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 provided 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 may be 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>
<thead>
<tr>
<th>CASE</th>
<th>Is 90/95 POD at $X_{pod}$ reached? (i.e., lower confidence bound, $X_{pod, LCL, LCL, LCL}$ 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: Misses 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. Misses 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 Misses 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 $X_{pod, LCL}$ or $X_{pod, LCL}$.</td>
<td></td>
</tr>
<tr>
<td>CASE 5</td>
<td>90/95 POD at $X_{pod}$ has not been reached and there are Misses above $X_{pod, LCL}$. Actions: Increase the number of flaws at $X_{pod, LCL}$.</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 $X_{pod, LCL}$ and $X_{pod}$ is greater than $X_{pod}$. 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 $X_{pod}$</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
inspection required.

Table 2

<table>
<thead>
<tr>
<th>CASE ID</th>
<th>Number of Data Sets</th>
<th>Action Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>CASE 1+</td>
<td>2</td>
<td>Explain of observed false negatives</td>
</tr>
<tr>
<td>CASE 1#</td>
<td>71</td>
<td>Further validation at larger flaws. Add test specimens with larger flaws.</td>
</tr>
<tr>
<td>CASE 1*</td>
<td>80</td>
<td>Further validation at larger flaw. Add test specimens with larger flaws. Explain observed false negatives.</td>
</tr>
<tr>
<td>CASE 2</td>
<td>46</td>
<td>Add test specimens at identified flaw sizes to demonstrate POD to be monotonically increasing with flaw size</td>
</tr>
<tr>
<td>CASE 4</td>
<td>37</td>
<td>Increase amount of relevant data by adding test specimens at identified flaw sizes to establish acceptable POD</td>
</tr>
<tr>
<td>CASE 5</td>
<td>12</td>
<td>Add test specimens with increased flaw sizes to address excessive false negatives at smaller flaw sizes.</td>
</tr>
<tr>
<td>CASE 6</td>
<td>91</td>
<td>Add test specimens with flaw sizes at least twice as large to address local inspection system oscillation instability or utilize a different inspection system or method.</td>
</tr>
<tr>
<td>CASE 7</td>
<td>98</td>
<td>Add test specimens with flaw sizes at least twice as large to address global inspection system instability or utilize a different inspection system or method.</td>
</tr>
</tbody>
</table>

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
Example

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**

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

**CW**  
Class width (width of the moving class; all flaws within the range CL to CL - CW, inclusively, are grouped together)

**Hit**  
Flaw is detected

**Miss**  
Flaw is not detected

**MLE**  

**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 class width 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} 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 Class length X at point “i”

X_L Largest class length in entire data set

X_m Class length near the mid-point between the largest and the smallest class lengths having no Misses

X_P 90/95 POD or greater is achieve, 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 - Classwidth @ X_P).

X_POD Class length at which the lower confidence bound (value) is 0.90 (90/95 POD) @ 95% confidence.

X_{POH=1, X_POH} Class length where there are no Misses above this class length, and POH = 1 above this class length.

X_{PODopt} Optional existing smaller class length where X_POD may also be achieved if additional samples are added and Hits are identified.

X_S Smallest class length in the data set

UCL Upper confidence bound (value) of the false call rate @ 95% confidence
Validated 90/95 POD has been reached at a class length, \(X_{\text{POD}}\). In order to achieve 90/95 POD for the class length range between \(X_{\text{POD}}\) and the largest class length in the data set, \(X_L\), inclusively, validation at a class length near the mid-point and largest class length is required\(^5\). 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 \(X_P = X_{\text{POD}}\), and there is a sufficient number and adequate range and distribution of class lengths greater than \(X_{\text{POD}}\), then the validation extends from \(X_{\text{POD}}\) to \(X_L\). When this occurs, validation at a class length near the mid-point and largest class length is satisfied.\(^6\)

**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., \((\text{length}) \times (\text{width}) = \text{area}\), 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 \(X_{\text{POD}}\) 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


| MATERIAL | SPECIFICATION | FILE NAME | Analysis Grid Text | Best LCL CLASS-LENGTH XL XL # Xm Xm # Xs Xs # Xlcl Xlcl # Xpoh Xpoh # 2XL 2XL # Xss Xss # Xpodopt Xpodopt # |
|----------|---------------|-----------|-------------------|-----------------------|-----------------------|--------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 2219 Al T-87 plate A1001AL.XLS | 6/4/15 | CASE 1# | 0.6100 | 0.2000 | 0.9050 | 0.9790 | 0.7100 | 0.5890 | 29 | | | | | | |
| 2219 Al T-87 plate A1001BL.XLS | 6/4/15 | CASE 1* | 0.3130 | 0.2000 | 0.9040 | 0.9790 | 0.6460 | 29 | | | | | | | | |
| 2219 Al T-87 plate A1001CL.XLS | 6/4/15 | CASE 1# | 0.3360 | 0.0570 | 0.9001 | 0.9790 | 0.5430 | | | | | | | | | |
| 2219 Al T-87 plate A1002AL.XLS | 6/4/15 | CASE 2 | 0.2980 | 0.0510 | 0.9001 | 0.9790 | 0.6460 | 29 | | | | | | | | |
| 2219 Al T-87 plate A1002BL.XLS | 6/4/15 | CASE 1* | 0.1080 | 0.0310 | 0.9001 | 0.9790 | 0.3360 | | | | | | | | | |
| 2219 Al T-87 plate A1002CL.XLS | 6/4/15 | CASE 1# | 0.1850 | 0.25 | 0.961 ET | | | | | | | | | | | |
| Ti 6Al4V plate A3001BL.XLS | 6/4/15 | CASE 2 | 0.2650 | 0.0800 | 0.9001 | 0.4070 | 57 | 0.3150 | 9 | | | | | | | |
| Ti 6Al4V plate A3001CL.XLS | 6/4/15 | CASE 1# | 0.2420 | 0.0420 | 0.9001 | 0.4070 | 0.3550 | 0.2350 | 1 | | | | | | | |
| Ti 6Al4V plate A3003AL.XLS | 6/4/15 | CASE 7 | 0.8853 | 0.2000 | 0.5100 | 1.1000 | 29 | | | | | | | | | |
| Ti 6Al4V plate A3003CL.XLS | 6/4/15 | CASE 7 | 0.0830 | 0.0080 | 0.9001 | 0.6100 | 0.2620 | | | | | | | | | |
| SS AMS 355 hole A400015.XLS | 6/4/15 | CASE 5 | 0.5493 | 0.0030 | 0.0579 | 0.2575 | 28 | 0.0663 | 27 | | | | | | | |
| SS AMS 355 hole A400016.XLS | 6/4/15 | CASE 1# | 0.1031 | 0.0540 | 0.9001 | 0.2575 | 0.1929 | 0.1004 | 2 | | | | | | | |
| SS AMS 355 hole A500011.XLS | 6/4/15 | CASE 4 | 0.8855 | 0.0230 | 0.0902 | 0.0902 | 4 | | | | | | | | | |
| SS AMS 355 hole A500016.XLS | 6/4/15 | CASE 1# | 0.0610 | 0.0250 | 0.9001 | 0.0815 | 0.0681 | 0.0587 | 3 | | | | | | | |
| 2024 Al T-37 lap splice A6001B.XLS | 6/4/15 | CASE 1# | 0.0940 | 0.0140 | 0.9001 | 0.8120 | 0.2760 | 0.0930 | 1 | | | | | | | |
| 2024 Al T-37 lap splice A6001D.XLS | 6/4/15 | CASE 1# | 0.1280 | 0.0240 | 0.9050 | 0.8120 | 0.3720 | | | | | | | | | |
| 2024 Al T-37 lap splice A6001G.XLS | 6/4/15 | CASE 4 | 0.8666 | 0.0870 | 0.2760 | 0.8120 | 27 | 0.2760 | 8 | 0.2760 | | | | | |
| 2024 Al T-37 lap splice A6001H.XLS | 6/4/15 | CASE 1* | 0.1310 | 0.0250 | 0.9001 | 0.8120 | 0.3720 | | | | | | | | | |
| 2024 Al T-37 lap splice A6002A.XLS | 6/4/15 | CASE 1# | 0.0940 | 0.0140 | 0.9001 | 0.8120 | 0.2760 | 0.0930 | 1 | | | | | | | |
| 2024 Al T-37 lap splice A6002C.XLS | 6/4/15 | CASE 1* | 0.1050 | 0.0180 | 0.9001 | 0.8120 | 0.2910 | | | | | | | | | |
| 2024 Al T-37 lap splice A6002D.XLS | 6/4/15 | CASE 1* | 0.1280 | 0.0240 | 0.9050 | 0.8120 | 0.3720 | | | | | | | | | |
| 2024 Al T-37 lap splice A6002DR.XLS | 6/4/15 | CASE 1# | 0.1540 | 0.0340 | 0.9077 | 0.8120 | 0.3220 | | | | | | | | | |
| 2024 Al T-37 lap splice A6002F.XLS | 6/4/15 | CASE 7 | 0.8190 | 0.0710 | 0.2910 | 1.6240 | 29 | | | | | | | | | |
| 2024 Al T-37 lap splice A6002G.XLS | 6/4/15 | CASE 1# | 0.1200 | 0.0230 | 0.9050 | 0.8120 | 0.3720 | | | | | | | | | |
| 2024 Al T-37 lap splice A6002H.XLS | 6/4/15 | CASE 1* | 0.2220 | 0.0910 | 0.9001 | 0.8120 | 0.3720 | | | | | | | | | |
| 2024 Al T-37 lap splice A6003A.XLS | 6/4/15 | CASE 1* | 0.1050 | 0.0190 | 0.9001 | 0.8117 | 0.2910 | | | | | | | | | |
| 2024 Al T-37 lap splice A6003B.XLS | 6/4/15 | CASE 1* | 0.0870 | 0.0190 | 0.9001 | 0.8117 | 0.2762 | | | | | | | | | |

*All lengths are in inches*
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

XL # Xm

Xm # Xs

Xs #

Xlcl

Xlcl #

Xpoh

Xpoh # 2XL

2XL # Xss

False Call
Xss # Xpodopt Xpodopt # UCL

False Call
Rate

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)

MLE Divergence
Warning: Initial results
listed.

POH or
POD @
Xpod

XP

METHO
D

2024 Al T-37

lap splice

A6003E.XLS

6/4/15 6:35 PM CASE 1*

0.1283

0.0360

0.9001

0.8117

0.3219

Warning: No false call
analysis.

0.105

0.115

0.14525

0.978

ET

2024 Al T-37

lap splice

A6003F.XLS

6/4/15 6:37 PM CASE 1*

0.1054

0.0190

0.9001

0.8117

0.2910

Warning: No false call
analysis.

0.08

0.09

0.1054

1.000

ET

0.5109

29

Warning: No false call
analysis.

0.19

0.225

1.000

ET

28

Warning: No false call
analysis.

0.14

0.165

1.000

ET

0.08

0.09

0.0982

1.000

ET

ET

2024 Al T-37
2024 Al T-37

2024 Al T-37

lap splice
lap splice

lap splice

A6003G.XLS
A6003H.XLS

A6003J.XLS

6/4/15 6:38 PM CASE 2
6/4/15 6:39 PM CASE 2

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

0.2100
0.1308

0.0982

0.0580
0.0250

0.0160

0.9001

0.8117

0.9001

0.8117

0.9050

26
26

0.8117

0.3719

0.2910

2024 Al T-37

lap splice

A6004A.XLS

6/4/15 6:42 PM CASE 1*

0.0940

0.0140

0.9001

0.8120

0.2760

2024 Al T-37

lap splice

A6004B.XLS

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

0.1140

0.0180

0.9001

0.8120

0.2910

2024 Al T-37

lap splice

A6004BR.XLS

6/4/15 6:44 PM CASE 1*

0.1050

0.0180

0.9001

0.8120

0.0980

0.1070

29

3

Warning: No false call
analysis.

MLE Divergence
Warning: Initial results
listed.

Warning: No false call
analysis.

MLE Divergence
Warning: Initial results
listed.

Warning: No false call
analysis.
Warning: No false call
analysis.

0.2910

2024 Al T-37

lap splice

A6004C.XLS

6/4/15 6:46 PM CASE 5

0.6070

0.0010

0.1140

0.8120

27

0.1760

27

Warning: No false call
analysis.

2024 Al T-37

lap splice

A6004CR.XLS

6/4/15 6:48 PM CASE 5

0.6070

0.0010

0.0960

0.8120

27

0.1760

27

Warning: No false call
analysis.

2024 Al T-37

lap splice

A6004D.XLS

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

0.1050

0.0180

0.9001

0.8120

0.2910

2024 Al T-37

lap splice

A6004E.XLS

6/4/15 6:50 PM CASE 1#

0.1310

0.0250

0.9001

0.8120

0.3720

2024 Al T-37

lap splice

A6004F.XLS

6/4/15 6:52 PM CASE 1*

0.1050

0.0180

0.9001

0.8120

0.2910

0.1040
0.1305

Warning: No false call
analysis.

29

Warning: No false call
analysis.

0.095

0.094

1.000

0.105

0.114

1.000

ET

0.07

0.085

0.105

1.000

ET

0.14

0.165

0.13

0.145

0.09

0.1

0.105

1.000

ET

ET

ET

0.11

0.125

0.131

1.000

ET

Warning: No false call
analysis.

MLE Divergence
Warning: Initial results
listed.

0.065

0.075

0.105

1.000

ET

Warning: No false call
analysis.

MLE Divergence
Warning: Initial results
listed.

0.07

0.08

0.105

1.000

ET

lap splice

A6004FR.XLS

6/4/15 6:53 PM CASE 1#

0.1050

0.0180

0.9001

0.8120

0.2910

2024 Al T-37

lap splice

A6004G.XLS

6/4/15 6:54 PM CASE 1*

0.1890

0.0640

0.9011

0.8120

0.3720

Warning: No false call
analysis.

0.15

0.185

0.189

0.979

ET

0.8120

0.3720

Warning: No false call
analysis.

0.135

0.165

0.189

0.979

ET

0.8120

0.3720

Warning: No false call
analysis.

