
</tr>
<tr>
<td>Classlength @ Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>User Provided a 90/95 POD @</td>
<td>inch</td>
</tr>
<tr>
<td>User's Maximum Allowed Classlength</td>
<td>inch</td>
</tr>
<tr>
<td>Inspector Classwidth @ Xp</td>
<td>inch</td>
</tr>
<tr>
<td>POD @ Xpod</td>
<td>inch</td>
</tr>
</tbody>
</table>

F22202CD.XLS
File Name =
Data Set Name =
Date & Time = 6/5/15 4:30 AM

Xpod 90/95 Reached Anywhere? = NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.7699
Best LCL = inch
Classwidth @ Best LCL = 0.0380
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod = inch

Largest Classlength, XL = inch
Samples Needed @ XL =
Classlength Mid-point, Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
Best LCL Classlength, Xcl = inch
Samples Needed @ Xcl =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength, 2XL = inch
Opt. POD classlength, Xpodopt = inch
Samples Needed @ Xpodopt =
Xp = inch
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

### Directed DOE Options

#### TABLE C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
<tr>
<td><strong>Alternate Xm =</strong></td>
<td><strong>Xpodopt</strong> =</td>
</tr>
</tbody>
</table>

**Alternate Xm =**

**Xpodopt** =

TABLE A*

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**TABLE C**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**No Misses Observed**
**At Least One Miss Occurred**

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

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Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpoh = 0.5300 - 0.003 inch
27 Samples

False Call Rate = with UCL @ 95% =
Largest Classlength, XL = 0.550 inch
Samples Needed @ XL = 22
Classlength Mid-point, Xm =
Smallest Classlength, Xs =
New Smaller Classlength, Xss =
Best LCL Classlength, Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh = 22
New Largest Classlength, 2XL =
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =

File Name = F2202C.XLS
Data Set Name = F2202C(CRACK #)
Date & Time = 6/5/15 4:31 AM
Xpod 90/95 Reached Anywhere? = NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.7411
Best LCL = 0.4920 inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod =
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

---

File Name = F22202CL.XLS
Data Set Name = F22202CL(CRACK #)

Directed DOE Options

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.550</td>
<td>22</td>
</tr>
<tr>
<td>Xm = 0.550</td>
<td>22</td>
</tr>
<tr>
<td>Xs =</td>
<td></td>
</tr>
<tr>
<td>Xss =</td>
<td></td>
</tr>
<tr>
<td>Xlcl =</td>
<td></td>
</tr>
<tr>
<td>Xpoh = 1.100</td>
<td>29</td>
</tr>
<tr>
<td>2XL =</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm =**

Xpodopt =

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**TABLE C**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths which indicates that the POH function may be oscillatory. This needs to be checked.*

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and those class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

### Table A

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod,Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.00</td>
</tr>
<tr>
<td>Xm</td>
<td>0.05</td>
</tr>
<tr>
<td>Xs</td>
<td>0.10</td>
</tr>
<tr>
<td>Xss</td>
<td>0.15</td>
</tr>
<tr>
<td>Xlcl</td>
<td>0.20</td>
</tr>
<tr>
<td>Xpoh</td>
<td>0.25</td>
</tr>
<tr>
<td><strong>Alternate Xm</strong></td>
<td>0.200</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

### Table B

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod,Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.00</td>
</tr>
<tr>
<td>Xm</td>
<td>0.05</td>
</tr>
<tr>
<td>Xs</td>
<td>0.10</td>
</tr>
<tr>
<td>Xss</td>
<td>0.15</td>
</tr>
<tr>
<td>Xlcl</td>
<td>0.20</td>
</tr>
<tr>
<td>Xpoh</td>
<td>0.25</td>
</tr>
</tbody>
</table>

**Xpodopt**

---

*Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Warning: No false call analysis.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

False Call Rate = 0.002 with UCL @ 95%

Sample/Optimum Xpod = 0.3200 inch

Survey/Optimum Xpod = 0.3200 ± 0.225 inch

Largest Classlength , XL = 0.814 inch

Samples Needed @ XL = 27

Classlength Mid-point , Xm = 0.2500 inch

Samples Needed @ Xm = 27

Smallest Classlength, Xs = 0.0930 inch

Samples Needed @ Xs = 27

New Smaller Classlength, Xss = 0.0930 inch

BestLCL Classlength, Xlcl = 0.2500 inch

Samples Needed @ Xlcl = 27

POH Classlength, Xpoh = 0.7411 inch

Samples Needed @ Xpoh = 27

New Largest Classlength , 2XL = 0.7411 inch

Xm is Near Verification Point

Opt. POD classlength, Xpodopt = 0.7411 inch

Samples Needed @ Xpodopt = 27

Xp = 0.814 inch
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Warning: No false call analysis.

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

TABLE C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.100</td>
</tr>
<tr>
<td>Xm</td>
<td>0.200</td>
</tr>
<tr>
<td>Xs</td>
<td>0.100</td>
</tr>
<tr>
<td>Xss</td>
<td>0.200</td>
</tr>
<tr>
<td>Xlcl</td>
<td>0.100</td>
</tr>
<tr>
<td>Xpod</td>
<td>0.200</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt

TABLE A*

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

TABLE B*

Xpod, Class Length, No. Need

Directed DOE Options

---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
**CASE 6** - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the Poh function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

*The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.*
Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
### Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

**Warning:** No false call analysis.

<table>
<thead>
<tr>
<th>POD @ Xpod</th>
<th>Xp, 90/95 POD</th>
<th>MLE(Mean) POD</th>
<th>MLE(95%) LCL</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOT REACHED</td>
<td>0.7411 inch</td>
<td></td>
<td>0.3250 inch</td>
</tr>
<tr>
<td>Classwidth @ Best LCL</td>
<td>0.0750 inch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classlength @ Best LCL</td>
<td>0.3250 inch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classwidth @ 90/95 Xpod</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classlength @ 90/95 Xpod</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Confidence Bound</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Best LCL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classwidth @ 90/95 Xp</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classlength @ 90/95 Xp</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>User Provided a 90/95 POD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>POD @ Xp</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.**

### Analysis File Name

- DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsm

### File Name

- F30653CL.XLS

### Data Set Name

- F30653CL(CRK #)

### Date & Time

- 6/5/15 4:46 AM

### Xpod 90/95 Reached Anywhere?

- NOT REACHED

### Classwidth @ 90/95 Xpod

- inch

### Classlength @ 90/95 Xpod

- inch

### Lower Confidence Bound

- 0.7411 inch

### Hit/Miss

- Not applicable

### POD @ Xp

- inch

### User Provided a 90/95 POD @

- inch

### User's Maximum Allowed Classlength

- inch

### Inspector Classwidth @ Xp

- inch

### Classlength @ Xp

- inch

### User's Maximum Allowed Classlength

- inch

### Best LCL Classlength, Xlcl

- inch

### New Largest Classlength, 2XL

- inch

### New Smaller Classlength, Xss

- inch

### Opt. POD classlength, Xpodopt

- inch

### Smallest Classlength, Xs

- inch

### Classwidth @ Xs

- inch

### Smallest Classlength, Xs

- inch

### Samples Needed @ Xs

- inch

### New Smaller Classlength, Xss

- inch

### Opt. POD classlength, Xpodopt

- inch

### Smallest Classlength, Xs

- inch

### Samples Needed @ Xs

- inch

### Samples Needed @ Xooh

- inch

### Largest Classlength, XL

- inch

### Opt. POD classlength, Xpodopt

- inch

### Smallest Classlength, Xs

- inch

### Samples Needed @ Xs

- inch

### Smallest Classlength, Xs

- inch

### Samples Needed @ Xs

- inch

### New Smaller Classlength, Xss

- inch

### Opt. POD classlength, Xpodopt

- inch

### Smallest Classlength, Xs

- inch

### Samples Needed @ Xs

- inch

### Smallest Classlength, Xs

- inch

### Samples Needed @ Xs

- inch

### Opt. POD classlength, Xpodopt

- inch

### Smallest Classlength, Xs

- inch

### Samples Needed @ Xs

- inch

### Smallest Classlength, Xs

- inch

### Samples Needed @ Xs

- inch

### Opt. POD classlength, Xpodopt

- inch

### Smallest Classlength, Xs

- inch

### Samples Needed @ Xs

- inch

### Smallest Classlength, Xs

- inch

### Samples Needed @ Xs

- inch

### Opt. POD classlength, Xpodopt

- inch

### Smallest Classlength, Xs

- inch

### Samples Needed @ Xs

- inch

### Smallest Classlength, Xs

- inch

### Samples Needed @ Xs

- inch

### Opt. POD classlength, Xpodopt

- inch

### Smallest Classlength, Xs

- inch

### Samples Needed @ Xs

- inch

### Smallest Classlength, Xs

- inch

### Samples Needed @ Xs

- inch

### Opt. POD classlength, Xpodopt

- inch

### Smallest Classlength, Xs

- inch

### Samples Needed @ Xs

- inch

### Smallest Classlength, Xs

- inch
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

### Directed DOE Options

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

- XL =
- Xm =
- Xs =
- Xss =
- Xlcl =
- Xpoh =
- 2XL =
- **Alternate Xm =**
- Xpodopt =

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

- Xpod, Class Length
- No. Need
- Xpod, Class Length
- No. Need

**TABLE C**

Class Length | Additional Samples
---|---
XL | 0.814 | 29

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

- XL =
- Xm =
- Xs =
- Xss =
- Xlcl =
- Xpoh =
- 2XL =
- **Alternate Xm =**
- Xpodopt =

File Name = F306353CL.XLS

Data Set Name = F306353CL(CRK #)

Directed DOE Options

- No Misses Observed
- At Least One Miss Occurred
- XL
- Xm
- Xs
- Xss
- Xlcl
- Xpoh
- 2XL
- Xpod
- Xpodopt

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

*Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
### Detection Probability
(Use of DOEPOD results requires approval of Engineering Authority)

**Warning:** No false call analysis.

**CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod 90/95 Reached Anywhere?</td>
<td>NOT REACHED</td>
</tr>
<tr>
<td>Classwidth @ 90/95 Xpod</td>
<td>inch</td>
</tr>
<tr>
<td>Classlength @ 90/95 Xpod</td>
<td>inch</td>
</tr>
<tr>
<td>Lower Confidence Bound</td>
<td>inch</td>
</tr>
<tr>
<td>Best LCL</td>
<td>0.3493 inch</td>
</tr>
<tr>
<td>Classwidth @ Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>Classlength @ Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>User Provided a 90/95 POD</td>
<td>inch</td>
</tr>
<tr>
<td>User's Maximum Allowed Classlength</td>
<td>inch</td>
</tr>
<tr>
<td>Inspector Classwidth @ Xp</td>
<td>inch</td>
</tr>
</tbody>
</table>

**Data Set Name:** F32251AL(CRK #)  
**File Name:** F32251AL.XLS  
**Date & Time:** 6/5/15 4:49 AM

### Analysis

- **Survey/Optimum Xpoh:** 0.3200 - 0.044 inch  
  - 28 Samples

- **False Call Rate:** 0.352 inch  
  - with UCL @ 95%  
  - 28 Samples

### Additional Parameters

- **Largest Classlength, XL:** 0.352 inch  
  - 28 Samples
- **Samples Needed @ XL:** inch
- **Classlength Mid-point, Xm:** inch
  - 28 Samples
- **Smallest Classlength, Xs:** inch
  - 28 Samples
- **New Smaller Classlength, Xss:** inch
- **Best LCL Classlength, Xlcl:** inch
  - 28 Samples
- **POH Classlength, Xpoh:** inch
  - 28 Samples
- **New Largest Classlength, 2XL:** inch
  - 28 Samples
- **Xm is Near Verification Point:** inch
- **Opt. POD classlength, Xpodopt:** inch
  - 28 Samples
- **Samples Needed @ Xpodopt:** inch
- **POH @ Xpod:** inch

### Graph

- **Probability of Hit (POH) in Class Range**
- **Lower Confidence Bound @ 95%**
- **Hit/Miss**
- **Xp, 90/95 POD**
- **MLE(Mean) POD**
- **MLE(95%) LCL**
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked. The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

**Directed DOE Options**

### TABLE A*
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>XL</th>
<th>Xm</th>
<th>Xs</th>
<th>Xss</th>
<th>Xlcl</th>
<th>Xpoh</th>
<th>2XL</th>
<th>Xpodopt</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.352</td>
<td>0.320</td>
<td>0.704</td>
<td>28</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TABLE B*
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod, Class Length</td>
<td>No. Need</td>
</tr>
</tbody>
</table>

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked. The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual.*

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths, this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

<table>
<thead>
<tr>
<th>Probability of Hit (POH), Lower Confidence Limit, LCL</th>
</tr>
</thead>
</table>

Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

| File Name = | F32251B.XLS |
| Data Set Name = | F32251B(CRK #) |
| Date & Time = | 6/5/15 4:53 AM |
| Xpod 90/95 Reached Anywhere? | NOT REACHED |
| Classwidth @ 90/95 Xpod = | inch |
| Classlength @ 90/95 Xpod = | inch |
| Lower Confidence Bound = | 0.2486 |
| Best LCL = | 0.2568 |
| Classwidth @ Best LCL = | inch |
| Classlength @ Best LCL = | inch |
| User Provided a 90/95 POD @ = | inch |
| User's Maximum Allowed Classlength = | inch |
| Inspector Classwidth @ Xp = | inch |
| POD @ Xpod = | inch |

Largest Classlength , XL = 0.704 inch
Samples Needed @ XL = 28

Smallest Classlength, Xs =
Samples Needed @ Xs =

New Smaller Classlength, Xss =

BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =

POH Classlength, Xpoh =
Samples Needed @ Xpoh =

New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =

NTIAC 90% POD =
NTIAC 90/95 POD =
False Call Rate = with UCL @ 95% =
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**Alternate Xm = Xpodopt**
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpoh = 0.3200 -0.044 inch

False Call Rate = with UCL @ 95% =

Largest Classlength , XL = inch
Samples Needed @ XL =
Classlength Mid-point , Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xcl = inch
Samples Needed @ Xcl =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength , 2XL = inch
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @Xpodopt =

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpod = 0.3200 - 0.044 inch 28 Samples

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = inch
Samples Needed @ XL =
Classlength Mid-point, Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
Best LCL Classlength, Xlcl = inch
Samples Needed @ Xlcl =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength, 2XL = inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @ Xpodopt =
Although Xpod appears to have been reached at a point, there are misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

File Name = F32253AD.XLS
Data Set Name = F32253AD(CRK #)
Date & Time = 6/5/15 4:56 AM
Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod inch
Classwidth @ Best LCL inch
Classwidth @ Best LCL inch
Lower Confidence Bound = 0.6837
Best LCL = 0.0150 inch
Classlength @ Best LCL inch
Classlength @ 90/95 Xpod inch
User Provided a 90/95 POD @ inch
User's Maximum Allowed Classlength inch
Inspection Classwidth @ Xp inch
POD @ Xpod =

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requires removing the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.*

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

NTIAC 90% POD = 0.901 @ 0.605 inch

False Call Rate = with UCL @ 95% =

- Largest Classlength, XL = 0.370 inch
- Samples Needed @ XL = 28
- Classlength Mid-point , Xm =
- Samples Needed @ Xm =
- Smallest Classlength, Xs =
- Samples Needed @ Xs =
- New Smaller Classlength, Xss =
- Best LCL Classlength, Xlcl =
- Samples Needed @ Xlcl =
- POH Classlength, Xpoh = 0.352 inch
- Samples Needed @ Xpoh = 28
- New Largest Classlength, 2XL = 0.740 inch
- Xn is Near Verification Point =
- Opt. POD classlength, Xpodopt =
- Samples Needed @ Xpodopt =
- Xp =

Survey/Optimum Xpod = 0.3520 -0.031 inch 28 Samples

File Name = F32253AL.XLS
Data Set Name = F32253AL(CRK #)
Date & Time = 6/5/15 4:58 AM

Xpod 90/95 Reached Anywhere? = NOT REACHED

Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = Best LCL = 0.6837
Classwidth @ Best LCL = Classlength @ Best LCL =
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xp =

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

**Warning:** No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Warning: No false call analysis.
Although $X_{pod}$ appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target $X_{pod}$ points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc), and resolved first.

**Satisfying the Alternate $X_m$ requirement removes the need to meet the adjacent $X_m$ requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths; this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false call analysis.