0.105

0.12

0.176

1.000

ET

2024 Al T-37

lap splice

A6004H.XLS

6/4/15 6:56 PM CASE 1*

0.1890

0.0640

0.9011

lap splice

A6004J.XLS

6/4/15 6:57 PM CASE 1#

0.1760

0.0390

0.9001

STEEL 4340

plate

A7001AL.XLS

6/4/15 6:58 PM CASE 7

STEEL 4340
STEEL 4340

plate
plate

A7001BL.XLS
A7001CL.XLS

0.5493

6/4/15 7:00 PM CASE 7

0.6070

6/4/15 7:03 PM CASE 7

0.5493

0.0040
0.0050
0.0040

0.1710

0.0933

4.8060

0.0933

4.8060

0.0933

4.8060

2

MLE Divergence
Warning: Initial results
listed.

0.08
0.095

2024 Al T-37

2024 Al T-37

0.1020

3

MLE Divergence
Warning: Initial results
listed.

3

29

Warning: No false call
analysis.

ET

29

Warning: No false call
analysis.

ET

29

Warning: No false call
analysis.

ET
ET
ET

STEEL 4340

plate

A7003AL.XLS

6/4/15 7:05 PM CASE 7

0.6356

0.0630

0.3500

4.8060

29

Warning: No false call
analysis.

STEEL 4340

plate

A7003BL.XLS

6/4/15 7:07 PM CASE 6

0.5493

0.0010

0.1960

2.4030

28

1.6030

28

4.8060

29

Warning: No false call
analysis.

STEEL 4340

plate

A7003CL.XLS

6/4/15 7:09 PM CASE 6

0.6878

0.0520

0.2480

2.4030

28

1.6030

28

4.8060

29

Warning: No false call
analysis.

SS AMS 355

hole

A8001L.XLS

6/4/15 7:11 PM CASE 1*

0.0218

0.0050

0.9001

0.3425

0.1611

Warning: No false call
analysis.
Warning: No false call
analysis.

0.0145

29

ET
0.025

0.03

0.04404

1.000

ET

0.01

0.015

0.01468

1.000

ET

0.01

0.015

0.01468

1.000

ET

SS AMS 355

hole

A8002L.XLS

6/4/15 7:12 PM CASE 1#

0.0147

0.0040

0.9129

0.3425

0.1611

SS AMS 355

hole

A8003L.XLS

6/4/15 7:16 PM CASE 1*

0.0147

0.0040

0.9129

0.3425

0.1611

Warning: No false call
analysis.

0.03

0.04

0.05873

1.000

ET

0.03

0.035

0.05753

1.000

ET

0.04

0.045

0.05873

1.000

ET

SS AMS 355

hole

A8004L.XLS

6/4/15 7:22 PM CASE 1#

0.0587

0.0190

0.9050

0.3425

0.1694

0.0581

29

Warning: No false call
analysis.

SS AMS 355

hole

A8005L.XLS

6/4/15 7:23 PM CASE 1#

0.0575

0.0180

0.9104

0.3425

0.1694

0.0567

29

Warning: No false call
analysis.

0.0587

0.0190

0.9050

0.3425

A8006L.XLS

6/4/15 7:24 PM CASE 1#

stringer panel

A9001(3)D.xls

6/4/15 7:26 PM CASE 6

0.7169

0.0020

0.0650

0.0950

26

0.0800

26

0.1900

29

Warning: No false call
analysis.

2219 Al T-87

stringer panel

A9001(3)L.xls

6/4/15 7:27 PM CASE 6

0.8444

0.0090

0.5690

0.6840

26

0.6840

26

1.3680

29

Warning: No false call
analysis.

2219 Al T-87

stringer panel

A9002(3)D.xls

6/4/15 7:29 PM CASE 6

0.8444

0.0040

0.0650

0.0950

26

0.0950

26

0.1900

29

Warning: No false call
analysis.

0.055

0.065

ET

1.3680

29

Warning: No false call
analysis.

0.375

0.51

ET

0.1900

29

Warning: No false call
analysis.

0.105

0.14

ET
ET
ET

stringer panel

A9002(3)L.xls

6/4/15 7:31 PM CASE 7

0.8827

0.0190

0.5790

stringer panel

A9003(3)D.xls

6/4/15 7:32 PM CASE 6

0.7933

0.0020

0.0570

0.0950

26

0.0760

26

29

Warning: No false call
analysis.

hole

2219 Al T-87

2219 Al T-87

0.0581

MLE Divergence
Warning: Initial results
listed.

SS AMS 355

2219 Al T-87

0.1694

MLE Divergence
Warning: Initial results
listed.

A9003(3)L.xls

6/4/15 7:34 PM CASE 6

0.7791

0.0020

0.1950

0.6840

26

0.6840

26

1.3680

29

Warning: No false call
analysis.

2219 Al T-87/w2319 weld LP

AA001(3)L.xls

6/4/15 7:35 PM CASE 6

0.6070

0.0040

0.6860

1.2710

26

1.2710

26

2.5420

29

Warning: No false call
analysis.

2219 Al T-87/w2319 weld LP

AA002(3)L.xls

6/4/15 7:37 PM CASE 7

0.7169

0.0080

0.9430

2.5420

29

Warning: No false call
analysis.

2219 Al T-87

stringer panel

2219 Al T-87/w2319 weld LP

AA003(3)L.xls

6/4/15 7:40 PM CASE 2

0.9450

0.0560

0.9050

1.2710

155

1.1560

8

2219 Al T-87/w2319 weld LFC

AB001(3)L.xls

6/4/15 7:43 PM CASE 7

0.6070

0.0030

0.2870

2.3760

29

2219 Al T-87/w2319 weld LFC

AB002(3)L.xls

6/4/15 7:44 PM CASE 6

0.6070

0.0030

0.2870

2.3760

29

Warning: No false call
analysis.

2219 Al T-87/w2319 weld LFC

AB003(3)L.xls

6/4/15 7:46 PM CASE 7

0.7206

0.0060

0.1000

2.3760

29

Warning: No false call
analysis.

2219 Al T-87/w2319 weld TFC

AC001(3)L.xls

6/4/15 7:48 PM CASE 7

0.8477

0.5000

0.9850

2.8700

29

Warning: No false call
analysis.

26

1.1880

26

2219 Al T-87/w2319 weld TFC

AC002(3)L.xls

6/4/15 7:49 PM CASE 6

0.7169

0.0040

0.4820

1.4350

26

0.4980

23

2.8700

29

Warning: No false call
analysis.

2219 Al T-87/w2319 weld TFC

AC003(3)L.xls

6/4/15 7:50 PM CASE 6

0.8666

0.2000

1.0760

1.4350

26

1.4350

26

2.8700

29

Warning: No false call
analysis.

2219 Al T-87/w2319 weld flush LFC AD001(3)L.xls

6/4/15 7:52 PM CASE 1*

0.3480

0.0290

0.9050

1.5620

ET

ET

1.1190

Warning: No false call
analysis.
Warning: No false call
analysis.

1.000

ET
ET
0.445

0.67

ET

0.465

0.74

ET

0.75
MLE Divergence
Warning: Initial results
listed.

0.105

0.348

1.000

ET

0.348

1.000

ET

0.185

0.23

0.235

1.000

ET

0.2

0.23

0.267

1.000

ET

0.235

1.000

ET

1.5620

1.1190

0.9050

1.5620

1.1190

0.1900

23

Warning: No false call
analysis.

2219 Al T-87/w2319 weld flush TFC AE001(3)L.xls

6/4/15 8:10 PM CASE 1#

0.2350

0.0570

0.9050

0.4950

0.3080

0.2240

8

Warning: No false call
analysis.

2219 Al T-87/w2319 weld flush TFC AE002(3)L.xls

6/4/15 8:11 PM CASE 1#

0.2670

0.0850

0.9050

0.4950

0.3810

0.2530

29

Warning: No false call
analysis.

MLE Divergence
Warning: Initial results
listed.

2219 Al T-87/w2319 weld flush TFC AE003(3)L.xls

6/4/15 8:11 PM CASE 1#

0.2350

0.0570

0.9050

0.4950

0.3080

0.1380

26

Warning: No false call
analysis.

MLE Divergence
Warning: Initial results
listed.

0.005

plate

B1001AD.XLS

6/4/15 8:12 PM CASE 6

0.8666

0.0090

0.0620

0.2100

28

0.2100

28

0.4200

29

STEEL 4340

plate

B1001AL.XLS

6/4/15 8:14 PM CASE 6

0.8855

0.0540

0.2340

2.4030

28

1.6030

28

4.8060

29

Warning: No false call
analysis.

plate

B1001BD.XLS

6/4/15 8:15 PM CASE 6

STEEL 4340

plate

B1001BL.XLS

6/4/15 8:17 PM CASE 6

STEEL 4340

plate

B1001CD.XLS

6/4/15 8:19 PM CASE 2

STEEL 4340

plate

B1001CL.XLS

6/4/15 8:19 PM CASE 2

0.0600
0.2340

0.0330
0.0630

0.9001
0.9001

0.8742

0.0380

0.0620

0.2100

28

0.8719

0.0520

0.2340

2.4030

28

0.2100

23

2.4030

24

0.1173
1.6030

0.2100

28

0.4200

29

Warning: No false call
analysis.

1.2270

28

4.8060

29

Warning: No false call
analysis.

14

Warning: No false call
analysis.

28

Warning: No false call
analysis.

*All lengths are in inches
13

ET

0.24

0.9050

0.0290

STEEL 4340

1.000

0.135

0.0290

0.3480

Warning: No false call
analysis.

0.348

0.11

0.3480

6/4/15 8:06 PM CASE 1#

MLE Divergence
Warning: Initial results
listed.

ET

0.13

0.185

6/4/15 7:58 PM CASE 1*

2219 Al T-87/w2319 weld flush LFC AD003(3)L.xls

29

ET
ET

2219 Al T-87/w2319 weld flush LFC AD002(3)L.xls

STEEL 4340

ET

Warning: No false call
analysis.
Warning: No false call
analysis.

1.1880

0.12

MT
0.695

MT
MT

0.4

0.37

MT
0.978

MT

1.000

MT


<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>APPLICATION</th>
<th>FILE NAME</th>
<th>Material Grade</th>
<th>Part Name</th>
<th>Description</th>
<th>Length</th>
<th>Width</th>
<th>Thickness</th>
<th>ID</th>
<th>Case Code</th>
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<tbody>
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<tr>
<td>STEEL 4340 plate</td>
<td>B1003AL.XLS</td>
<td>6/4/15 8:22 PM</td>
<td>CASE 2</td>
<td>0.2340</td>
<td>0.0590</td>
<td>0.9001</td>
<td>2.4030</td>
<td>24</td>
<td>1.6030</td>
<td></td>
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<tr>
<td>SS AMS 355 hole</td>
<td>B2002.XLS</td>
<td>6/4/15 8:30 PM</td>
<td>CASE 1</td>
<td>0.1031</td>
<td>0.0540</td>
<td>0.9001</td>
<td>0.2575</td>
<td>0.1929</td>
<td>0.1004</td>
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<tr>
<td>SS AMS 355 hole</td>
<td>B30012.XLS</td>
<td>6/4/15 8:34 PM</td>
<td>CASE 4</td>
<td>0.8855</td>
<td>0.0230</td>
<td>0.0902</td>
<td>0.0902</td>
<td>4</td>
<td>0.0902</td>
<td>4</td>
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<td>2219 Al T-87 plate</td>
<td>C1001AL.XLS</td>
<td>6/4/15 8:38 PM</td>
<td>CASE 7</td>
<td>0.8609</td>
<td>0.0200</td>
<td>0.2610</td>
<td>1.9580</td>
<td>29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ti 6Al4V plate</td>
<td>C3001AL.XLS</td>
<td>6/4/15 9:04 PM</td>
<td>CASE 6</td>
<td>0.7942</td>
<td>0.0180</td>
<td>0.1940</td>
<td>0.4070</td>
<td>28</td>
<td>0.3000</td>
<td>27</td>
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<tr>
<td>Ti 6Al4V plate</td>
<td>C3002AL.XLS</td>
<td>6/4/15 9:08 PM</td>
<td>CASE 6</td>
<td>0.8868</td>
<td>0.0960</td>
<td>0.2120</td>
<td>0.4070</td>
<td>18</td>
<td>0.3450</td>
<td>10</td>
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<tr>
<td>Ti 6Al4V plate</td>
<td>C3003AL.XLS</td>
<td>6/4/15 9:12 PM</td>
<td>CASE 7</td>
<td>0.8965</td>
<td>0.1000</td>
<td>0.3250</td>
<td>0.8140</td>
<td>29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SS AMS 355 hole</td>
<td>C400011.XLS</td>
<td>6/4/15 9:15 PM</td>
<td>CASE 6</td>
<td>0.8074</td>
<td>0.0730</td>
<td>0.1752</td>
<td>0.2575</td>
<td>24</td>
<td>0.2575</td>
<td>24</td>
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<tr>
<td>SS AMS 355 hole</td>
<td>C400012.XLS</td>
<td>6/4/15 9:16 PM</td>
<td>CASE 5</td>
<td>0.5493</td>
<td>0.0070</td>
<td>0.0776</td>
<td>0.2575</td>
<td>28</td>
<td>0.0858</td>
<td>27</td>
</tr>
<tr>
<td>SS AMS 355 hole</td>
<td>C500012.XLS</td>
<td>6/4/15 9:22 PM</td>
<td>CASE 4</td>
<td>0.8855</td>
<td>0.0230</td>
<td>0.0902</td>
<td>0.0902</td>
<td>4</td>
<td>0.0902</td>
<td>4</td>
</tr>
<tr>
<td>STEEL 4340 plate</td>
<td>C6002BL.XLS</td>
<td>6/4/15 9:35 PM</td>
<td>CASE 1</td>
<td>0.0960</td>
<td>0.0400</td>
<td>0.9001</td>
<td>2.4030</td>
<td>1.6030</td>
<td>0.215</td>
<td>0.36</td>
</tr>
<tr>
<td>STEEL 4340 plate</td>
<td>C6003CL.XLS</td>
<td>6/4/15 9:40 PM</td>
<td>CASE 1</td>
<td>0.2340</td>
<td>0.0590</td>
<td>0.9001</td>
<td>2.4030</td>
<td>1.6030</td>
<td>0.215</td>
<td>0.36</td>
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<tr>
<td>STEEL 4340 hole</td>
<td>C7002L.XLS</td>
<td>6/4/15 9:43 PM</td>
<td>CASE 4</td>
<td>0.8444</td>
<td>0.0970</td>
<td>0.2131</td>
<td>0.3425</td>
<td>27</td>
<td>0.2131</td>
<td>11</td>
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<tr>
<td>2219 Al T-87 stringer panel</td>
<td>C8001(3)L.xls</td>
<td>6/4/15 9:49 PM</td>
<td>CASE 2</td>
<td>0.2760</td>
<td>0.0050</td>
<td>0.9050</td>
<td>0.6840</td>
<td>23</td>
<td>0.5790</td>
<td>17</td>
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<tr>
<td>2219 Al T-87 stringer panel</td>
<td>C8002(3)D.xls</td>
<td>6/4/15 9:50 PM</td>
<td>CASE 7</td>
<td>0.8739</td>
<td>0.0030</td>
<td>0.0430</td>
<td>0.1900</td>
<td>29</td>
<td>0.395</td>
<td>1.000</td>
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<tr>
<td>2219 Al T-87 stringer panel</td>
<td>C8002(3)L.xls</td>
<td>6/4/15 9:51 PM</td>
<td>CASE 2</td>
<td>0.2620</td>
<td>0.0680</td>
<td>0.9050</td>
<td>0.6840</td>
<td>26</td>
<td>0.4760</td>
<td>23</td>
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*All lengths are in inches*
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<th>FILE NAME</th>
<th>CASE #</th>
<th>DATE (HH:MM)</th>
<th>Project ID</th>
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<th>Xpod WIDTH</th>
<th>Xpod Thickness</th>
<th>Xpod Loc</th>
<th>Xpod Position</th>
<th>Analysis</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>2219 Al T-87</td>
<td>TFC</td>
<td>CB001(3)L.xls</td>
<td>6/4/15 9:54 PM</td>
<td>CASE 1#</td>
<td>0.5790</td>
<td>0.0130</td>
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|-------------------|------------|-----------|--------------------|---------|------------|------------|-----|----|--------------|---|----|-------|------|------|----------|-----------------|-------------------|-----------------|-----|----|--------------|
| 2219 Al T-87 Plate | F12203BD   | 6/5/15 4:10 AM | 0.1190            | 0.0430  | 0.9001    | 0.1780     | 29  |    |               |   |    |       |      |      |          |                 |                  |                |    |    |             |
| 2219 Al T-87 Plate | F12203BL   | 6/5/15 4:11 AM | 0.5350            | 0.2000  | 0.9129    | 0.6100     | 0.5680| 0.5290 | 29            |   |    |       |      |      |          |                 |                  |                |    |    |             |
| 2219 Al T-87 Plate | F12203CD   | 6/5/15 4:12 AM | 0.8668            | 0.0670  | 0.1260    | 0.1780     | 17  |    |               |   |    |       |      |      |          |                 |                  |                |    |    |             |
| 2219 Al T-87 Plate | F12203CD   | 6/5/15 4:12 AM | 0.8668            | 0.0670  | 0.1260    | 0.1780     | 17  |    |               |   |    |       |      |      |          |                 |                  |                |    |    |             |
| Ti 6Al4V Plate    | F30651CD   | 6/5/15 4:31 AM | 0.7411            | 0.0200  | 0.4920    | 0.5500     | 22  |    |               |   |    |       |      |      |          |                 |                  |                |    |    |             |
| Ti 6Al4V Plate    | F30651CL   | 6/5/15 4:39 AM | 0.7411            | 0.0930  | 0.2500    | 0.8140     | 29  |    |               |   |    |       |      |      |          |                 |                  |                |    |    |             |
| Ti 6Al4V Plate    | F32251AD   | 6/5/15 4:47 AM | 0.5493            | 0.0030  | 0.2150    | 0.3520     | 28  |    |               |   |    |       |      |      |          |                 |                  |                |    |    |             |
| Ti 6Al4V Plate    | F32251AL   | 6/5/15 4:49 AM | 0.5493            | 0.0030  | 0.2150    | 0.3520     | 28  |    |               |   |    |       |      |      |          |                 |                  |                |    |    |             |
| Ti 6Al4V Plate    | F32253AL   | 6/5/15 4:58 AM | 0.6837            | 0.0150  | 0.2250    | 0.3700     | 28  |    |               |   |    |       |      |      |          |                 |                  |                |    |    |             |
| STEEL 4340 Plate  | F40603B    | 6/5/15 5:09 AM | 0.6877            | 0.0070  | 0.0943    | 0.2480     | 28  |    |               |   |    |       |      |      |          |                 |                  |                |    |    |             |
| STEEL 4340 Plate  | F42501A    | 6/5/15 5:12 AM | 0.2486            | 0.0080  | 0.3300    | 2.4030     | 28  |    |               |   |    |       |      |      |          |                 |                  |                |    |    |             |
| STEEL 4340 Plate  | F42501C    | 6/5/15 5:16 AM | 0.2236            | 0.0030  | 0.3300    | 2.4030     | 28  |    |               |   |    |       |      |      |          |                 |                  |                |    |    |             |
| 2219 Al T-87 Weld | F5002(3)L  | 6/5/15 5:28 AM | 0.3370            | 0.0490  | 0.9050    | 1.2100     | 16  |    |               |   |    |       |      |      |          |                 |                  |                |    |    |             |
| 2219 Al T-87 Weld | F5003(3)D  | 6/5/15 5:30 AM | 0.0720            | 0.0020  | 0.9050    | 0.1600     | 20  |    |               |   |    |       |      |      |          |                 |                  |                |    |    |             |
| 2219 Al T-87 Weld | F5003(3)L  | 6/5/15 5:41 AM | 0.6880            | 0.0170  | 0.9050    | 1.2100     | 16  |    |               |   |    |       |      |      |          |                 |                  |                |    |    |             |

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

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>STRUCTURE</th>
<th>FILE NAME</th>
<th>Analysis Date Time</th>
<th>Case #</th>
<th>Class-LENGTH</th>
<th>False Call</th>
<th>False Call</th>
<th>False Call</th>
<th>False Call Flag</th>
<th>MLE Flag</th>
<th>DOEPOD CAPABILITIES DATA BOOK - SUMMARY</th>
</tr>
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<tbody>
<tr>
<td><strong>2019-6-1</strong></td>
<td>19</td>
<td>2219 Al T-87 F6001(3)D.xls</td>
<td>6/5/15 5:49 AM</td>
<td>CASE 7</td>
<td>0.6070</td>
<td>0.0050</td>
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<td>6/5/15 5:52 AM</td>
<td>CASE 6</td>
<td>0.5709</td>
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<td>CASE 4</td>
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<td>6/5/15 5:59 AM</td>
<td>CASE 6</td>
<td>0.6070</td>
<td>0.0130</td>
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<td>CASE 4</td>
<td>0.8813</td>
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<td>2219 Al T-87 weld flush TFC F9001(3)D.xls</td>
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<td>0.3684</td>
<td>0.0010</td>
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<td>2219 Al T-87 weld flush TFC F9001(3)L.xls</td>
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<td>CASE 7</td>
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<td>2219 Al T-87 weld flush TFC F9002(3)L.xls</td>
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<td>6/5/15 6:27 AM</td>
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<td>6/5/15 6:29 AM</td>
<td>CASE 7</td>
<td>0.8074</td>
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<td>0.1260</td>
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<td><strong>2019-6-1</strong></td>
<td>19</td>
<td>2219 Al T-87 plate G10003BL.XLS</td>
<td>6/5/15 6:30 AM</td>
<td>CASE 6</td>
<td>0.7794</td>
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<td>0.1694</td>
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</tr>
</tbody>
</table>

*All lengths are in inches*
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 1.83.

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.***
Large flaw validation failure. Need 12 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 = 0.903 @ 0.185 inch
  - NTIAC 90/95 POD = 0.902 @ 0.150 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 = inch
  - Samples Needed @ Xcl =
  - POD Classlength, Xpoh = inch
  - Samples Needed @ Xpoh =
  - New Largest Classlength, 2XL = inch
  - Xm is Near Verification Point =
  - Opt. POD classlength, Xpoodpt = inch
  - Samples Needed @Xpoodpt =
  - Xp = inch

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

Class Length, inch

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

Classwidth @ 90/95 Xpod
Classlength @ 90/95 Xpod
Lower Confidence Bound @ 90/95 Xpod
Best LCL @ 90/95 Xpod
Classwidth @ Best LCL
Classlength @ Best LCL
User Provided a 90/95 POD @
User's Maximum Allowed Classlength @
Inspection Classwidth @ Xp @
POD @ Xp =

<table>
<thead>
<tr>
<th>File Name</th>
<th>Data Set Name</th>
<th>Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1001BL.XLS</td>
<td>A1001(B)CRACK #</td>
<td>6/4/15 5:16 PM</td>
</tr>
</tbody>
</table>

**Xpod 90/95 Reached Anywhere?**
- REACHED
  - 0.2000 inch
  - 0.3130 inch
  - 0.9040 inch

**Class Length @ 90/95 Xpod:**
- 0.2000 inch
- 0.3130 inch
- 0.9040 inch

**Lower Confidence Bound @ 90/95 Xpod:**
- 0.9040 inch

**New Smaller Classlength, Xss:**
- inch

**BestLCL Classlength, Xlcl:**
- inch

**POH Classlength, Xpoh:**
- inch

**New Largest Classlength, 2XL:**
- inch

**BestLCL Classlength, Xlcl:**
- inch

**POH Classlength, Xpoh:**
- 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. 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.

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

File Name = A1001CL.XLS
Data Set Name = A1001CL(CRACK #)

Date & Time = 6/4/15 5:19 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0570 inch
Classlength @ 90/95 Xpod = 0.3360 inch
Lower Confidence Bound = 0.9001 inch
Best LCL = 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

Survey/Optimum Xpoh = 0.000 inch Samples
NTIAC 90% POD = 0.900 @ 0.300 inch
NTIAC 90/95 POD = 0.902 @ 0.410 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 =
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 = 0.4960 inch

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 =
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 = 0.4960 inch

Warning: No false call analysis.

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.

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.

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.

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

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 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.

File Name = A1002AL.XLS
Data Set Name = A1002AL(CRACK #)
Date & Time = 6/4/15 5:21 PM

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.0510 inch
Classlength @ 90/95 Xpod = 0.2980 inch

Lower Confidence Bound = 0.9001 inch
Best LCL = 0.9001 inch
Classwidth @ Best LCL = 0.9001 inch
Classlength @ Best LCL = 0.9001 inch
User Provided a 90/95 POD @ =
User's Maximum Allowed Classlength =
 Inspector Classwidth @ Xp =
POD @ Xp = 1.0000

POH Classlength, Xpoh =
Best LCL Classlength, Xlcl =
New Larger Classlength , 2XL =

New Smaller Classlength, Xss =
Opt. POD classlength, Xpodopt =
Classlength Mid-point, Xm =
User Provided a POD at =

Warning: No false call analysis.

Largest Classlength, XL = 0.979 inch
Samples Needed @ XL = 22
Classlength Mid-point, Xm = 0.489 inch
Samples Needed @ Xm = 24
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 =

 nullable

Sample @ 0.000 Inch
Samples

False Call Rate = with UCL @ 95% =

Largest Classlength , XL = 0.979 inch
Samples Needed @ XL = 22
Classlength Mid-point , Xm = 0.489 inch
Samples Needed @ Xm = 24
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 =

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 C**

Selected class lengths with existing misses.

Additional samples at these class lengths provide alternate target Xpod points. 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)

Warning: No false call analysis.

Large flaw validation failure. Need 10 more large flaws.
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. 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.
Large flaw validation failure. Need 10 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.

File Name = A1002CL.XLS
Data Set Name = A1002CL(CRACK #)

Date & Time = 6/4/15 5:25 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0360 inch
Classlength @ 90/95 Xpod = 0.1530 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 @ Xpod = 1.0000

Largest Classlength, XL = 0.979 inch
Samples Needed @ XL = 29

Smallest Classlength, Xs = inch
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xlcl = inch
Samples Needed @ Xlcl = inch
New Largest Classlength, 2XL = inch

POH Classlength, Xpoh = inch
Opt. POD classlength, Xpodopt = 0.152 inch
Samples Needed @ Xpodopt = 29

Samples Needed @ XL = 29
Opt. POD classlength, Xpodopt = 0.152 inch

False Call Rate = with UCL @ 95% =

Largest Classlength , XL = 0.979 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.523 inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
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 =
Opt. POD classlength, Xpodopt = 0.152 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 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>0.152</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>0.152</td>
<td>29</td>
</tr>
</tbody>
</table>

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>0.523</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 = 0.152 29
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.

**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)

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.

---

**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 Details

- **Date & Time:** 6/4/15 5:30 PM
- **File Name:** DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsm
- **Data Set Name:** A1003BL(CRACK #)
- **User Provided a 90/95 POD @:** 0.0860 inch
- **User's Maximum Allowed Classlength:** 0.0830 inch
- **POD @ Xpod:** 0.0000

---

### Analysis

- **Survey/Optimum Xpoh:**
  - NTIAC 90% POD = 0.910 @ 0.040 inch
  - NTIAC 90/95 POD = 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 =
  - New Smaller Classlength, Xss =
  - BestLCL, Classlength, Xcl =
  - Samples Needed @ Xcl =
  - POH Classlength, Xpoh =
  - Samples Needed @ Xpoh =
  - Opt. POD classlength, Xpodopt =
  - New Largest Classlength, 2XL =
  - Xn is Near Verification Point =
  - Opt. POD classlength, Xpodopt =
  - Samples Needed @ Xpodopt =

---

**Xp:** 0.0860 inch

---

### Graph Details

- **Analysis File Name:** DOEPOD-1.2.01-PC-06a2010-Win7.xlsm
- **Class Length, inch:**
  - Probability of Hit in Class Range
  - Lower Confidence Bound @ 95%
  - Hit/Miss
  - Xp, 90/95 POD
  - MLE(Mean) POD
  - MLE(95%) LCL

---

### Observations

- **Xp:** 0.610 inch
- **Xm:** 0.262 inch
- **Xs:** 0.040 inch
- **XL:** 0.610 inch
- **Xpoh:** 1.0000

---

### Notes

- 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.