### Data
- **File Name:** F32253CL.XLS
- **Data Set Name:** F32253CL(CRK #)
- **Date & Time:** 6/5/15 5:03 AM

**Xpod 90/95 Reached Anywhere?**
- **Classwidth @ 90/95 Xpod:** inch
- **Classlength @ 90/95 Xpod:** inch
- **Lower Confidence Bound:** 0.0020 inch
- **Best LCL:** 0.2120 inch
- **Classwidth @ Best LCL:** inch
- **Classlength @ Best LCL:** inch
- **User Provided a 90/95 POD @:** inch
- **User's Maximum Allowed Classlength:** inch
- **Inspector Classwidth @ Xp:** inch
- **POD @ Xpod:**

**Best LCL Classlength, Xlcl:**
- **Classwidth @ Xlcl:** inch
- **Classlength @ Xlcl:** inch
- **Samples Needed @ Xlcl:** 28

**POH Classlength, Xpoh:**
- **Classwidth @ Xpoh:** inch
- **Classlength @ Xpoh:** inch
- **Samples Needed @ Xpoh:** 28

**New Largest Classlength, 2XL:**
- **Classwidth @ 2XL:** inch
- **Classlength @ 2XL:** inch
- **Samples Needed @ 2XL:** 28

**Opt. POD classlength, Xpodopt:**
- **Classwidth @ Xpodopt:** inch
- **Classlength @ Xpodopt:** inch
- **Samples Needed @ Xpodopt:** 28

**False Call Rate**
- **with UCL @ 95%**
- **Largest Classlength, XL:** inch
- **Samples Needed @ XL:** 28
- **Classlength Mid-point, Xm:** inch
- **Samples Needed @ Xm:** inch
- **Smallest Classlength, Xs:** inch
- **Samples Needed @ Xs:** inch
- **New Smaller Classlength, Xss:** inch
- **Samples Needed @ Xss:** inch
- **POH Classlength, Xpoh:** inch
- **Samples Needed @ Xpoh:** 28
- **New Largest Classlength, 2XL:** inch
- **Xm is Near Verification Point:**
- **Opt. POD classlength, Xpodopt:** inch
- **Samples Needed @ Xpodopt:** 28

### Graph
- **Probability of Hit (POH), Lower Confidence Limit, LCL**
- **Class Length, inch**
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

### Directed DOE Options

**Table A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xm</th>
<th>Xlcl</th>
<th>Xpoh</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.370</td>
<td>0.370</td>
<td>0.740</td>
</tr>
</tbody>
</table>

**Table B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xm</th>
<th>Xlcl</th>
<th>Xpoh</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.370</td>
<td>0.370</td>
<td>0.740</td>
</tr>
</tbody>
</table>

**Alternate Xm** = Xpodopt
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

### Directed DOE Options

#### TABLE C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.496</td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td>29</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =

---

### TABLE A*

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

### TABLE B*

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

---

**No Misses Observed**  **At Least One Miss Occurred**  **XL**  **Xm**  **Xs**  **Xss**  **Xlcl**  **Xpoh**  **2XL**  **Xpod**  **Xpodopt**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

File Name = F406018.XLS
Data Set Name = F406018(Crk #)
Date & Time = 6/5/15 5:05 AM

Xpod 90/95 Reached Anywhere?
Class width @ 90/95 Xpod = NOT REACHED inch
Lower Confidence Bound = 0.5293 inch
Best LCL = 0.0943 inch
Class length @ Best LCL = inch
User Provided a 90/95 POD = inch
User’s Maximum Allowed Class length = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod =

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpoh = 0.000 Inch Samples

BTIAC 90% POD = @ inch
BTIAC 90/95 POD = @ inch
False Call Rate = with UCL @ 95% =

Largest Class length , XL = inch
Samples Needed @ XL =
Class length Mid-point , Xm = inch
Samples Needed @ Xm =
Smallest Class length, Xs = inch
Samples Needed @ Xs =
New Smaller Class length, Xss = inch
Best LCL Class length, Xcl =
Samples Needed @ Xcl =
POD Class length, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Class length, 2XL =
Xm is Near Verification Point =
Opt. POD class length, Xpodopt = inch
Samples Needed @ Xpodopt =

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths, indicating that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
**Case 6: 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.**

**Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)**

**Warning: No false call analysis.**

<table>
<thead>
<tr>
<th>Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>File Name =</strong> F40603A.XLS</td>
</tr>
<tr>
<td><strong>Date &amp; Time =</strong> 6/5/15 5:08 AM</td>
</tr>
<tr>
<td><strong>Xpod 90/95 Reached Anywhere?</strong></td>
</tr>
<tr>
<td><strong>Class Width @ 90/95 Xpod =</strong></td>
</tr>
<tr>
<td><strong>Class Length @ 90/95 Xpod =</strong></td>
</tr>
<tr>
<td><strong>Lower Confidence Bound =</strong></td>
</tr>
<tr>
<td><strong>Best LCL =</strong></td>
</tr>
<tr>
<td><strong>Class Width @ Best LCL =</strong></td>
</tr>
<tr>
<td><strong>Class Length @ Best LCL =</strong></td>
</tr>
<tr>
<td><strong>User Provided a 90/95 POD @ =</strong></td>
</tr>
<tr>
<td><strong>User's Maximum Allowed Class Length =</strong></td>
</tr>
<tr>
<td><strong>Inspector Class Width @ Xp =</strong></td>
</tr>
<tr>
<td><strong>POD @ Xpod =</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Probability of Hit (POH) in Class Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Probability of Hit (POH),</strong></td>
</tr>
<tr>
<td><strong>Lower Confidence Limit, LCL</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Class Length, inch</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>XL</strong> = 0.248 inch</td>
</tr>
<tr>
<td><strong>Xpoh</strong> = 0.1343 inch</td>
</tr>
<tr>
<td><strong>2XL</strong> = 0.496 inch</td>
</tr>
</tbody>
</table>

| **Largest Class Length, XL =** 0.248 inch |
| **Samples Needed @ XL =** 28 |
| **Class Length Mid-point, Xm =** 0.175 inch |
| **Samples Needed @ Xm =** 28 |
| **Smallest Class Length, Xs =** 0.0943 inch |
| **Samples Needed @ Xs =** 28 |
| **New Smaller Class Length, Xss =** 0.0070 inch |
| **Best LCL Class Length, Xlcl =** 0.0070 inch |
| **Samples Needed @ Xlcl =** 28 |
| **POH Class Length, Xpoh =** 0.175 inch |
| **Samples Needed @ Xpoh =** 28 |
| **New Largest Class Length, 2XL =** 0.496 inch |
| **Xn is Near Verification Point =** 0.248 inch |
| **Opt. POD class length, Xpodopt =** 0.1343 inch |
| **Samples Needed @ Xpodopt =** 28 |

| **Analysis file name:** DOEPOD v.1.2.01 PC.08a2010.Win7.xlsm |
| **Warning:** No false call analysis. |
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POF function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xl</th>
<th>Xm</th>
<th>Xs</th>
<th>Xss</th>
<th>Xlcl</th>
<th>Xpoh</th>
<th>2XL</th>
<th>Xpod</th>
<th>Xpodopt</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.248</td>
<td>0.175</td>
<td>0.496</td>
<td>0.496</td>
<td>0.496</td>
<td>0.496</td>
<td>0.496</td>
<td>0.496</td>
<td>0.496</td>
</tr>
</tbody>
</table>

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xl</th>
<th>Xm</th>
<th>Xs</th>
<th>Xss</th>
<th>Xlcl</th>
<th>Xpoh</th>
<th>2XL</th>
<th>Xpod</th>
<th>Xpodopt</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.248</td>
<td>0.175</td>
<td>0.496</td>
<td>0.496</td>
<td>0.496</td>
<td>0.496</td>
<td>0.496</td>
<td>0.496</td>
<td>0.496</td>
</tr>
</tbody>
</table>

**Note:**
- File Name = F40603A.XLS
- Data Set Name = F40603A(CRX # )
Warning: No false call analysis.

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited Misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no Misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths, this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Sample/Optimum Xp = 2.403 inch
XL is Near Verification Point = 1.603 inch
Opt. POD classlength, Xpodopt = 28 inch
Samples Needed @Xpodopt = 28

- Optimum Xpoh Available; Using Best LCL
- Probability of Hit (POH) in Class Range
- Lower Confidence Bound @ 95%
- Hit/Miss
- Xp, 90/95 POD
- MLE (Mean) POD
- MLE (95%) LCL
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resloved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

---

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**TABLE C**

Class Length | Additional Samples
--- | ---
XL | 2.403 | 28
Xm | 1.603 | 28
Xs | 4.806 | 29
Xss | Xlcl | Xpoh | 2XL | Xpod | Xpodopt

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resloved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.*

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.*
Warning: No false call analysis.

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 5 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and Xpoh.