---

### Summary

- **Detection Probability:** Utilization of DOEPOD results requires approval of Engineering Authority.
- **Validity:** VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.

---

### Additional Information

- **Survey/Optimum Xpoh:**
  - NTIAC 90% POD = 0.910 @ 0.040 inch
  - NTIAC 90/95 POD = 0.904 @ 0.050 inch

---

### Conclusion

- The analysis indicates that the POD classlength, Xpoh, is 0.0000.
- The validation gap exists, and further validation is recommended between Xp and XL when the causes of Misses are understood and corrected.

---

### Analysis

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

---

### Recommendations

- ADD 4 More Large Flaws
- Understanding and correcting the causes of Misses
- Further validation between Xp and XL
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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>0.610</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>
</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.

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

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

***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 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 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

<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>0.610</td>
<td>0.262</td>
<td>0.610</td>
<td>0.610</td>
<td>0.610</td>
<td>0.610</td>
<td>0.610</td>
</tr>
</tbody>
</table>

**Alternate Xm** = Xpodopt

### Table B

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

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

The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

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

***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 = 0.5300 -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 =

40
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in an 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.
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 alternate Xm requirements. Xp may VALIDATE between Xpod and XL when causes of highlighted Misses are understood and corrected.

survey/Optimum Xpoh = 1.0000 inch

False Call Rate = with UCL @ 95% = 0.000

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 = inch
New Smaller Classlength, Xss = inch
Best LCL Classlength, Xlcl = inch
Samples Needed @ Xlcl = inch
Opt. POD classlength, Xpodopt = inch
New Largest Classlength , 2XL = inch
Xm is Near Verification Point = inch
Samples Needed @ Xpodopt = inch
Xp = 0.4740 inch

- Warning: No false call analysis.

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

- The diagram shows the Probability of Hit (POH) in Class Range, Lower Confidence Bound at 95%, and Hit/Miss. The data sheet includes file name, data set name, date & time, Xpod 90/95 Reached Anywhere, Classwidth, Classlength, Lower Confidence Bound, Best LCL, Classwidth, Classlength, User Provided a 90/95 POD, User's Maximum Allowed Classlength, Inspector Classwidth, POD @ Xp, and more.

- The analysis results include NTIAC 90% POD, NTIAC 90/95 POD, False Call Rate, and other measurements such as 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, Opt. POD classlength, Xpodopt, New Largest Classlength, 2XL, Xm is Near Verification Point, Samples Needed @ Xpodopt, and 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.**

---

### Table C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.550</td>
</tr>
<tr>
<td>Xm</td>
<td>0.496</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></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>
Large flaw validation failure. Extend flaw size range to 0.675.

Note: Xp@dopt is within one class width of Xp.

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.

Item: Description
---: ---
Xpod Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod 0.0400 inch
Classlength @ 90/95 Xpod 0.2250 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

File Name = A3001AL.XLS
Data Set Name = A3001AL(CRK)
Date & Time = 6/4/15 5:40 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod 0.0400 inch
Classlength @ 90/95 Xpod 0.2250 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

Largest Classlength, XL = 0.407 inch
Classlength Mid-point, Xm = 0.275 inch
Smallest Classlength, Xs = 0.175 inch
New Smaller Classlength, Xss = 0.210 inch
Best LCL Classlength, Xlcl = 0.223 inch
Samples Needed @ Xlcl = 29
POH Classlength, Xpoh =
Classlength  Mid-point, Xm =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.225 inch
Samples Needed @ Xpodopt =

False Call Rate = 0.1850
Survey/Optimum Xpoh = 0.1850 - 0.002 inch
NTIAC 90% POD = 0.904 @ 0.175 inch
NTIAC 90/95 POD = 0.904 @ 0.210 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.

<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>Xpoh</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.

<table>
<thead>
<tr>
<th>POD @ Xpod</th>
<th>LCL @ Xpod</th>
<th>Actual Class Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.407</td>
<td>0.315</td>
<td>0.407 inch</td>
</tr>
<tr>
<td>0.903</td>
<td>0.902</td>
<td>0.902 inch</td>
</tr>
</tbody>
</table>

Survey/Optimum Xpoh = 0.000 Inch

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = 0.407 Inch
Samples Needed @ XL = 57
Classlength Mid-point, Xm = 0.315 Inch
Samples Needed @ Xm = 9
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =

Opt. POD classlength, Xpodopt =
New Largest Classlength, 2XL =
Xm 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.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.726.

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.

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

Date & Time = 6/4/15 5:43 PM
REACHED
Xpod 90/95 Reached Anywhere? Yes
Classwidth @ 90/95 Xpod = 0.2420 inch
Classlength @ 90/95 Xpod = 0.9001
Lower Confidence Bound @ 95% = 0.0420 inch
Best LCL = 0.2420 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

Best LCL Classlength, Xlcl =
POH Classlength, Xpoh =
Survey/Optimum Xpoh = 0.1940 -0.003 inch 28 Samples
NTIAC 90% POD = 0.907 @ 0.180 inch
NTIAC 90/95 POD = 0.901 @ 0.210 inch
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 =
Opt. POD classlength, Xpodopt = 0.235 inch
Samples Needed @ Xpodopt = 1
Xp = 0.2420 inch

Warning: No false call analysis.

Large flaw validation failure. Extend flaw size range to 0.726.

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.

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

Date & Time = 6/4/15 5:43 PM
REACHED
Xpod 90/95 Reached Anywhere? Yes
Classwidth @ 90/95 Xpod = 0.2420 inch
Classlength @ 90/95 Xpod = 0.9001
Lower Confidence Bound @ 95% = 0.0420 inch
Best LCL = 0.2420 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

Best LCL Classlength, Xlcl =
POH Classlength, Xpoh =
Survey/Optimum Xpoh = 0.1940 -0.003 inch 28 Samples
NTIAC 90% POD = 0.907 @ 0.180 inch
NTIAC 90/95 POD = 0.901 @ 0.210 inch
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 =
Opt. POD classlength, Xpodopt = 0.235 inch
Samples Needed @ Xpodopt = 1
Xp = 0.2420 inch

Warning: No false call analysis.

Large flaw validation failure. Extend flaw size range to 0.726.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may 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 = A3001CL.XLS  
Data Set Name = A3001CL(CRK #)  

**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>0.407</td>
</tr>
<tr>
<td>Xm</td>
<td>0.355</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 = 0.235

1

<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>

**Additional Samples Needed**

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

- **Survey/Optimum Xpod** = 0.905 inch @ 0.275
- **NTIAC 90% POD** = 0.905 @ 0.275 inch
- **NTIAC 90/95 POD** = 0.902 @ 0.360 inch
- **False Call Rate** = with UCL @ 95% = 0.000 inch Samples
- **Largest Classlength, XL** = inch
- **Samples Needed @ XL** = inch
- **Classlength Mid-point, 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
- **Xn is Near Verification Point** = inch
- **Opt. POD classlength, Xpodopt** = inch
- **Samples Needed @ Xpodopt** = inch
- **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.**
**CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.**

- **Survey/Optimum Xpoh =** 0.814 inch
- **False Call Rate =** 0.000
- **Opt. POD classlength, Xpodopt =** inch
- **New Largest Xclasslength, 2XL =** inch
- **Xn is Near Verification Point =** inch
- **Inspection Classwidth @ Xp =** inch
- **POH Classlength, Xpoh =** inch
- **New Smaller Xclasslength, Xss =** inch
- **BestLCL Classlength, Xlcl =** inch
- **Samples Needed @ Xs =** inch
- **Samples Needed @ Xss =** inch
- **Samples Needed @ Xlcl =** inch
- **Smallest Classlength, Xs =** inch
- **Classwidth Mid-point, Xm =** inch
- **Classlength @ 90/95 Xpod =** inch
- **Classwidth @ 90/95 Xpod =** inch
- **Classlength @ Best LCL =** inch
- **Best LCL =** 0.7411 inch
- **Lower Confidence Bound =** 0.0220 inch
- **Classwidth @ Best LCL =** inch
- **User Provided a 90/95 POD @ =** inch
- **User's Maximum Allowed Classlength =** inch
- **MLE (Mean) POD =** inch
- **MLE (95%) LCL =** 0.2470 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.**
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.

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 (e.g., human factors, unexpected flaw type, etc.) and resolved first.

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

***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 (e.g., human factors, unexpected flaw type, etc.) and resolved first.

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

***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 0.30942.

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.

False Call Rate = with UCL @ 95% =
- Largest Class length, XL = 0.257 inch
- Samples Needed @ XL =
- Class length Mid-point, Xm = 0.193 inch
- Samples Needed @ Xm =
- Smallest Class length, Xs =
- Samples Needed @ Xs =
- New Smaller Class length, Xss =
- Best LCL Class length, Xicl =
- Samples Needed @ Xicl =
- POD Class length, Xpoh =
- Samples Needed @ Xpoh =
- New Largest Class length, 2XL =
- Xn is Near Verification Point =
- Opt. POD class length, Xpodopt =
- Samples Needed @Xpohopt = 2
- Xp = 0.1031 inch

Survey/Optimum Xpoh = 0.0492 @ 0.004 inch 28 Samples
NTIAC 90% POD = 0.933 @ 0.040 inch
NTIAC 90/95 POD = 0.930 @ 0.065 inch

File Name = A400013.XLS
Data Set Name = A400013(HOLE #)
Date & Time = 6/4/15 5:49 PM
Xpod 90/95 Reached Anywhere? = REACHED
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 =
POD @ Xpod = 1.0000

Warning: No false call analysis.

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

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 $X_{pod}$ 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.

---

**TABLE A**
Selected class lengths with existing misses. Each point requires additional samples in or to achieve the $X_{pod}$ listed.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.257</td>
<td>28</td>
</tr>
<tr>
<td>0.156</td>
<td>28</td>
</tr>
</tbody>
</table>

**TABLE B**
Selected class lengths with no misses. Additional samples at these class lengths will achieve the $X_{pod}$ listed.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.515</td>
<td>29</td>
</tr>
</tbody>
</table>

**Alternate $X_m$**

---

*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 5 - This is a survey data set. 90/95 Xpod is not reached anywhere. Recommend satisfying XL and Survey Xpoh (if listed)

*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.***
Warning: No false call analysis.

CASE 18 - Xpod 90/95 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 \pm 0.004 inch 
Samples: 28

NTIAC 90% POD = 0.937 @ 0.025 inch
NTIAC 90/95 POD = 0.932 @ 0.045 inch

False Call Rate = 0.0492 with UCL @ 95% = 0.004 inch

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 =
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, Xpoh =
Samples Needed @ Xpoh =

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 resolved first.

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

***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**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xl</td>
<td>0.257</td>
</tr>
<tr>
<td>Xm</td>
<td>0.193</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 = 0.100 2**
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 C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</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 =</td>
<td></td>
</tr>
<tr>
<td>Xss = 0.180</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**

A500011.XLS

**DATA SET NAME**

A500011(HOLE #)
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.

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

Class Length, inch

Classwidth @ 90/95 Xpod = 0.0050 inch
Classlength @ 90/95 Xpod = 0.0204 inch
Lower Confidence Bound = 0.092 inch
Best LCL = 0.7360 inch
Classwidth @ Best LCL = 0.0050 inch
Classlength @ Best LCL = 0.0204 inch
User Provided a 90/95 POD @ = 0.0309 inch
User's Maximum Allowed Classlength = 0.034 inch
Inspector Classwidth @ Xp = 0.034 inch
POD @ Xpod = 0.0309 inch

False Call Rate = 0.060 inch

Survey/Optimum Xpoh = 0.0309 inch
NTIAC 90% POD = 0.915 @ 0.030 inch
NTIAC 90/95 POD = 0.906 @ 0.060 inch
Opt. POD classlength, Xpodopt = 0.0309 inch
Largest Classlength , XL = 0.046 inch
Samples Needed @ XL = 28
Classlength Mid-point , Xm = 0.0204 inch
Samples Needed @ Xm = 27
Smallest Classlength, Xs = 0.0050 inch
Samples Needed @ Xs = 68
New Smaller Classlength, Xss = 0.0050 inch
BestLCL Classlength, Xlcl = 0.0050 inch
Samples Needed @ Xlcl = 68
POH Classlength, Xpoh = 0.0309 inch
Samples Needed @ Xpoh = 68
New Largest Classlength , 2XL = 0.092 inch
Xm is Near Verification Point = True
Opt. POD classlength, Xpodopt = 0.0309 inch
Samples Needed @Xpodopt = 28

A500013.XLS
A500013(HOLE #)
6/4/15 5:55 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 C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.046</td>
<td>28</td>
</tr>
<tr>
<td>Xm = 0.034</td>
<td>27</td>
</tr>
<tr>
<td>Xs = 0.092</td>
<td>29</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =**

*No Misses Observed*  
*At Least One Miss Occurred*  
⊥ XL □ Xm ○ Xs ◯ Xss ∆ Xld ▲ 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.**
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.
Although Xpod appears to have been reached 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.

Before adding flawed samples to satisfy elements of Table 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.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 0.18306.

Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

File Name = A500016.XLS
Data Set Name = A500016(HOLE #)
Date & Time = 6/4/15 5:58 PM

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

Xp, 90/95 POD =
MLE(Mean) POD =
MLE(95%) LCL =

Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =

POH Classlength, Xpoh =
Samples Needed @ Xpoh =

New Largest Classlength , 2XL =
New Smaller Classlength, Xss =
Smallest Classlength, Xs =
Classwidth @ Xs =
Classlength @ Xs =
Samples Needed @ Xs =

Largest Classlength , XL =
Classwidth @ XL =
Classlength Mid-point , Xm =
Smallest Classlength, Xs =
Classwidth @ Xs =
Classlength @ Xs =
Samples Needed @ Xs =

Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =

False Call Rate = with UCL @ 95% =

Large flaw validation failure. Extend flaw size range to 0.18306.

Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

File Name = A500016.XLS
Data Set Name = A500016(HOLE #)
Date & Time = 6/4/15 5:58 PM

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

Xp, 90/95 POD =
MLE(Mean) POD =
MLE(95%) LCL =

Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =

POH Classlength, Xpoh =
Samples Needed @ Xpoh =

New Largest Classlength , 2XL =
New Smaller Classlength, Xss =
Smallest Classlength, Xs =
Classwidth @ Xs =
Classlength @ Xs =
Samples Needed @ Xs =

Largest Classlength , XL =
Classwidth @ XL =
Classlength Mid-point , Xm =
Smallest Classlength, Xs =
Classwidth @ Xs =
Classlength @ Xs =
Samples Needed @ Xs =

Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =

False Call Rate = with UCL @ 95% =

Large flaw validation failure. Extend flaw size range to 0.18306.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

**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.
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.

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.

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.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may 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 = 0.812</td>
<td></td>
</tr>
<tr>
<td>Xm = 0.291</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.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Warning: No false analysis.

Note: Xpodopt is within one class width of Xpod.

CASE 18 - 90/95 Xpod may be VALIDATED from Xpod to XL. Xp is 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. Need 16 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 POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the misses be 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.

**TABLE C**

Additional Samples

<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 = 0.105

---

**Directed DOE Options**

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

TABLE C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod,Class Length</td>
<td>No. Need</td>
</tr>
<tr>
<td>Xpod</td>
<td>3</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 15 more large flaws. Note: Xpodopt is within one class width of Xpod.

Warning: No false call analysis.

**FILE NAME =** A6001B.XLS

**DATA SET NAME =** A6001B(SITE CODE)

**DATE & TIME =** 6/4/15 6:01 PM

**REACHED**

- **Xpod 90/95 Reached Anywhere?**
- **Classwidth @ 90/95 Xpod** = 0.0140 inch
- **Classlength @ 90/95 Xpod** = 0.0940 inch
- **Lower Confidence Bound** = 0.9001 inch
- **Best LCL** = 0.093 inch
- **Classwidth @ Best LCL** = 0.0940 inch
- **Classlength @ Best LCL** = 0.075 inch
- **User Provided a 90/95 POD @** = 0.065 inch
- **User's Maximum Allowed Classlength** = 0.075 inch
- **POD @ Xpod** = 0.065 inch
- **Xpodopt** = 0.093 inch
- **Optimum Xpoh** = 0.075 inch
- **Opt. POD classlength, Xpodopt** = 28 Samples
- **Survey/Optimum Xpoh** = 0.0780 inch

**NTIAC 90% POD =** 0.933 inch @ 0.065 inch

**NTIAC 90/95 POD =** 0.908 inch @ 0.075 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, Xlcl =**
- **Samples Needed @ Xlcl =**
- **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

**POH Classlength, Xpoh =**

**Smallest Classlength, Xs =**

**Xm is Near Verification Point =**

**Opt. POD classlength, Xpodopt =**

**Samples Needed @Xpodopt =**

**Xp =** 0.0940 inch

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

**Warning: No false call analysis.**

**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.**

**Warning: No false call analysis.**

**Large flaw validation failure. Need 15 more large flaws. Note: Xpodopt is within one class width of Xpod.**

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**Warning: No false call analysis.**

**Large flaw validation failure. Need 15 more large flaws. Note: Xpodopt is within one class width of Xpod.**

**Warning: No false call analysis.**

**Large flaw validation failure. Need 15 more large flaws. 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.**
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.

Large flaw validation failure. Need 16 more large flaws.

MLE Divergence Warning: Initial results listed.

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 = A6001C.XLS
DATA SET NAME = A6001C
SITE CODE = 6/4/15 6:03 PM
REACHED
Xpod 90/95 Reached Anywhere? Reached
Classwidth @ 90/95 Xpod 0.106 inch
Classlength @ 90/95 Xpod 0.090 inch
Lower Confidence Bound 0.085 inch
Best LCL 0.1140 inch
Classwidth @ Best LCL inch
Classlength @ Best LCL inch
User Provided a 90/95 POD 0.0180 inch
User's Maximum Allowed Classlength inch
POD @ Xpod 1.0000 inch

Largest Classlength, XL = 0.812 inch
Samples Needed @ XL = 82

Smallest Classlength, Xs = 0.0890 inch
Samples Needed @ Xs = 27

New Smaller Classlength, Xss = 0.291 inch
Samples Needed @ Xss = 27

BestLCL Classlength, Xcl = 0.1140 inch
Samples Needed @ Xcl = 27

POH Classlength, Xpoh = 0.938 inch
Samples Needed @ Xpoh = 27

New Largest Classlength, 2XL = 0.140 inch
Xm is Near Verification Point = False
Opt. POD classlength, Xpodopt = 0.106 inch
Samples Needed @ Xpodopt = 82

Survey/Optimum Xpoh = 0.0890 inch
False Call Rate = 0.0890 - 0.001 inch
with UCL @ 95% = 0.085 inch

NTIAC 90% POD = 0.938 @ 0.085 inch
NTIAC 90/95 POD = 0.900 @ 0.090 inch

0.000 0.100 0.200 0.300 0.400 0.500 0.600 0.700 0.800 0.900
0.000 0.100 0.200 0.300 0.400 0.500 0.600 0.700 0.800 0.900

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.

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

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

**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>
<tr>
<td><strong>Alternate Xm</strong></td>
<td>0.105</td>
</tr>
<tr>
<td>Xpodopt</td>
<td>3</td>
</tr>
</tbody>
</table>

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

Selected class lengths

No. Additional Samples Needed

Number of Additional Samples Needed

Data Set Name = A6001C(SITE CODE)
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 = A6001D.XLS
Data Set Name = A6001D(SITE CODE)

Date & Time = 6/4/15 6:04 PM
Xpod 90/95 Reached Anywhere? = REACHED

Class @ 90/95 Xpod =
- Lower Confidence Bound = 0.024 inch
- Best LCL = 0.905 inch
- Classwidth @ Best LCL = 0.1280 inch
- Classlength @ Best LCL = 0.000

User Provided a 90/95 POD =
- POD @ Xpod = 1.0000

User's Maximum Allowed Classlength =
- Inspector Classwidth @ Xp =
- POD @ Xp =

Best LCL Classlength, Xlcl =
- Samples Needed @ Xlcl =

POH Classlength, Xpoh =
- New Largest Classlength , 2XL =

Large flaw validation failure. Need 16 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 POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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 = A6001E.XLS
Data Set Name = A6001E

Date & Time = 6/4/15 6:05 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0240 inch
Classlength @ 90/95 Xpod = 0.1280 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 inch

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 = 0.1040 inch
False Call Rate = 0.001 Inch

NTIAC 90% POD = 0.950 @ 0.095 inch
NTIAC 90/95 POD = 0.936 @ 0.100 inch

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, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.127 inch
Samples Needed @Xpodopt = 1

Warning: No false call analysis.
Large flaw validation failure. Need 16 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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.
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 @ Xpoh =

NTIAC 90% POD = 0.903 @ 0.075 Inch
NTIAC 90/95 POD = 0.901 @ 0.090 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 =
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 = 0.1200 Inch

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 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.

<table>
<thead>
<tr>
<th>Class Length, inch</th>
<th>Probability of Hit (POH), Lower Confidence Limit, LCL</th>
</tr>
</thead>
<tbody>
<tr>
<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>Survey/Optimum Xpoh</th>
<th>NTIAC 90% POD</th>
<th>NTIAC 90/95 POD</th>
<th>False Call Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2420</td>
<td>0.914@0.160</td>
<td>0.908@0.185</td>
<td></td>
</tr>
</tbody>
</table>

### False Call Rate with UCL @ 95%

<table>
<thead>
<tr>
<th>Largest Classlength, XL</th>
<th>Samples Needed @ XL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.812 inch</td>
<td>27</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Class length Mid-point, Xm</th>
<th>Samples Needed @ Xm</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.160 inch</td>
<td>28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Smallest Classlength, Xs</th>
<th>Samples Needed @ Xs</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.185 inch</td>
<td>28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>New Smaller Classlength, Xss</th>
<th>Samples Needed @ Xss</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1920 inch</td>
<td>28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Best LCL Classlength, Xlcl</th>
<th>Samples Needed @ Xlcl</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.160 inch</td>
<td>28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>POD @ Xpod</th>
<th>Opt. POD classlength, Xpodopt</th>
<th>Samples Needed @ Xpodopt</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.322 inch</td>
<td>1.624 inch</td>
<td>24</td>
</tr>
</tbody>
</table>

### POH Classlength, Xpoh | Samples Needed @ Xpoh |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0540 inch</td>
<td>28</td>
</tr>
</tbody>
</table>

### New Largest Classlength, 2XL | Samples Needed @ 2XL |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0.185 inch</td>
<td>28</td>
</tr>
</tbody>
</table>

### Xp = |
| 0.812 inch                  |

<table>
<thead>
<tr>
<th>Xp, 90/95 POD</th>
<th>MLE(Mean) POD</th>
<th>MLE(95%) LCL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probability of Hit (POH) in Class Range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Confidence Bound @ 95%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hit/Miss</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

### Date & Time: 6/4/15 6:09 PM

### Not Reached

### 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.

---

**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**

---

### Directed DOE Options

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.812</td>
<td>27</td>
</tr>
<tr>
<td>Xm = 0.322</td>
<td>24</td>
</tr>
<tr>
<td>Xs = 1.624</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>2XL =</td>
<td></td>
</tr>
<tr>
<td>Xpod =</td>
<td></td>
</tr>
<tr>
<td>Xpodopt =</td>
<td></td>
</tr>
</tbody>
</table>
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.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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)

File Name = A6001L.XLS
Data Set Name = A6001L(SITE CODE)
Date & Time = 6/4/15 6:12 PM
REACHED

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.0250 inch
Classlength @ 90/95 Xpod = 0.1310 inch
Lower Confidence Bound @ 95% = 0.9001 inch
Best LCL = 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

User Provided a 90/95 POD @ =
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 = 0.1070 inch @ 0.105 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 =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.131 inch
Samples Needed @Xpodopt = 29

Note: Xpodopt is within one class width of Xpod.

Warning: No false call analysis.
MLE Divergence Warning: Initial results 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. Need 16 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.

NTIAC 90% POD = 0.905 @ 0.095 inch
NTIAC 90/95 POD = 0.922 @ 0.110 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 =
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 = 0.123 inch
Samples Needed @ Xpodopt = 2
Xp = 0.1280 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 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>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt = 0.123**

### TABLE C
<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>0.123</td>
<td>2</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.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements 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 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.

### False Call Rate with UCL @ 95%
- Largest Classlength, XL = 0.812 inch
- Samples Needed @ XL = 26
- Classlength Mid-point, Xm = 0.291 inch
- Samples Needed @ Xm = 26
- Smallest Classlength, Xs = 0.100 inch
- Samples Needed @ Xs = 26
- New Smaller Classlength, Xss = 0.120 inch
- Best LCL Classlength, Xlcl = 0.105 inch
- Samples Needed @ Xlcl = 26
- POD @ Xpod = 0.9001
- Xp = 0.812 inch
- NTIAC 90% POD = 0.908
- NTIAC 90/95 POD = 0.902
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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>xls</th>
<th>xls</th>
<th>xls</th>
<th>xls</th>
<th>xls</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.812</td>
<td>0.291</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.000</td>
<td>0.100</td>
<td>0.200</td>
<td>0.300</td>
<td>0.400</td>
</tr>
<tr>
<td>Number of Additional Samples Needed</td>
<td></td>
<td></td>
<td></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</th>
<th>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</th>
<th>Class Length</th>
<th>No. Need</th>
</tr>
</thead>
</table>

0.000 0.100 0.200 0.300 0.400 0.500 0.600 0.700 0.800 0.900 | 0.00 5.00 10.00 15.00 20.00 25.00 30.00 35.00 |

No Misses Observed  □ At Least One Miss Occured ▲ 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 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.

NTIAC 90% POD = 0.917 @ 0.105 inch
NTIAC 90/95 POD = 0.902 @ 0.115 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, 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 = 0.1280 inch

Samples Needed @ 0.000 inch =

File Name = A6002D.XLS
Data Set Name = A6002D
Date & Time = 6/4/15 6:18 PM
Xpod 90/95 Reached Anywhere? = REACHED
Classwidth @ 90/95 Xpod = 0.0240 inch
Classlength @ 90/95 Xpod = 0.1280 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

Large flaw validation failure. Need 16 more large flaws.

Warning: No false call analysis.

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

106
Although Xpod appears to have been reached at a point, there are misses at larger class lengths; this indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.

Note: Xpodopt is within one class width of Xpod.

Large flaw validation failure. Need 17 more large flaws.

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 = A6002DR.XLS  Data Set Name = A6002DR(SITE CODE)
Date & Time = 6/4/15 6:19 PM
Xpod 90/95 Reached Anywhere? REACHED
Class width @ 90/95 Xpod = 0.0340 inch
Lower Confidence Bound = 0.1530 inch
Hit Miss = 0.9077

User Provided a 90/95 POD @
POD @ Xp = 1.0000

Best LCL =
Class length @ Best LCL =
Class length @ Best XL =
User's Maximum Allowed Classlength =

False Call Rate = with UCL @ 95% =
Largest Class length, XL = 0.812 inch
Samples Needed @ XL =
Class length Mid-point , Xm = 0.322 inch
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 =

Opt. POD class length, Xpodopt = 0.013 inch
Samples Needed @Xpodopt = 29
Xp = 0.1540 inch

Survey/Optimum Xpoh = 0.1200 inch @ 26 Samples

Warning: No false call analysis.

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 POG function may 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.