Warning: No false call analysis.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

File Name = F42503B.XLS
Data Set Name = F42503B(CRK #)

Date & Time = 6/5/15 5:19 AM
Xpod 90/95 Reached Anywhere? = NOT REACHED
Class Length @ 90/95 Xpod = inch
Lower Confidence Bound @ 90/95 Xpod = 0.7616 inch
Best LCL = 0.0630 inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod =

Survey/Optimum Xpoh = 0.5320 -0.071 inch
Samples = 28

False Call Rate =

Largest Classlength , XL = 2.403 inch
Samples Needed @ XL = 28

Classlength Mid-point , Xm = inch
Samples Needed @ Xm =

Smallest Classlength, Xs = inch
Samples Needed @ Xs =

New Smaller Classlength, Xss = inch
Best LCL Classlength, Xcl =
Samples Needed @ Xcl =

POH Classlength, Xpoh = 0.532 inch
Samples Needed @ Xpoh = 28

New Largest Classlength , 2XL = inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @ Xpodopt =

XL is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @ Xpodopt =
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 5 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and Xpoh.

**Warning:** No false call analysis.

**Survey/Optimum Xpoh:** 0.4600 -0.059 inch

**False Call Rate =** with UCL @ 95% =

- **Largest Classlength**, XL = 2.403 inch
- **Samples Needed @ XL** = 28
- **Classlength Mid-point**, Xm = inch
- **Samples Needed @ Xm** = inch
- **Smallest Classlength**, Xs = inch
- **Samples Needed @ Xs** = inch
- **New Smaller Classlength**, Xss = inch
- **Best LCL Classlength**, Xlcl = inch
- **Samples Needed @ Xlcl** = inch
- **POH Classlength**, Xpoh = 0.532 inch
- **Samples Needed @ Xpoh** = 28
- **New Largest Classlength**, 2XL = inch
- **Xm is Near Verification Point** = inch
- **Opt. POD classlength**, Xpodopt = inch
- **Samples Needed @ Xpodopt** = inch

**NTIAC 90% POD =** 0.901 @ 0.575 inch

**NTIAC 90/95 POD =**

**False Call Rate =** with UCL @ 95% =

- **Largest Classlength**, XL = 2.403 inch
- **Samples Needed @ XL** = 28
- **Classlength Mid-point**, Xm = inch
- **Samples Needed @ Xm** = inch
- **Smallest Classlength**, Xs = inch
- **Samples Needed @ Xs** = inch
- **New Smaller Classlength**, Xss = inch
- **Best LCL Classlength**, Xlcl = inch
- **Samples Needed @ Xlcl** = inch
- **POH Classlength**, Xpoh = 0.532 inch
- **Samples Needed @ Xpoh** = 28
- **New Largest Classlength**, 2XL = inch
- **Xm is Near Verification Point** = inch
- **Opt. POD classlength**, Xpodopt = inch
- **Samples Needed @ Xpodopt** = inch

**NOT REACHED**

**File Name =** F42503C.XLS
**Data Set Name =** F42503C(CRK #)

**Date & Time =** 6/5/15 5:20 AM

Class Width @ 90/95 Xpod = 0.7942 inch
Class Length @ 90/95 Xpod = 0.3500 inch
Lower Confidence Bound @ 95% = 0.0680 inch
Best LCL = 0.7942 inch
Class Length @ Best LCL = 0.3500 inch
User Provided a 90/95 POD = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod = inch

**CASE 5 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and Xpoh.**

**Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)**
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**Additional Notes:**
- TABLE A*
  - Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.
- TABLE B*
  - Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**File Name =** F42503C.XLS
**Data Set Name =** F42503C(CRK # )
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Warning: No false call analysis.
**Although Xpod appears to have been reached at a point, there are Misses at longer class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.**

The class lengths listed in Table A exhibited Misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no Misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

---

### Table A

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
<tr>
<td><strong>Alternate Xm = Xpodopt</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Table B

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
<tr>
<td><strong>Alternate Xm = Xpodopt</strong></td>
<td></td>
</tr>
</tbody>
</table>

---

**TABLE C**

Selected class lengths with existing misses.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.160</td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td>0.160</td>
</tr>
<tr>
<td>2XL</td>
<td>0.320</td>
</tr>
</tbody>
</table>

**No Misses Observed**  **At Least One Miss Occurred**  **Xl**  **Xm**  **Xs**  **Xss**  **Xlcl**  **Xpoh**  **2XL**  **Xpod**  **Xpodopt**

---

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked. The class lengths listed in Table A exhibited Misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown. The class lengths listed in Table B exhibited no Misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.**

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 3.474.

Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.

CASE 1* - 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Warning: No false call analysis.

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation successful.
Any highlighted Misses are RED and shown in Column A of this data sheet

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.*
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 0.216.

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

CASE 2 - 90/95 Xpod is reached at a class length. Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the Poh function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

File Name = F5003(3)D.xls
Data Set Name = F5003(3)D(CK. NO.)

### Directed DOE Options

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.160</td>
</tr>
<tr>
<td>Xm</td>
<td>0.105</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xpod</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1200</td>
<td>110</td>
</tr>
<tr>
<td>0.1180</td>
<td>107</td>
</tr>
<tr>
<td>0.1170</td>
<td>70</td>
</tr>
<tr>
<td>0.0980</td>
<td>64</td>
</tr>
</tbody>
</table>

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1270</td>
<td>26</td>
</tr>
<tr>
<td>0.1200</td>
<td>23</td>
</tr>
</tbody>
</table>

*All misses observed. At least one miss occurred. XL, Xm, Xs, Xss, Xlcl, Xpoh, Xpod, Xpodopt.*

*Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the Poh function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
**File Name:** F5003[3].xls  
**Data Set Name:** F5003[3](LCK, NO.)  
**Date & Time:** 6/5/15 5:41 AM  
**Xpod 90/95 Reached Anywhere?** REACHED  
**Class Length @ 90/95 Xpod:** 0.0170 inch  
**Lower Confidence Bound @ 95%:** 0.6880 inch  
**Best LCL:** 0.9050 inch  
**Classwidth @ Best LCL:** inch  
**Classlength @ Best LCL:** inch  
**User Provided a 90/95 POD @ Xp:** inch  
**User’s Maximum Allowed Classlength:** inch  
**POD @ Xpod:** 1.0000 inch

**CASE 2 - 90/95 Xpod is reached at a class length, Xp used to reduce XL requirements. Recommend satisfying XL, Xm and the smallest Xpod in TABLE B that is greater than the largest Xpod in TABLE A, and/or the largest Xpod in Table A.**

**Survey/Optimum Xpoh:** 0.000 inch  
**Samples @ Xpoh:**  
**False Call Rate with UCL @ 95%:**  
**Largest Classlength, XL:** 1.210 inch  
**Samples Needed @ XL:** 16  
**Classlength Mid-point, Xm:** 1.079 inch  
**Samples Needed @ Xm:** 14  
**Smallest Classlength, Xs:**  
**Samples Needed @ Xs:**  
**New Smaller Classlength, Xss:**  
**Best LCL Classlength, Xcl:**  
**Samples Needed @ Xcl:**  
**POH Classlength, Xpoh:**  
**Samples Needed @ Xpoh:**  
**New Largest Classlength, 2XL:**  
**Xm is Near Verification Point:**  
**Opt. POD classlength, Xpopt:**  
**Samples Needed @Xpopt:**  

---

**Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)**

Large flaw validation failure. Extend flaw size range to 2.064.

**MLE Divergence Warning:** Initial results listed.

**Warning:** No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resloved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1750</td>
<td>67</td>
</tr>
<tr>
<td>1.1580</td>
<td>64</td>
</tr>
<tr>
<td>1.1250</td>
<td>49</td>
</tr>
<tr>
<td>1.1220</td>
<td>67</td>
</tr>
</tbody>
</table>

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1750</td>
<td>16</td>
</tr>
<tr>
<td>1.1580</td>
<td>20</td>
</tr>
<tr>
<td>1.1250</td>
<td>26</td>
</tr>
<tr>
<td>1.1220</td>
<td>26</td>
</tr>
</tbody>
</table>

**TABLE C**
Selected class lengths.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2100</td>
<td>16</td>
</tr>
<tr>
<td>1.0790</td>
<td>14</td>
</tr>
</tbody>
</table>

---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resloved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**
Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

File Name = F6001(3)xls
Data Set Name = F6001(3)(CK. NO.)
Date & Time = 6/5/15 5:50 AM
Xpod 90/95 Reached Anywhere? = NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlengh @ 90/95 Xpod = inch
Lower Confidence Bound = 0.0070 inch
Best LCL = 0.0790 inch
Classwidth @ Best LCL = inch
Classlengh @ Best LCL = inch
User Provided a 90/95 POD = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod =

Largest Classlength , XL = inch
Samples Needed @ XL =
Classlength Mid-point , Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xcl = inch
Samples Needed @ Xcl =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength , 2XL = inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @Xpodopt =

NTIAC 90% POD = @ inch
NTIAC 90/95 POD = @ inch
False Call Rate = with UCL @ 95% =

Survey/Optimum Xpoh = 0.000 Inch Samples
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Warning: No false call analysis.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Survey/Optimum Xpoh = 0.2150 -0.038 inch

Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = inch
Best LCL = 0.5709
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod =

Largest Classlength , XL = inch
Samples Needed @ XL = 26
Classlength Mid-point , Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
Best LCL Classlength, Xlcl = inch
Samples Needed @ Xlcl =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength , 2XL = inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @Xpodopt =
Xp = inch
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the P0H function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

File Name = F6002(3)D.xls
Data Set Name = F6002(3)D(CIK. NO.)

Directed DOE Options

<table>
<thead>
<tr>
<th>TABLE A*</th>
<th>Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL ≠</td>
<td>Xm ≠</td>
</tr>
<tr>
<td>Xs ≠</td>
<td>Xss ≠</td>
</tr>
<tr>
<td>Xlcl ≠</td>
<td>Xpoh ≠</td>
</tr>
<tr>
<td>2XL ≠</td>
<td><strong>Alternate Xm = Xpodopt ≠</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TABLE B*</th>
<th>Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod,Class Length</td>
<td>No. Need</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TABLE C</th>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.430</td>
<td>29</td>
</tr>
</tbody>
</table>

*Note: XL, Xm, Xs, Xss, Xlcl, Xpoh, 2XL, Xpod, Xpodopt*
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpoh = 0.9950 - 0.004 inch
26 Samples

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

*Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked. The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual.*

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

File Name = F6002[3]L.xls
Data Set Name = F6002[3](LCK. NO.)

Directed DOE Options

TABLE C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>1.188</td>
</tr>
<tr>
<td>Xm</td>
<td>1.188</td>
</tr>
<tr>
<td>Xs</td>
<td>2.376</td>
</tr>
<tr>
<td>Xss</td>
<td>2.376</td>
</tr>
<tr>
<td>Xlcl</td>
<td>2.376</td>
</tr>
<tr>
<td>Xpoh</td>
<td>2.376</td>
</tr>
<tr>
<td>2XL</td>
<td>2.376</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt

TABLE A*

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

Xpod | Class | Length | No. Need |
-----|-------|--------|---------|
 1.188 | 26 |

TABLE B*

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

Xpod | Class | Length | No. Need |
-----|-------|--------|---------|
 2.376 | 29 |

Note: All Xpods are within the width indicated by the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.

Survey/Optimum Xpoh = 0.1530 ± 0.019 inch

False Call Rate = with UCL @ 95% =

NTIAC 90% POD = @ inch

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = 0.215 inch
Samples Needed @ XL = 8

Classlength Mid-point, Xm = inch
Samples Needed @ Xm = inch

Smallest Classlength, Xs = inch
Samples Needed @ Xs = inch

New Smaller Classlength, Xss = inch

Best LCL Classlength, Xlcl = 0.215 inch
Samples Needed @ Xlcl = 8

POH Classlength, Xpoh = 0.215 inch
Samples Needed @ Xpoh = inch

New Largest Classlength, 2XL = 0.430 inch
Xm is Near Verification Point = inch

Opt. POD classlength, Xpodopt = inch
Samples Needed @ Xpodopt = inch
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

### Directed DOE Options

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**TABLE C**

Additional Samples

| XL     | 1.188 | 14  |
| Xm     | 1.188 | 14  |
| Xs     | 0.981 | 26  |
| Xss    | 2.376 | 29  |

**Alternate Xm = Xpodopt =**

**No Misses Observed**  
**At Least One Miss Occurred**

<table>
<thead>
<tr>
<th>Number of Additional Samples Needed</th>
<th>30.00</th>
<th>25.00</th>
<th>20.00</th>
<th>15.00</th>
<th>10.00</th>
<th>5.00</th>
<th>0.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 1.188</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xm =</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xs =</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xss =</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xlcl =</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xpoh =</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2XL =</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Alternate Xm = Xpodopt =</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
### Detection Probability

Utilization of DOEPOD results requires approval of Engineering Authority.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probability of Hit (POH)</td>
<td></td>
</tr>
<tr>
<td>Lower Confidence Limit, LCL</td>
<td></td>
</tr>
</tbody>
</table>

### Class Length

- **Xp, 90/95 POD**: 0.235 inch
- **MLE(Mean) POD**: 0.235 inch
- **MLE(95%) LCL**: 0.235 inch

### Case 4 - 90/95 Xpod is not reached anywhere.

Recommend satisfying XL and the greater of Xpoh or Xlcl.

### Survey/Optimum Xpoh

- NTIAC 90% POD @ inch
- NTIAC 90/95 POD @ inch

### False Call Rate

- False Call Rate = with UCL @ 95%
- Largest Classlength, XL = 0.235 inch
- Samples Needed @ XL = 23
- Classlength Mid-point, Xm = inch
- Samples Needed @ Xm = inch
- Smallest Classlength, Xs = inch
- Samples Needed @ Xs = inch
- New Smaller Classlength, Xss = inch
- Best LCL Classlength, Xlcl = 0.235 inch
- Samples Needed @ Xlcl = 23
- POD Classlength, Xpoh = 0.235 inch
- Samples Needed @ Xpoh = inch
- New Largest Classlength, 2XL = 0.470 inch
- Xn is Near Verification Point = inch
- Opt. POD classlength, Xpodopt = inch
- Samples Needed @ Xpodopt = inch

**Warning:** No false call analysis.

### Plot

- Probability of Hit (POH) in Class Range
- Lower Confidence Bound @ 95%
- Hit/Miss
- Xp, 90/95 POD
- MLE(Mean) POD
- MLE(95%) LCL
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Warning: No false call analysis.

CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Warning: No false call analysis.

CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.

Survey/Optimum Xpoh = 0.1930 -0.018 inch

Samples Needed @ XL = 26

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = 0.235 inch
Samples Needed @ XL = 23
Classlength Mid-point, Xm = inch
Samples Needed @ Xm = inch
Smallest Classlength, Xs = inch
Samples Needed @ Xs = inch
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xlcl = 0.235 inch
Samples Needed @ Xlcl = 23
POH Classlength, Xpoh = 0.235 inch
Samples Needed @ Xpoh = inch
New Largest Classlength, 2XL = 0.470 inch
Xn is Near Verification Point = inch
Opt. POD classlength, Xpodopt = inch
Samples Needed @ Xpodopt = inch

Date & Time = 6/5/15 6:01 AM

Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.6070
Best LCL = 0.0420 inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod =

File Name = F7002(3)D.xls
Data Set Name = F7002(3)(CK. NO.)

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Probability of Hit (POH), Lower Confidence Limit, LCL
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the Porod function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

File Name = F7003[3].xls
Data Set Name = F7003[3](LK. NO.)
Date & Time = 6/5/15 6:06 AM

Warning: No false call analysis.

Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod inch
Classlength @ 90/95 Xpod inch
Lower Confidence Bound inch
Best LCL 0.7933
Classwidth @ Best LCL inch
Classlength @ Best LCL inch
User Provided a 90/95 POD inch
User's Maximum Allowed Classlength inch
BestLCL Classlength @ Xp inch
POH Classlength @ Xp inch

Largest Classlength, XL = 1.435 inch
Samples Needed @ XL = 26

Classlength Mid-point, Xm = 1.435 inch
Samples Needed @ Xm = 26

Smallest Classlength, Xs = 2.870 inch
Samples Needed @ Xs = 26

New Smaller Classlength, Xss = 2.870 inch
BestLCL Classlength, Xcl = 1.435 inch
Samples Needed @ Xcl = 26

POH Classlength, Xpoh = 1.435 inch
Samples Needed @ Xpoh = 26

New Largest Classlength, 2XL = 2.870 inch
Xm is Near Verification Point inch
Opt. POD classlength, Xpodopt = inch
Samples Needed @ Xpodopt = inch

Warning: No false call analysis.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpod = 1.1190 -0.008 Inch
Samples = 26

NTIAC 90% POD = 0.8739 Inch
NTIAC 90/95 POD = 0.6000 Inch

False Call Rate = 0.008 Inch with UCL @ 95%

Largest Classlength , XL = 1.5620 Inch
Samples Needed @ XL = 6
Classlength Mid-point , Xm = 0.8739 Inch
Samples Needed @ Xm = 6
Smallest Classlength, Xs = 0.6000 Inch
Samples Needed @ Xs = 6
New Smaller Classlength, Xss = 0.4000 Inch
New Largest Classlength , 2XL = 3.124 Inch
Opt. POD classlength, Xpodopt = 1.1190 Inch
Samples Needed @Xpodopt = 26