**Warning:** No false call analysis.

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

**Survey/Optimum Xpoh:**

<table>
<thead>
<tr>
<th>NTIAC 90% POD</th>
<th>NTIAC 90/95 POD</th>
</tr>
</thead>
<tbody>
<tr>
<td>@ 0.905 inch</td>
<td>@ 0.911 inch</td>
</tr>
</tbody>
</table>

**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 =
- POH Classlength, Xpoh =
- Samples Needed @ Xpoh =
- Opt. POD classlength, Xpodopt =
- Samples Needed @ Xpodopt =

**Xp:** 0.2270 inch

### Class Length

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

### File Name

A6002E.XLS

### Data Set Name

A6002E(SITE CODE)

### Date & Time

6/4/15 6:20 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 @ Xp = 1.0000 inch

### Classwidth @ 90/95 Xpod

- 0.0250 inch
- 0.1310 inch

### Classlength @ 90/95 Xpod

- 0.9001 inch

### Lower Confidence Bound

- 0.905 inch
- 0.911 inch

### Samples Needed @ XL

- 0.812 inch

### Samples Needed @ XM

- 0.372 inch

### Smallest Classlength, Xs

- inch

### New Smaller Classlength, Xss

- inch

### Best LCL Classlength, Xlcl

- inch

### Samples Needed @ Xlcl

- inch

### POH Classlength, Xpoh

- inch

### Samples Needed @ Xpoh

- inch

### Opt. POD classlength, Xpodopt

- inch

### Samples Needed @ Xpodopt

- 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 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 18 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. This indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.

Note: Xpodopt is within one class width of Xpod.

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

CASE 1A - 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 = A6002G.XLS
Data Set Name = A6002G
Site Code =
Date & Time = 6/4/15 6:24 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.098 Inch
Classlength @ 90/95 Xpod = 0.1200 Inch
Lower Confidence Bound @ 95% = 0.0950
Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD =
POD @ Xpod = 0.000
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xo =
POD @ Xp =
Classwidth @ 90/95 Xpod = 0.0230 Inch
Classlength @ 90/95 Xpod = 0.1200 Inch
Largest Classlength, XL =
Samples Needed @ XL =
Classlength Mid-point, Xm =
Samples Needed @ Xm =
Smallest Classlength, Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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>TABLE C</th>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.812</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xm = 0.372</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>
</tbody>
</table>

**Alternate Xm = Xpodopt =**

---

**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.

File Name = A6002H.XLS
Data Set Name = A6002H(SITE CODE)

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. 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.

File Name = A6002HR.XLS
Data Set Name = A6002HR(SITE CODE)
Date & Time = 6/4/15 6:27 PM
Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.9050 inch
Classlength @ 90/95 Xpod = 0.812 inch
Lower Confidence Bound = 0.904 inch
Best LCL = 0.812 inch
Classwidth @ Best LCL = 0.750 inch
Classlength @ Best LCL = 0.691 inch
User Provided a 90/95 POD @ =
User's Maximum Allowed Classlength = 0.909 inch
POD @ Xpod = 0.909

NTIAC 90% POD = 0.909 @ 0.105 inch
NTIAC 90/95 POD = 0.904 @ 0.120 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 =
Best LCL Classlength, Xlc =
Samples Needed @ Xlc =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
Xp = 0.1300 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 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.
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)**

Large flaw validation failure. Need 15 more large flaws.

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

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 =
- New Largest Classlength , 2XL =
- Xm is Near Verification Point =
- POD classlength @ Xpoh =
- Samples Needed @ Xpoh =

Survey/Optimum Xpoh = 0.000 Inch Samples

| NTIAC 90% POD | 0.936 @ 0.085 inch |
| NTIAC 90/95 POD | 0.930 @ 0.095 inch |

Analysis file name: DOEPOD v.1.2.0.1.PC.08a2010.Win7.xlsm

**File Name **= A6003A.XLS

**Data Set Name **= A6003A(SITE CODE)

**Date & Time **= 6/4/15 6:30 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** = 1.0000

**Xp** = 0.1054 inch

**Largest Classlength , XL =** 0.936 inch

**Smallest Classlength, Xs =** 0.085 inch

**New Smaller Classlength, Xss =** 0.095 inch

**BestLCL Classlength, Xlcl =** 1.0000

**POD classlength @ Xpoh =** 0.930 inch

**New Largest Classlength , 2XL =** 0.936 inch

**Xm is Near Verification Point =** 0.291 inch

**Opt. POD classlength, Xpodopt =** 0.930 inch

**Samples Needed @Xpodopt =** 0.095 inch

**Classwidth @ Best LCL =** 0.1054 inch

**Classlength @ Best LCL =** 0.9001 inch

**User Provided a 90/95 POD @ =** 1.0000

**User’s Maximum Allowed Classlength =** 0.936 inch

**Inspector Classwidth @ Xp =** 0.812 inch

**POD classlength @ Xpoh =** 0.930 inch

**New Largest Classlength , 2XL =** 0.936 inch

**Xm is Near Verification Point =** 0.291 inch

**Opt. POD classlength, Xpodopt =** 0.930 inch

**Samples Needed @Xpodopt =** 0.095 inch

**Classwidth @ Best LCL =** 0.1054 inch

**Classlength @ Best LCL =** 0.9001 inch

**User Provided a 90/95 POD @ =** 1.0000

**User’s Maximum Allowed Classlength =** 0.936 inch

**Inspector Classwidth @ Xp =** 0.812 inch

**POD classlength @ Xpoh =** 0.930 inch

**New Largest Classlength , 2XL =** 0.936 inch

**Xm is Near Verification Point =** 0.291 inch

**Opt. POD classlength, Xpodopt =** 0.930 inch

**Samples Needed @Xpodopt =** 0.095 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.
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.

### 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>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.

File Name = A6003B.XLS

Data Set Name = A6003B(SITE CODE)

![Directed DOE Options Chart](chart.png)

**Directed DOE Options Chart**

- No Misses Observed
- At Least One Miss Occurred
- XL
- Xm
- Xs
- Xss
- Xpoh
- 2XL
- Xpod
- Xpodopt

---

*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 15 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet.

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

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.
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.

- Xpod = 0.812 inch
- XL = 0.812 inch
- Xm = 0.291 inch
- Xs = 0.291 inch
- New Smaller Classlength (Xss) = 0.291 inch
- Opt. POD classlength (Xpodopt) = 0.103 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 16 more large flaws.
Any highlighted Misses are RED and shown in Column A of this data sheet.

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

Class Length, inch

Largest Classlength, XL = 0.812 inch
Samples Needed @ XL = 0.322 inch
Classlength Mid-point, 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 = 0.1453 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 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 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)
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.

Survey/Optimum Xpoh = 0.000 Inch Samples
NTIAC 90% POD = 0.908 @ 0.190 inch
NTIAC 90/95 POD = 0.902 @ 0.225 inch

False Call Rate = False Call Rate with UCL @ 95% = 0.000

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 =
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 = 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.

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

Large flaw validation failure. Need 16 more large flaws.

Class Length, inch | Probability of Hit (POH), Lower Confidence Limit, LCL | Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

<table>
<thead>
<tr>
<th>Xp, 90/95 POD</th>
<th>MLE(Mean) POD</th>
<th>MLE(95%) LCL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.912</td>
<td>0.908</td>
<td>0.140</td>
</tr>
</tbody>
</table>

**Survey/Optimum Xpoh**

- NTIAC 90% POD = 0.912 @ 0.140 inch
- NTIAC 90/95 POD = 0.908 @ 0.165 inch

**False Call Rate**

- with UCL @ 95% = 0.000 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.**

**File Name** = A6003H.XLS

**Data Set Name** = A6003H(SITE CODE)

**Date & Time** = 6/4/15 6:39 PM

- Xpod 90/95 Reached Anywhere? = REACHED
- Classwidth @ 90/95 Xpod = 0.0250 inch
- Classlength @ 90/95 Xpod = 0.1308 inch
- Lower Confidence Bound @ 95% = 0.9001 inch
- Best LCL = 0.812 inch
- Classwidth @ Best LCL = 0.372 inch
- Classlength @ Best LCL = 0.372 inch
- User Provided a 90/95 POD =
- User's Maximum Allowed Classlength =
- POD @ Xp =
- Inspector Classwidth @ Xp =
- POD @ Xp =
- NTIAC 90% POD =
- NTIAC 90/95 POD =
- False Call Rate =
- with UCL @ 95% =
- Largest Classlength, XL = 0.812 inch
- Samples Needed @ XL = 26
- Classlength Mid-point, Xm = 0.372 inch
- Samples Needed @ Xm = 28
- 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 =
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.

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 = 0.0833 - 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, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.098 Inch
Samples Needed @ Xpodopt = 29

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, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.098 Inch
Samples Needed @ Xpodopt = 29

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.

**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.

**Alternative Xm = Xpodopt = 0.098 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.

* File Name = A6003J.XLS
  Data Set Name = A6003J(SITE CODE)

---

**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 = 0.098 29**
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.
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 = A6004B.XLS
Data Set Name = A6004B(SITE CODE)
Date & Time = 6/4/15 6:43 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0180 inch
Classlength @ 90/95 Xpod = 0.1140 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 = 0.9001 inch
Pod @ Xpod = 1.0000

Large flaw validation failure. Need 16 more large flaws.

Warning: No false call analysis.

File Name = A6004B.XLS
Data Set Name = A6004B(SITE CODE)
Date & Time = 6/4/15 6:43 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0180 inch
Classlength @ 90/95 Xpod = 0.1140 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 = 0.9001 inch
Pod @ Xpod = 1.0000

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 = A6004B.XLS
Data Set Name = A6004B(SITE CODE)
Date & Time = 6/4/15 6:43 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0180 inch
Classlength @ 90/95 Xpod = 0.1140 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 = 0.9001 inch
Pod @ Xpod = 1.0000

Large flaw validation failure. Need 16 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 POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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>Xm</th>
<th>Xs</th>
<th>Xss</th>
<th>Xlcl</th>
<th>Xpohopt</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.912</td>
<td>0.291</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>Xpoh</th>
<th>2XL</th>
<th>XL</th>
<th>Xm</th>
<th>Xs</th>
<th>Xss</th>
<th>Xlcl</th>
<th>Xpohopt</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.107</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</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>XL</th>
<th>Xm</th>
<th>Xs</th>
<th>Xss</th>
<th>Xlcl</th>
<th>Xpoh</th>
<th>2XL</th>
<th>Xpohopt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<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
- Xpohopt

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.

File Name = A6004BR.XLS
Data Set Name = A6004Br(SITE CODE)
Date & Time = 6/4/15 6:44 PM
Xpod 90/95 Reached Anywhere? = REACHED
Classwidth @ 90/95 Xpod = 0.0180 inch
Classlength @ 90/95 Xpod = 0.1050 inch
Lower Confidence Bound = 0.812 inch
Best LCL = 0.070 inch
Classwidth @ Best LCL = 0.9001 inch
Classlength @ Best LCL = 0.9001 inch
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod = 1.0000 inch

CASE 2* - 90/95 Xpod is reached. Opt. POD classified, Xp used to satisfy XL and Xm requirements.

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 =
Samples Needed @ Xpodopt =

Survey/Optimum Xpoh =

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 =
Samples Needed @ Xpodopt =

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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.

- Optimum Xpoh Available; Using Best LCL
- NTIAC 90% POD = 0.901 @ 0.140 inch
- NTIAC 90/95 POD = 0.907 @ 0.165 inch
- False Call Rate with UCL @ 95% =
  - Largest Classlength, XL = 0.812 inch
  - New Smaller Classlength, Xss = 0.176 inch
  - Samples Needed @ Xpoh = 27
  - Opt. POD classlength, Xpodopt = inch
  - Samples Needed @Xpodopt = inch
  - 2XL = inch
  - Xm is Near Verification Point =
  - 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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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>0.812</td>
<td>27</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>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.176</td>
<td>27</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 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 = 0.1760 -0.001 Inch 27 Samples

False Call Rate = 0.001 with UCL @ 95%

Largest Classlength , XL = 0.812 inch
Samples Needed @ XL = 27

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 = 0.176 inch 27 Samples

New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =

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

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

File Name = A6004CLR.XLS
Data Set Name = A6004C
Date & Time = 6/4/15 6:48 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 =

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

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.

Largest Classlength, XL = 0.812 inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 0.372 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
New Largest Classlength, 2XL =
Smallest Classlength, Xs =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt = 29
Xp = 0.131 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.

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 @ 95% = 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

CASE 2# - 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. Need 16 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 largest 4 class lengths are shown.

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

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

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

**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>Xp</th>
<th>0.812</th>
<th>0.291</th>
</tr>
</thead>
</table>

**CASE 1** - 90/95 Xp 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.

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

**Survey/Optimum Xpoh =** 0.000 Inch Samples

- **NTIAC 90% POD =** 0.936 @ 0.065 Inch
- **NTIAC 90/95 POD =** 0.907 @ 0.075 Inch

**False Call Rate =** with UCL @ 95%

- **Largest Classlength, XL =** 0.812 Inch
- **Samples Needed @ XL =** 0
- **Classlength Mid-point, Xm =** 0.291 Inch
- **Samples Needed @ Xm =** 0
- **Smallest Classlength, Xs =** 0
- **New Smaller Classlength, Xss =** 0
- **Best LCL Classlength, Xlcl =** 0
- **Samples Needed @ Xlcl =** 0
- **POH Classlength, Xpoh =** 0
- **Samples Needed @ Xpoh =** 0
- **New Largest Classlength, 2XL =** 0
- **Xn is Near Verification Point =** 0
- **Opt. POD classlength, Xpodopt =** 0
- **Samples Needed @ Xpodopt =** 0

**Largest Flaw Validation Failure. Need 15 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 alternative 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>No. Need</th>
<th>XL = 0.812</th>
<th>Xm = 0.291</th>
<th>Xs</th>
<th>Xss</th>
<th>Xlcl</th>
<th>Xpoh</th>
<th>2XL</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>Xpodopt</th>
</tr>
</thead>
</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>0.00</td>
<td></td>
</tr>
<tr>
<td>0.05</td>
<td></td>
</tr>
<tr>
<td>0.10</td>
<td></td>
</tr>
<tr>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td>0.20</td>
<td></td>
</tr>
<tr>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>0.30</td>
<td></td>
</tr>
<tr>
<td>0.35</td>
<td></td>
</tr>
<tr>
<td>0.40</td>
<td></td>
</tr>
<tr>
<td>0.45</td>
<td></td>
</tr>
<tr>
<td>0.50</td>
<td></td>
</tr>
<tr>
<td>0.55</td>
<td></td>
</tr>
<tr>
<td>0.60</td>
<td></td>
</tr>
<tr>
<td>0.65</td>
<td></td>
</tr>
<tr>
<td>0.70</td>
<td></td>
</tr>
<tr>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>0.80</td>
<td></td>
</tr>
<tr>
<td>0.85</td>
<td></td>
</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 the largest 4 class lengths are shown.