F8001(3) (LCR. NO.)
0.6000 Inch
1.5620 Inch

F8001(3)L.xls
NOT REACHED
6/5/15 6:09 AM

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod =
Classlength @ 90/95 Xpod =
Lower Confidence Bound =
Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD @
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod =

BestLCL Classlength, Xlcl = 0.8739
Samples Needed @ Xlcl = 6
POH Classlength, Xpoh = 1.1190
Samples Needed @ Xpoh = 26

Xp = 0.8739 Inch

False Call Rate = 0.008 Inch with UCL @ 95%
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

<table>
<thead>
<tr>
<th>File Name</th>
<th>FB002(3)D.xls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Set Name</td>
<td>F8002(3)(CK. NO.)</td>
</tr>
<tr>
<td>Date &amp; Time</td>
<td>6/5/15 6:11 AM</td>
</tr>
</tbody>
</table>

Xpod 90/95 Reached Anywhere?
- NOT REACHED

Class Length @ 90/95 Xpod:
- Best LCL = 0.0690 inch
- Classwidth @ Best LCL = 0.0690 inch

User Provided a 90/95 POD @:
- POD @ Xpod = 0.276 inch

User's Maximum Allowed Classlength @:
- Inspector Classwidth @ Xp = 0.276 inch
- Lower Confidence Bound = 0.0690 inch

Best LCL Classlength, Xlcl:
- Samples Needed @ Xlcl = 2

POH Classlength, Xpoh:
- Samples Needed @ Xpoh = 2

New Largest Classlength, 2XL:
- Xp = 0.276 inch

NTIAC 90% POD = @ inch
NTIAC 90/95 POD = @ inch

False Call Rate = with UCL @ 95% =
- Large Classlength, XL = 0.276 inch
- Samples Needed @ XL = 2
- Classlength Mid-point, Xm = inch
- Samples Needed @ Xm =
- Smallest Classlength, Xs = inch
- Samples Needed @ Xs =
- New Smaller Classlength, Xss = inch
- Samples Needed @ Xss =
- POH Classlength, Xpoh = 0.276 inch
- Samples Needed @ Xpoh =
- Opt. POD classlength, Xpodopt = inch
- Samples Needed @Xpodopt =

CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.

Graph:
- Probability of Hit (POH) vs. Class Length
- Lower Confidence Bound @ 95%
- Hit/Miss
- Xp, 90/95 POD
- MLE(Mean) POD
- MLE(95%) LCL

Analysis File name: DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsm
Although Xpod appears to have been reached at a point, there are misses at larger class lengths, which indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**Alternate Xm = Xpodopt**

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.*
CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.

Warning: No false call analysis.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

File Name = FB003(3)D.xls
Data Set Name = FB003(3)(DICK. NO.)
Date & Time = 6/5/15 6:15 AM
Xpod 90/95 Reached Anywhere? NOT REACHED
Class width @ 90/95 Xpod = inch
Class length @ 90/95 Xpod = inch
Lower Confidence Bound = 0.8931 inch
Best LCL = 0.2760 inch
Class length @ Best LCL = inch
User Provided a 90/95 POD @ = inch
User's Maximum Allowed Class length = inch
Inspector Class width @ Xp = inch
POD @ Xpod =

Survey/Optimum Xpoh = 0.2070 -0.007 inch

False Call Rate = with UCL @ 95%
Largest Class length, XL = 0.276 inch
Samples Needed @ XL = 2
Class length Mid-point, Xm = inch
Samples Needed @ Xm = 2
Smallest Class length, Xs = inch
Samples Needed @ Xs = 2
New Smaller Class length, Xss = inch
Best LCL Class length, Xlcl = 0.276 inch
Samples Needed @ Xlcl = 2
POD Class length, Xpoh = 0.276 inch
Samples Needed @ Xpoh = 2
New Largest Class length, 2XL = inch
Xm is Near Verification Point = inch
Opt. POD class length, Xpodopt = inch
Samples Needed @ Xpodopt = inch
Xp = inch

Probability of Hit (POH) in Class Range

Probabilty of Hit (POH), Lower Confidence Limit, LCL
Although Xpod appears to have been reached at a point, there are misses at larger class lengths, this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

### Directed DOE Options

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.276</td>
</tr>
<tr>
<td>Xm</td>
<td>0.276</td>
</tr>
<tr>
<td>Xs</td>
<td>0.276</td>
</tr>
<tr>
<td>Xss</td>
<td>0.276</td>
</tr>
<tr>
<td>Xpoh</td>
<td>0.552</td>
</tr>
<tr>
<td>2XL</td>
<td>2</td>
</tr>
</tbody>
</table>

*Alternate Xm = Xpodopt*
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Need 7 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet
Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory.  This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.  The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
**Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)**

**Warning: No false call analysis.**

**CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>File Name</td>
<td>F900CD.XLS</td>
</tr>
<tr>
<td>Data Set Name</td>
<td>F900CD(CRACK #)</td>
</tr>
<tr>
<td>Date &amp; Time</td>
<td>6/5/15 6:18 AM</td>
</tr>
<tr>
<td>Xpod 90/95 Reached Anywhere?</td>
<td>NOT REACHED</td>
</tr>
<tr>
<td>Classwidth @ 90/95 Xpod</td>
<td>inch</td>
</tr>
<tr>
<td>Classlength @ 90/95 Xpod</td>
<td>inch</td>
</tr>
<tr>
<td>Lower Confidence Bound</td>
<td>0.908 0.095 inch</td>
</tr>
<tr>
<td>Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>Classwidth @ Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>Classlength @ Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>User Provided a 90/95 POD @</td>
<td>inch</td>
</tr>
<tr>
<td>User's Maximum Allowed Classlength</td>
<td>inch</td>
</tr>
<tr>
<td>Inspector Classwidth @ Xp =</td>
<td>inch</td>
</tr>
<tr>
<td>POD @ Xpod =</td>
<td>inch</td>
</tr>
<tr>
<td>User's Maximum Allowed Classlength</td>
<td>inch</td>
</tr>
<tr>
<td>Inspector Classwidth @ Xp =</td>
<td>inch</td>
</tr>
<tr>
<td>POD @ Xpod =</td>
<td>inch</td>
</tr>
<tr>
<td>Survey/Optimum Xpoh =</td>
<td>0.0480 -0.001 Inch</td>
</tr>
<tr>
<td>NTIAC 90% POD @</td>
<td>0.908 inch</td>
</tr>
<tr>
<td>NTIAC 90/95 POD @</td>
<td>0.095 inch</td>
</tr>
<tr>
<td>False Call Rate with UCL @ 95%</td>
<td>samples</td>
</tr>
<tr>
<td>Largest Classlength , XL</td>
<td>inch</td>
</tr>
<tr>
<td>Samples Needed @ XL</td>
<td>inch</td>
</tr>
<tr>
<td>Classlength Mid-point , Xm</td>
<td>inch</td>
</tr>
<tr>
<td>Samples Needed @ Xm</td>
<td>inch</td>
</tr>
<tr>
<td>Smallest Classlength, Xs</td>
<td>inch</td>
</tr>
<tr>
<td>Samples Needed @ Xs</td>
<td>inch</td>
</tr>
<tr>
<td>New Smaller Classlength, Xss</td>
<td>inch</td>
</tr>
<tr>
<td>Best LCL Classlength, Xcl</td>
<td>inch</td>
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<tr>
<td>Samples Needed @ Xcl</td>
<td>inch</td>
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<tr>
<td>POD Classlength, Xpoh</td>
<td>inch</td>
</tr>
<tr>
<td>Samples Needed @ Xpoh</td>
<td>inch</td>
</tr>
<tr>
<td>New Largest Classlength, 2XL</td>
<td>inch</td>
</tr>
<tr>
<td>Xm is Near Verification Point</td>
<td>inch</td>
</tr>
<tr>
<td>Opt. POD classlength, Xpodopt</td>
<td>inch</td>
</tr>
<tr>
<td>Samples Needed @ Xpodopt</td>
<td>inch</td>
</tr>
<tr>
<td>Xp</td>
<td>inch</td>
</tr>
</tbody>
</table>

**Analysis File name:** DOEPOD v 1.2.01 PC Office2010 Win7 xtm
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resoled first.

*Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Case 7: No hits anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

---

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

- XL = 
- Xm = 
- Xs = 
- Xss = 
- Xlcl = 
- Xpoh = 
- 2XL =

**Alternate Xm = Xpodopt = 0.430**

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABLE C</td>
<td>Class Length</td>
</tr>
<tr>
<td>XL</td>
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</tr>
<tr>
<td>Xm</td>
<td></td>
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<td>Xs</td>
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<td>Xss</td>
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<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td>0.430</td>
</tr>
</tbody>
</table>

**TABLE C**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABLE A*</td>
<td>Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.</td>
</tr>
<tr>
<td>TABLE B*</td>
<td>Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.</td>
</tr>
</tbody>
</table>
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.

Survey/Optimum Xpoh = 0.2150 - 0.090 inch
False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 0.215 inch
Samples Needed @ XL = 26
Classlength Mid-point , Xm =
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl = 0.215 inch
Samples Needed @ Xlcl =
POH Classlength, Xpoh = 0.215 inch
Samples Needed @ Xpoh =
New Largest Classlength , 2XL = 0.430 inch
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =

Xp = 0.215 inch

File Name = F9002(3)D.xls
Data Set Name = F9002(3)(CK. NO. )
Date & Time = 6/5/15 6:19 AM

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = Best LCL = 0.3684 inch
Classwidth @ Best LCL = Classlength @ Best LCL = 0.0010 inch
User Provided a 90/95 POD @ = inch
User's Maximum Allowed Classlength = inch

Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =

Xp = 0.215 inch
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.***

### Table C: Selected class lengths with existing misses. Each point requires additional samples to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.215</td>
</tr>
<tr>
<td>Xm</td>
<td>0.215</td>
</tr>
<tr>
<td>Xs</td>
<td>0.215</td>
</tr>
<tr>
<td>Xss</td>
<td>0.215</td>
</tr>
<tr>
<td>Xlcl</td>
<td>0.430</td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
<tr>
<td>Xpod</td>
<td></td>
</tr>
<tr>
<td>Xpodopt</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**
Detection Probability (utilization of DOEPOD results requires approval of Engineering Authority)

MLE Divergence Warning: initial results listed.
Warning: No false call analysis.

FILE NAME = F9002(3).xls
DATA SET NAME = F9002(3) (CK. NO. )
FILE DATE & TIME = 6/5/15 6:20 AM

Xpod 90/95 Reached Anywhere?
Not Reached

Class Width @ 90/95 Xpod =

Lower Confidence Bound @ 95% = 0.3684 inch
Best LCL = 0.0100 inch
Class Width @ Best LCL = 0.4950 inch
Class Length @ Best LCL = 0.4950 inch
User Provided a 90/95 POD @
User’s Maximum Allowed Class Length =
Inspector Class Width @ Xp =
POD @ Xpod =

Best LCL Class Length, XL =
Samples Needed @ XL = 0.990

Class Width @ Best LCL =
Class Length @ Best LCL =
User Provided a 90/95 POD @
User’s Maximum Allowed Class Length =
Inspector Class Width @ Xp =
POD @ Xpod =

New Smaller Class Length, Xss =
Best LCL Class Length, Xlcl =
Samples Needed @ Xlcl = 0.495
POH Class Length, Xpoh =
Samples Needed @ Xpoh = 26
New Largest Class Length, 2XL =
Xm is Near Verification Point =
Opt. POD class length, Xpodopt =
Samples Needed @ Xpodopt =

CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.

Survey/Optimum Xpoh = 0.4950 inch
0.100 - 26 Samples

False Call Rate =
With UCL @ 95% =
Largest Class Length, XL = 0.495 inch
Samples Needed @ XL = 26
Class Length Mid-point, Xm =
Samples Needed @ Xm =
Smallest Class Length, Xs =
Samples Needed @ Xs =
New Smaller Class Length, Xss =
Best LCL Class Length, Xlcl = 0.495 inch
Samples Needed @ Xlcl = 26
POH Class Length, Xpoh = 0.495 inch
Samples Needed @ Xpoh = 0.990
New Largest Class Length, 2XL =
Xm is Near Verification Point =
Opt. POD class length, Xpodopt =
Samples Needed @ Xpodopt =

Xp = 0.495 inch
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

MLE Divergence Warning: Initial results listed.
Warning: No false call analysis.

CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.

- File Name = F9003(3).xls
- Data Set Name = F9003(3)(CK. NO. )
- Date & Time = 6/5/15 6:22 AM
- Xpod 90/95 Reached Anywhere? NOT REACHED
- Class Length @ 90/95 Xpod = 0.495 inch
- Lower Confidence Bound = 0.0010 inch
- Best LCL = 0.3684 inch
- Xpod @ 90/95 Xpod = 0.495 inch
- User Provided a 90/95 POD = inch
- User's Maximum Allowed Classlength = inch
- Inspector Classwidth @ Xp = inch
- POD @ Xp = inch

- NTIAC 90% POD = 0.905 inch
- NTIAC 90/95 POD = 0.560 inch
- False Call Rate = with UCL @ 95% 
  - Largest Classlength, XL = 0.990 inch
  - Samples Needed @ XL = 26
  - Classlength Mid-point, Xm = inch
  - Samples Needed @ Xm = inch
  - Smallest Classlength, Xs = inch
  - Samples Needed @ Xs = inch
  - New Smaller Classlength, Xss = inch
  - Best LCL Classlength, Xlcl = 0.495 inch
  - Samples Needed @ Xlcl = 26
  - POH Classlength, Xpoh = 0.495 inch
  - Samples Needed @ Xpoh = inch
  - New Largest Classlength, 2XL = inch
  - Xm Near Verification Point = inch
  - Opt. POD classlength, Xpodopt = inch
  - Samples Needed @ Xpodopt = inch

- Xp = 0.495 inch
- LCL @ 95% LCL
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.495</td>
</tr>
<tr>
<td>Xm</td>
<td>0.495</td>
</tr>
<tr>
<td>Xs</td>
<td>0.495</td>
</tr>
<tr>
<td>Xss</td>
<td>0.990</td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.495</td>
</tr>
<tr>
<td>Xm</td>
<td>0.495</td>
</tr>
<tr>
<td>Xs</td>
<td>0.495</td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.495</td>
<td>26</td>
</tr>
<tr>
<td>Xm = 0.495</td>
<td>26</td>
</tr>
<tr>
<td>Xs = 0.495</td>
<td>26</td>
</tr>
<tr>
<td>Xss = 0.990</td>
<td>29</td>
</tr>
</tbody>
</table>

**TABLE C**

Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.495</td>
</tr>
<tr>
<td>Xm</td>
<td>0.495</td>
</tr>
<tr>
<td>Xs</td>
<td>0.495</td>
</tr>
<tr>
<td>Xss</td>
<td>0.990</td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.495</td>
<td>26</td>
</tr>
<tr>
<td>Xm = 0.495</td>
<td>26</td>
</tr>
<tr>
<td>Xs = 0.495</td>
<td>26</td>
</tr>
<tr>
<td>Xss = 0.990</td>
<td>29</td>
</tr>
</tbody>
</table>
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpoh = 0.000 inch

False Call Rate = with UCL @ 95%

Largest Classlength, XL = inch
Samples Needed @ XL =
Classlength Mid-point, Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
Best LCL Classlength, Xlcl = inch
Samples Needed @ Xlcl =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength, 2XL = inch
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @ Xpodopt =
Xp = inch

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the P O H function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

*Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the P O H function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

**TABLE C**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.
CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
Warning: No false call analysis.

CASE 1: 90/95 Xpod is reached. Xp used to satisfy XL and Xm requirements. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 0.964.

Any highlighted Misses are RED and shown in Column A of this data sheet.

Class Length, inch

Warning: No false call analysis.

Probabilty of Hit (POH), Lower Confidence Limit, LCL

Probability of Hit (POH) in Class Range, Lower Confidence Bound @ 95%

Hit/Miss

Xp, 90/95 POD

MLE(Mean) POD

MLE(95%) LCL

Warning: No false call analysis.

Survey/Optimum Xpoh = 0.000 inch Samples

NTIAC 90% POD = 0.901 @ 0.245 inch

NTIAC 90/95 POD = 0.900 @ 0.400 inch

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = 0.610 inch

Samples Needed @ XL =

Classlength Mid-point, Xm = 0.535 inch

Samples Needed @ Xm =

Smallest Classlength, Xs =

Samples Needed @ Xs =

New Smaller Classlength, Xss =

BestLCL Classlength, Xcl =

Samples Needed @ Xcl =

POH Classlength, Xpoh =

Samples Needed @ Xpoh =

New Largest Classlength, 2XL =

Xm is Near Verification Point =

Opt. POD classlength, Xpodopt =

Samples Needed @Xpodopt =

Xp = 0.4750 inch
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be determined (human factors, unexpected flaw type, etc) and resolved first.

Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.
**Detection Probability** (Utilization of DOEPOD results requires approval of Engineering Authority)

- **POH** (Probability of Hit)
- **LCL** (Lower Confidence Limit)

**Warning:** No false call analysis.

**CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.**

- **Survey/Optimum Xpoh**
- **False Call Rate**
- **Opt. POD classlength, Xpodopt**
- **Samples Needed @ Xpodopt**

**File Name:** G10003BD.XLS
**Data Set Name:** G10003BD(CRACK #)
**Date & Time:** 6/5/15 6:29 AM

- Xpod 90/95 Reached Anywhere? **NOT REACHED**
- Classwidth @ 90/95 Xpod
- Classlength @ 90/95 Xpod
- Lower Confidence Bound
- Best LCL
- Classwidth @ Best LCL
- Classlength @ Best LCL
- User Provided a 90/95 POD
- User's Maximum Allowed Classlength
- Inspector Classwidth @ Xp
- POD @ Xp

- **Classwidth @ 90/95 Xpod:** inch
- **Classlength @ 90/95 Xpod:** inch
- **Best LCL:** inch
- **Classwidth @ Best LCL:** inch
- **Classlength @ Best LCL:** inch
- **User Provided a 90/95 POD:** inch
- **User's Maximum Allowed Classlength:** inch
- **Inspector Classwidth @ Xp:** inch
- **POD @ Xp:** inch

- **Largest Classlength, XL:** inch
- **Samples Needed @ XL:** inch
- **Classlength Mid-point, Xm:** inch
- **Samples Needed @ Xm:** inch
- **Smallest Classlength, Xs:** inch
- **Samples Needed @ Xs:** inch
- **New Smaller Classlength, Xss:** inch
- **BestLCL Classlength, Xlcl:** inch
- **Samples Needed @ Xlcl:** inch
- **POH Classlength, Xpoh:** inch
- **Samples Needed @ Xpoh:** inch
- **New Largest Classlength, 2XL:** inch
- **Xm is Near Verification Point:** inch
- **Opt. POD classlength, Xpodopt:** inch
- **Samples Needed @Xpodopt:** inch

- **NTIAC 90% POD:** inch
- **NTIAC 90/95 POD:** inch

- **False Call Rate with UCL @ 95%:** inch
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths—this indicates that the POH function may be oscillatory. This needs to be checked.

- The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.
- The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc.) and resolved first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

0.356 29

**Alternate Xm = Xpodopt =

* Alternate class lengths with existing misses. Each point requires additional samples to achieve the Xpod listed.

** Alternate class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
<tr>
<td><strong>Alternate Xm</strong></td>
<td><strong>Xpodopt</strong></td>
</tr>
</tbody>
</table>

**TABLE A**

Selected class lengths with existing misses. Each point requires additional samples to achieve the Xpod listed.

**TABLE B**

Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

*No Misses Observed  □ At Least One Miss Occurred  △ XL  ○ Xm  ● Xs  ♦ Xss  ♠ Xlcl  Xpoh  ▲ 2XL  Xpod  ◆ Xpodopt

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths; this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only the largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**

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CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Warning: No false call analysis.
Although \( X_{pod} \) appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target \( X_{pod} \) points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

**Satisfying the Alternate \( X_m \) requirement removes the need to meet the adjacent \( X_m \) requirement.**

***The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.**
Large flaw validation failure. Extend flaw size range to 0.25356.

CASE 18 - 90/95 Xpod may be VALIDATED from Xp to XL. Xp used to satisfy XL and Xm requirements. An alternate 90/95 Xpod is available if Xpodopt or Optimum Xpoh (if listed) is also satisfied.

Warning: No false call analysis.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resold first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

File Name = G2001L.XLS
Data Set Name = G2001L(Eol-a)

Directed DOE Options

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<td>Xpodopt</td>
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**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the Xpod listed.

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.

Xpod, Class Length  | No. Need  | Xpod, Class Length  | No. Need  |
-------------------|----------|-------------------|----------|

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resold first.

**Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.

**The added class lengths are to be at the class length indicated or smaller to within the class width indicated in the companion chart.

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Errata

NTIAC NDE Capabilities Book, 3rd Edition (November 1997)
[NTIAC: DB-97-02]

DATA sets that do not appear to exist on the NTIAC CD:

B20011 (appears to be B2001)
B20012 (appears to be B2002)
B20013 (appears to be B2003)

G6001G (appears to be A6001G)
G6001GR (appears to be A6001GR)
G6002G (appears to be A6002G)
G6003G (appears to be A6003G)
G6004G (appears to be A6004G)

F40601AL (appears to be F40601A)
F40601BL (appears to be F40601B)
F40601CL (appears to be F40601C)

F40603AL (appears to be F40603A)
F40603BL (appears to be F40603B)
F40603CL (appears to be F40603C)

F42501AL (appears to be F42501A)
F42501BL (appears to be F42501B)
F42501CL (appears to be F42501C)

F42503AL (appears to be F42503A)
F42503BL (appears to be F42503B)
F42503CL (appears to be F42503C)

A4000(7) is listed in Mag Particle data index – should be B4000(7) with B4001L as the companion data set

DATA sets on the CD that are not listed in the index:

B1001AD (POD data not shown in book)
B1001BD (POD data not shown in book)
B1001CD (POD data not shown in book)

B1003AD (POD data not shown in book)
B1003BD (POD data not shown in book)
B1003CD (POD data not shown in book)
B4001L (see above)

B2001 (appears to be the missing B20011 above)
B2002 (appears to be the missing B20012 above)
B2003 (appears to be the missing B20013 above)

There are an additional 18 data sets (grouped) and not listed in the index:

DB001(3)D (POD data not shown in book)
DB001(3)L (POD data not shown in book)
DB002(3)D (POD data not shown in book)
DB002(3)L (POD data not shown in book)
DB003(3)D (POD data not shown in book)
DB003(3)L (POD data not shown in book)

DC001(3)D (POD data not shown in book)
DC001(3)L (POD data not shown in book)
DC002(3)D (POD data not shown in book)
DC002(3)L (POD data not shown in book)
DC003(3)D (POD data not shown in book)
DC003(3)L (POD data not shown in book)

DD001(3)D (POD data not shown in book)
DD001(3)L (POD data not shown in book)
DD002(3)D (POD data not shown in book)
DD002(3)L (POD data not shown in book)
DD003(3)D (POD data not shown in book)
DD003(3)L (POD data not shown in book)

DATA set duplicated:

F9000CD appears to be a duplicate identical to data file F20852CD

DATA Analysis integrity:

During validation of DOEPOD results on the entire NTIAC NDE Capabilities Book "DOEPOD(NTIAC)", some exceptions were noted in the results. There are 437 data sets and exceptions were identified in the 32 data sets listed below. The analysis results shown in the NTIAC NDE Capabilities Book, 3rd Edition (1997) [NTIAC: DB-97-02] for the data sets listed below are incorrect due to a data listing error. These data sets need to be re-run with data sorted.

A1001CL.XLS
A1002CL.XLS
OTHER:

C8003(3)L.xls - sample #136 shows 3 trials with -1 in the HIT/MISS column
C8003(3)D.xls - sample #136 shows 3 trials with -1 in the HIT/MISS column

C3002: Sample #16 shows 0.10” in depth. NASA CR 151098 pg 27. shows 0.010”. Since the sample thickness is 0.063” this NTIAC entry is incorrect.

The primary and secondary scales on abscissa axes in Chart 1 may be incorrect. Compare actual flaw sizes and inspection data on data sheets available in electronic distributions.
This data book contains the Directed Design of Experiments for Validating Probability of Detection (POD) Capability of NDE Systems (DOEPOD) analyses of the nondestructive inspection data presented in the NTIAC, Nondestructive Evaluation (NDE) Capabilities Data Book, 3rd ed., NTIAC DB-97-02. DOEPOD is designed as a decision support system to validate inspection system, personnel, and protocol demonstrating 0.90 POD with 95% confidence at critical flaw sizes, a90/95. The test methodology used in DOEPOD is based on the field of statistical sequential analysis founded by Abraham Wald, “Sequential analysis is a method of statistical inference whose characteristic feature is that the number of observations required by the procedure is not determined in advance of the experiment. The decision to terminate the experiment depends, at each stage, on the results of the observations previously made. A merit of the sequential method, as applied to testing statistical hypotheses, is that test procedures can be constructed which require, on average, a substantially smaller number of observations than equally reliable test procedures based on a predetermined number of observations.” A. Wald, 1947.

15. SUBJECT TERMS
Defects; Flaws; Maximum destructive likelihood; Nondestructive evaluation; Probability of detection

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