The class lengths listed in Table B exhibited no Misses, and these class lengths provide alternative 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.

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.

Large flaw validation failure. Need 15 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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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 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.

```
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xp</td>
<td>0.812 inch</td>
</tr>
<tr>
<td>Xp @ Xp =</td>
<td>0.372 inch</td>
</tr>
<tr>
<td>XL</td>
<td>0.907 inch</td>
</tr>
<tr>
<td>XL @ Xlcl =</td>
<td>0.904 inch</td>
</tr>
<tr>
<td>XM</td>
<td>0.9787 inch</td>
</tr>
<tr>
<td>XM @ Xp =</td>
<td>0.150 inch</td>
</tr>
<tr>
<td>Xs</td>
<td>0.185 inch</td>
</tr>
<tr>
<td>XS @ Xs =</td>
<td>0.180 inch</td>
</tr>
<tr>
<td>XL @ XL =</td>
<td>0.9011 inch</td>
</tr>
<tr>
<td>XL @ Xs =</td>
<td>0.185 inch</td>
</tr>
<tr>
<td>XL @ XL =</td>
<td>0.9011 inch</td>
</tr>
</tbody>
</table>
```

**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:** False call analysis is not performed.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

**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 = A6004G.XLS |
| Data Set Name = A6004G(SITE CODE) |

### 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>0.372</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.

*No Misses Observed

**At Least One Miss Occurred

Xp, Class Length No. Need Xp, Class Length No. Need

---

No. Need

---

*File Name = A6004G.XLS
Data Set Name = A6004G(SITE CODE)
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.

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 = 0.903 @ 0.135 inch
NTIAC 90/95 POD = 0.905 @ 0.165 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, 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 = 0.1890 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.
### Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

**Warning:** No false call analysis.

- **Large flaw validation failure. Need 17 more large flaws.**
- **Note:** Xpodopt is within one class width of Xpod.

### Data Set Name: A6004J(SITE CODE)

#### POD @ Xpod

<table>
<thead>
<tr>
<th>Xp (in)</th>
<th>0.812</th>
</tr>
</thead>
<tbody>
<tr>
<td>XM (in)</td>
<td>0.372</td>
</tr>
</tbody>
</table>

#### False Call Rate =

- NTIAC 90% POD = 0.919 @ 0.105 inch
- NTIAC 90/95 POD = 0.935 @ 0.120 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.

- **Survey/Optimum Xpod:** 0.320
- **With UCL @ 95%:** 0.1320
- **False Call Rate:**

#### Results:

- **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:**
- **POH Classlength, Xpoh:**
- **Samples Needed @ Xpoh:**
- **New Largest Classlength, 2XL:**
- **Xn is Near Verification Point:**
- **Opt. POD classlength, Xpodopt:** 0.171 inch
- **Samples Needed @ Xpodopt:** 3
- **POH classlength, Xpoh:** 0.1760 inch

### File Name: A6004J.XLS

**Date & Time:** 6/4/15 6:57 PM

- **Xpod 90/95 Reached Anywhere?** REACHED
- **Classwidth @ 90/95 Xpod:** 0.0390 inch
- **Lower Confidence Bound @ 95%**
- **Best LCL:**
- **Classwidth @ Best LCL:**
- **Classlength @ Best LCL:**
- **User Provided a 90/95 POD @:**
- **User’s Maximum Allowed Classlength:**
- **POD @ Xpod:** 1.0000

### Diagram:

- **Probability of Hit (POH) in Class Range**
- **Lower Confidence Limit, LCL**
- **Xp, 90/95 POD**
- **MLE(Mean) POD**
- **MLE(95%) LCL**

---

### Notes:

- Large flaw validation failure. Need 17 more large flaws.
- 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.**
**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)**

### DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsmAnalysis file name:

- **File Name:** A7001AL.XLS
- **Data Set Name:** A7001AL(CRK #)
- **Date & Time:** 6/4/15 6:58 PM

### Xpod 90/95 Reached Anywhere?
- **Classwidth @ 90/95 Xpod:** NOT REACHED
- **Classlength @ 90/95 Xpod:** inch
- **Lower Confidence Bound:** inch
- **Best LCL:** 0.5493 inch
- **MLE(Mean) POD:** 0.0040 inch
- **MLE(95%) LCL:** 0.0933 inch
- **User Provided a 90/95 POD @:** inch
- **User’s Maximum Allowed Classlength:** inch
- **Inspector Classwidth @ Xp:** inch
- **POD @ Xpod:** inch

### Survey/Optimum Xpoh
- **@ 0.000 Inch:** Samples

### NTIAC 90% POD = @ inch
- **@ inch**
- **with UCL @ 95% =**

### 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, Xicl =** inch
- **Samples Needed @ Xicl =** 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.v1.2.01.FC.06242010.Win7.xlsm

**Probability of Hit (POH) in Class Range**

- **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 resolved first.

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

**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)

<table>
<thead>
<tr>
<th>File Name</th>
<th>A7001BL.XLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Set Name</td>
<td>A7001BL(CRK) #</td>
</tr>
<tr>
<td>Date &amp; Time</td>
<td>6/4/15 7:00 PM</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>0.6070</td>
</tr>
<tr>
<td>Best LCL</td>
<td>inch</td>
</tr>
<tr>
<td>Classwidth @ Best LCL</td>
<td>0.0933</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>

| NTIAC 90% POD | @ inch |
| NTIAC 90/95 POD | @ 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 |
| POD Classlength, Xpoh | inch |
| Samples Needed @ Xpoh | 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.1.2.0.1_PC_Ofiica2010_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.

---

**Directed DOE Options**

![Directed DOE Options Diagram](image)

**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 = Xpodopt</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm**

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

**Xpod, Class Length**

Additional samples at these class lengths will achieve the Xpod listed.

**TABLE A**

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

**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.

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.

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  =
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, 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.**
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. 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.

<table>
<thead>
<tr>
<th>POD</th>
<th>NTIAC 90% POD</th>
<th>NTIAC 90/95 POD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>0.936</td>
<td>0.937</td>
</tr>
<tr>
<td>0.000</td>
<td>@ 0.025 inch</td>
<td>@ 0.030 inch</td>
</tr>
</tbody>
</table>

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 =
- POH Classlength, Xpoh =
- Samples Needed @ Xpoh =
- New Largest Classlength, 2XL =
- Xn is Near Verification Point =
- Opt. POD classlength, Xpodopt =
- Samples Needed @Xpodopt =
- Xp = 0.0440 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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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 8 more large flaws.

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 = 0.0115 - 0.001 inch 18 Samples
NTIAC 90% POD = 0.942 @ 0.010 inch
NTIAC 90/95 POD = 0.952 @ 0.015 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 =
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 = 0.014 inch
Samples Needed @ Xpodopt = 29
Xp = 0.0147 inch

File Name = AB002L.XLS
Data Set Name = AB002L(Eci-a-b5)
Date & Time = 6/4/15 7:12 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 =
Inspector Classwidth @ Xp =
POD @ Xpod = 1.0000

Note: Xpodopt is within one class width of Xpod.

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.***

### 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>Xpod</th>
<th>Xpodopt</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.342</td>
<td>0.161</td>
<td>0.014</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>Xpod, Class Length</th>
<th>No. Need</th>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.342</td>
<td></td>
<td>0.161</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.***
 Probability of Hit (POH), Lower Confidence Limit, LCL

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Need 8 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 = AB003L.XLS
Data Set Name = AB003L(Eci-a-b8)
Date & Time = 6/4/15 7:16 PM

Xp, 90/95 POD
MLE (Mean) POD
MLE (95%) LCL
Best LCL

Class length, 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.

Warning: No false call analysis.

Survey/Optimum Xpoh = 0.000 inch
Samples at Xpoh =

NTIAC 90% POD = 0.906 @ 0.010 inch
NTIAC 90/95 POD = 0.933 @ 0.015 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 =
POH Classlength, Xpoh =
_new Smaller Classlength, 2XL =
Opt. POD classlength, Xpodopt =
Samples Needed@ Xpodopt =

Xp = 0.0147 inch

Xp90/95 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 = 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.***

### Table A

<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>
<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

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

Xl  Xm  Xs  Xss  Xlcl  Xpoh  2XL  Xpod  Xpodopt

# Directed DOE Options

### Table C

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

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

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

***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.

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.

Large flaw validation failure. Need 9 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 POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.

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. Need 8 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 POH function may 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.
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.***

---

**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>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xl</td>
<td>0.342</td>
<td>XL</td>
<td>0.342</td>
</tr>
<tr>
<td>Xm</td>
<td>0.169</td>
<td>Xs</td>
<td>0.169</td>
</tr>
<tr>
<td>Xss</td>
<td></td>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>XX1</td>
<td></td>
<td>XX1</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:

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.058</td>
<td>29</td>
</tr>
</tbody>
</table>

**FILE NAME = A8006L.XLS**

**DATA SET NAME = A8006L(Eci-m-c)**
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.
<table>
<thead>
<tr>
<th>Probability of Hit (POH), Lower Confidence Limit, LCL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probability of Hit (POH) in Class Range</td>
</tr>
<tr>
<td>Xp, 90/95 POD</td>
</tr>
<tr>
<td>MLE(Mean) POD</td>
</tr>
<tr>
<td>MLE(95%) LCL</td>
</tr>
</tbody>
</table>

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

- Xpod 90/95 Reached Anywhere? Not Reached
- Classwidth @ 90/95 Xpod = 0.8444 inch
- Classlength @ 90/95 Xpod = 0.5690 inch
- Lower Confidence Bound = 0.0090 inch
- Best LCL = 0.8444 inch
- Classwidth @ Best LCL = 0.0090 inch
- Classlength @ Best LCL = 0.0090 inch
- User Provided a 90/95 POD @ =
- User's Maximum Allowed Classlength =
- Inspector Classwidth @ Xp =
- POD @ Xpod =

<table>
<thead>
<tr>
<th>File Name</th>
<th>A9001[3].xls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Set Name</td>
<td>A9001[3](CK. NO.)</td>
</tr>
<tr>
<td>Date &amp; Time</td>
<td>6/4/15 7:27 PM</td>
</tr>
<tr>
<td>Warning: No false call analysis.</td>
<td></td>
</tr>
</tbody>
</table>

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

- NTIAC 90% POD = @ inch
- NTIAC 90/95 POD = @ inch
- False Call Rate = with UCL @ 95% =
- Largest Classlength, XL = 0.684 inch
- Samples Needed @ XL = 26 samples
- Classlength Mid-point, Xm =
- Samples Needed @ Xm =
- Smallest Classlength, Xs =
- Samples Needed @ Xs =
- New Smaller Classlength, Xss =
- Best LCL Classlength, Xlcl =
- Samples Needed @ Xlcl =
- POD Classlength, Xpoh = 0.684 inch
- Samples Needed @ Xpoh = 26 samples
- New Largest Classlength, 2XL = 1.368 inch
- Xn 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.**

### Table A

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.684</td>
</tr>
<tr>
<td>Xm</td>
<td>0.684</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xid</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td>0.684</td>
</tr>
<tr>
<td>2XL</td>
<td>1.368</td>
</tr>
</tbody>
</table>

**Alternate Xm =**

### Table B

**Alternate Xm =**

### Table C

<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.

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

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

**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.

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**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.

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

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

***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 = 0.0760 - 0.002 Inch 26 Samples

NTIAC 90% POD = 0.909 @ 0.105 Inch
NTIAC 90/95 POD = 0.904 @ 0.140 Inch

False Call Rate = with UCL @ 95% =

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 =
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh = 26
New Largest Classlength , 2XL = 0.190 Inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
Xp =

POH Classlength, Xpoh =
Samples Needed @ Xpoh =

Analysis file name: DOEPOD_v.1.2.01_PC-QC.xla2010_Win7.xlsx

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

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?
Classwidth @ 90/95 Xpod =
Classlength @ 90/95 Xpod =
Lower Confidence Bound =
Best LCL = 0.7933
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod =

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

Survey/Optimum Xpoh = 0.0760 - 0.002 Inch 26 Samples

NTIAC 90% POD = 0.909 @ 0.105 Inch
NTIAC 90/95 POD = 0.904 @ 0.140 Inch

False Call Rate = with UCL @ 95% =

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 =
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh = 26
New Largest Classlength , 2XL = 0.190 Inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
Xp =

Analysis file name: DOEPOD_v.1.2.01_PC-QC.xla2010_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 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.

Survey/Optimum Xpoh = 0.6840 - 0.071 Inch Samples = 26
False Call Rate = with UCL @ 95% =
Largest Classlength, XL 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 = 0.684 Inch
Samples Needed @ Xpoh = 26
New Largest Classlength, 2XL = 1.368 Inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =
Xp =

File Name = A9003[3]L.xls
Data Set Name = A9003[3](LCK. No.)
Date & Time = 6/4/15 7:34 PM
Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod = inch
Lower Confidence Bound = 0.7791
Best LCL = 0.0030 inch
Classlength @ Best LCL = inch
Classlength @ 90/95 Xpod = 0.1950 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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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>0.684</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>0.684</td>
</tr>
<tr>
<td>2XL</td>
<td>1.368</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 = AA001(3).xls
Data Set Name = AA001(3)(CK. NO.)
Date & Time = 6/4/15 7:35 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 =
- 0.0040 inch

Classwidth @ Best LCL =
- inch

Classlength @ Best LCL =
- inch

User Provided a 90/95 POD @
- inch

User's Maximum Allowed Classlength =
- inch

POD @ Xpod =
- inch

POH Classlength, Xpoh =
- inch

New Largest Classlength, 2XL =
- 1.271 inch

Xm is Near Verification Point =
- inch

Opt. POD classlength, Xpodopt =
- inch

Samples Needed @ Xpodopt =
- 26

NTIAC 90% POD =
- @ inch

NTIAC 90/95 POD =
- @ inch

False Call Rate =
- with UCL @ 95% =

Largest Classlength, XL =
- 1.271 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 =
- 1.271 inch

Samples Needed @ Xpoh =
- 26

New Largest Classlength, 2XL =
- 2.542 inch

Xm is Near Verification Point =
- inch

Samples Needed @ Xp =
- inch

Samples Needed @ Xpoh =
- inch

Samples Needed @ 2XL =
- inch

Survey/Optimum Xpoh =
- 1.2710 -0.025 inch

26 Samples

Probability of Hit (POH) in Class Range

Class Length, inch

Probability of Hit (POH)

Lower Confidence Bound @ 95%

Hit/Miss

Case Length, inch

POH Classlength, Xpoh

New Largest Classlength, 2XL

Opt. POD classlength, Xpodopt

Samples Needed @ Xpodopt

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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 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**

---

**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

---

Directory DOE Options

File Name = AA002(3)l.xls Data Set Name = AA002(3)l(CK. NO.)
### Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Extend flaw size range to 2.835.

#### 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>POD @ Xpod</th>
<th>Samples Needed @ XL</th>
<th>Classlength @ XL</th>
<th>XL</th>
<th>@</th>
<th>inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>155</td>
<td>1.271</td>
<td>1.271 inch</td>
<td>1.271 inch</td>
<td></td>
</tr>
<tr>
<td>0.9050</td>
<td>8</td>
<td>1.156</td>
<td>1.156 inch</td>
<td>1.156 inch</td>
<td></td>
</tr>
<tr>
<td>0.9450</td>
<td>8</td>
<td>1.156</td>
<td>1.156 inch</td>
<td>1.156 inch</td>
<td></td>
</tr>
</tbody>
</table>

**Survey/Optimum Xpoh =** 0.000 inch

**False Call Rate =** 0.000

**With UCL @ 95% =**

<table>
<thead>
<tr>
<th>Largest Classlength, XL</th>
<th>@ inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.271</td>
<td>inch</td>
</tr>
</tbody>
</table>

### File Name = AA003(3)IL.xls

### Data Set Name = AA003(3)L(CK. NO.)

### Date & Time = 6/4/15 7:40 PM

**Xpod 90/95 Reached Anywhere?**

**Classwidth @ 90/95 Xpod =** 0.0560 inch

**Classlength @ 90/95 Xpod =** 0.9450 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

**Case Length, inch**

**Analysis file name: DOEPOD_v.1.2.01_PC.O08a2010.Win7.dat**

---

![Graph showing Probability of Hit (POH) in Class Length, Lower Confidence Bound at 95%, and Hit/Miss results.](image)
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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>1.2710</td>
<td>155</td>
</tr>
<tr>
<td>1.2450</td>
<td>142</td>
</tr>
<tr>
<td>1.2260</td>
<td>136</td>
</tr>
<tr>
<td>1.2180</td>
<td>114</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>1.2710</td>
<td>155</td>
</tr>
<tr>
<td>1.156</td>
<td>8</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.

- **Xpod 90/95 Reached Anywhere?** NOT REACHED
- **Classwidth @ 90/95 Xpod** inch
- **Classlength @ 90/95 Xpod** inch
- **Lower Confidence Bound** 0.6070
- **Best LCL** 0.0030
- **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** = @ inch
  - **NTIAC 90/95 POD** = @ 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
    - **POH Classlength, Xpoh** = inch
    - **Samples Needed @ Xpoh** = inch
    - **New Largest Classlength, 2XL** = 2.376 inch
    - **Xm is Near Verification Point** =
    - **Opt. POD classlength, Xpodopt** = inch
    - **Samples Needed @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 resolved first.

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

***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></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt = 2.376**

### Table B*

<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>

---

**Tables:**
- Table A*
- Table B*
- Table C

---

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.

---

**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 = 1.188, 26</td>
</tr>
<tr>
<td>Xs</td>
<td>Xss =</td>
</tr>
<tr>
<td>Xld</td>
<td>Xpod = 1.188, 26</td>
</tr>
<tr>
<td>Xpoh</td>
<td>Xpoh = 2.376, 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>TABLE C</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>No. Need</td>
<td>Xpod, Class Length</td>
</tr>
<tr>
<td>26</td>
<td>1.188, XL = 1.188, Xm = Xs = Xss = Xld = Xpoh = 2.376</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.***

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

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

File Name = AC001(3).L.xls
Data Set Name = AC001(3)(CK. NO.)
Date & Time = 6/4/15 7:48 PM

Xpod 90/95 Reached Anywhere? = NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.8477
Best LCL = 0.9850
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD = inch
User's Maximum Allowed Classlength = inch
POD @ Xpod =

New Larger Classlength, XL = inch
Samples Needed @ XL =
Classlength Mid-point, Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
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 =

Survey/Optimum Xpoh = 1.0850 - 0.008 inch
False Call Rate =

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

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
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xlcl = inch
Samples Needed @ Xlcl =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Larger Classlength, 2XL = inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @ Xpodopt =

Survey/Optimum Xpoh = 1.0850 - 0.008 inch
26 Samples
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.

Survey/Optimum Xpoh = 0.4980 - 0.004 inch
23 Samples

NTIAC 90% POD = 0.900 @ 0.465 inch
NTIAC 90/95 POD = 0.901 @ 0.740 inch

False Call Rate = 0.004 inch

Largest Classlength , XL = 1.435 inch
Samples Needed @ XL = 26
Classlength Midpoint , 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
Opt. POD classlength, Xpodopt =
New Largest Classlength , 2XL = 2.870 inch
Xm is Near Verification Point =
POD @ 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>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 1.435</td>
<td>26</td>
</tr>
<tr>
<td>Xm = 0.498</td>
<td>23</td>
</tr>
<tr>
<td>Xs = 2.870</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.

**TABLE C**

<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>1.435</td>
<td>26</td>
<td>0.498</td>
<td>23</td>
</tr>
<tr>
<td>2.870</td>
<td>29</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.
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.**

### 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>1.435</td>
</tr>
<tr>
<td>Xm</td>
<td>1.435</td>
</tr>
<tr>
<td>Xs</td>
<td>2.870</td>
</tr>
<tr>
<td>Xlcl</td>
<td>2.870</td>
</tr>
<tr>
<td>Xpoh</td>
<td>2.870</td>
</tr>
<tr>
<td>2XL</td>
<td>2.870</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>Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod,Class</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,Class</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 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.

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 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</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 = 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></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.
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.

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

File Name = AD002(3)L.xls
Data Set Name = AD002(3)L(CK. NO.)
Date & Time = 6/4/15 7:58 PM

REACHED
Xpod 90/95 Reached Anywhere?
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 =

### Probability of Hit (POH)
In Class Range

<table>
<thead>
<tr>
<th>Probability of Hit (POH) in Class Range</th>
<th>Lower Confidence Bound @ 95%</th>
<th>Hit/Miss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xp, 90/95 POD</td>
<td>MLE(Mean) POD</td>
<td>MLE(95%) LCL</td>
</tr>
</tbody>
</table>

### Class Length

<table>
<thead>
<tr>
<th>Class Length, inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
</tr>
<tr>
<td>0.200</td>
</tr>
<tr>
<td>0.400</td>
</tr>
<tr>
<td>0.600</td>
</tr>
<tr>
<td>0.800</td>
</tr>
<tr>
<td>1.000</td>
</tr>
<tr>
<td>1.200</td>
</tr>
<tr>
<td>1.400</td>
</tr>
<tr>
<td>1.600</td>
</tr>
<tr>
<td>1.800</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Samples Needed @ XL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.562 inch</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Samples Needed @ Xm</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.119 inch</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Smallest Classlength, Xs</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.901 inch</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inspectors Near Verification Point, Xn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xn = 0.901 inch</td>
</tr>
</tbody>
</table>

### NTIAC 90% POD and 90/95 POD

<table>
<thead>
<tr>
<th>NTIAC 90% POD</th>
<th>NTIAC 90/95 POD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.901 @ 0.185 inch</td>
<td>0.902 @ 0.240 inch</td>
</tr>
</tbody>
</table>

### False Call Rate
(With UCL @ 95%)

<table>
<thead>
<tr>
<th>False Call Rate</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>Best LCL Classlength, Xcl =</td>
</tr>
<tr>
<td>Samples Needed @ Xcl =</td>
</tr>
<tr>
<td>POH 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, Xn =</td>
</tr>
<tr>
<td>Opt. POD classlength, Xpodopt =</td>
</tr>
<tr>
<td>Samples Needed @ Xpodopt =</td>
</tr>
</tbody>
</table>

### 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>1.562</td>
</tr>
<tr>
<td>Xm</td>
<td>1.119</td>
</tr>
<tr>
<td>Xs</td>
<td>Xss</td>
</tr>
<tr>
<td>Xlcl</td>
<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.

| Xpod, Class Length | No. Need | Xpod, Class Length | No. Need |

### 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 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.

Survey/Optimum Xpoh = 0.1610 ± 0.003 inch 26 samples

NTIAC 90% POD = 0.903 @ 0.110 inch

NTIAC 90/95 POD = 0.903 @ 0.135 inch

False Call Rate = 0.1610 - 0.003 inch

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 =

Samples Needed @ Xs =

New Smaller Classlength, Xss =

Best LCL Classlength, Xcl =

Samples Needed @ Xcl =

POH Classlength, Xpoh =

Samples Needed @ Xpoh =

New Largest Classlength, 2XL =

Xn is Near Verification Point =

Opt. POD classlength, Xpotopt = 0.190 inch

Samples Needed @ Xpotopt = 23

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

Follow sample selection priority in the DOEPOD Manual.

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

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

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

False Call Rate = with UCL @ 95% =

- Largest Classlength, XL = 0.495 inch
- Samples Needed @ XL =
- Classlength Mid-point, Xm = 0.308 inch
- Smallest Classlength, Xs =
- Samples Needed @ Xs =
- New Smaller Classlength, Xss =
- BestLCL Classlength, Xlcl =
- Samples Needed @ Xlcl =
- Opt. POD classlength, Xpodopt = 0.224 inch
- Samples Needed @Xpodopt = 8
- Xp = 0.308 inch
- Xs = 0.185 inch
- Xss = 0.185 inch
- Xlcl = 1.000 inch
- Xpoh = 0.495 inch

False Call Rate = with UCL @ 95% =

- Largest Classlength, XL = 0.495 inch
- Samples Needed @ XL =
- Classlength Mid-point, Xm = 0.308 inch
- Smallest Classlength, Xs =
- Samples Needed @ Xs =
- New Smaller Classlength, Xss =
- BestLCL Classlength, Xlcl =
- Samples Needed @ Xlcl =
- Opt. POD classlength, Xpodopt = 0.224 inch
- Samples Needed @Xpodopt = 8
- Xp = 0.308 inch
- Xs = 0.185 inch
- Xss = 0.185 inch
- Xlcl = 1.000 inch
- Xpoh = 0.495 inch

Warning: No false call analysis.

File Name: AE001(3).xls
Data Set Name: AE001(3) (CK. NO.)
Date & Time: 6/4/15 8:10 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 =

Largest Classlength, XL =
Samples Needed @ XL =
Classlength Mid-point, Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt = 8
Xp = 0.308 inch

Warning: No false call analysis.

False Call Rate = with UCL @ 95% =

- Largest Classlength, XL = 0.495 inch
- Samples Needed @ XL =
- Classlength Mid-point, Xm = 0.308 inch
- Smallest Classlength, Xs =
- Samples Needed @ Xs =
- New Smaller Classlength, Xss =
- BestLCL Classlength, Xlcl =
- Samples Needed @ Xlcl =
- Opt. POD classlength, Xpodopt = 0.224 inch
- Samples Needed @Xpodopt = 8
- Xp = 0.308 inch
- Xs = 0.185 inch
- Xss = 0.185 inch
- Xlcl = 1.000 inch
- Xpoh = 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.***

---

**Directed DOE Options**

<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>0.308</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 = 0.224

---

**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)

Large flaw validation failure. Extend flaw size range to 0.801.

Note: Xpopt 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 Xpopt or Optimum Xpoh (if listed) is also satisfied.

Survey/Optimum Xpoh = 0.1820 -0.003 inch 29 Samples

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 =
Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
Opt. POD Classlength, Xpodopt =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.253 inch
Samples Needed @ Xpodopt = 29

Classification, LCL

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

Class Length,

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

Large flaw validation failure. Extend flaw size range to 0.801.

Note: Xpopt 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 Xpopt or Optimum Xpoh (if listed) is also satisfied.

Survey/Optimum Xpoh = 0.1820 -0.003 inch 29 Samples

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 =
Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
Opt. POD Classlength, Xpodopt =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.253 inch
Samples Needed @ Xpodopt = 29

Classification, LCL

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

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.

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 = 0.1380 -0.057 Inch 26 Samples
NTIAC 90% POD = 1.000 @ 0.005 inch
NTIAC 90/95 POD =
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 =
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, Xpodox = 0.138 inch
Samples Needed @Xpodox = 26
Xp = 0.2350 inch

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 = 1.0000
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 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.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.
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.**

---

**TABLE A**

<table>
<thead>
<tr>
<th>XL</th>
<th>0.210</th>
<th>28</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xm</td>
<td>0.210</td>
<td>28</td>
</tr>
<tr>
<td>Xs</td>
<td>0.420</td>
<td>29</td>
</tr>
<tr>
<td>Xss</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

---

**TABLE C**

<table>
<thead>
<tr>
<th>XL</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>2XL</td>
<td>28</td>
</tr>
<tr>
<td>Xpoh</td>
<td>0.420</td>
</tr>
</tbody>
</table>

---

**Directed DOE Options**

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

**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 = B1001BD.XLS**
**Data Set Name = B1001BD(CRK #)**

---

**TABLE C**

<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>0.210</td>
</tr>
<tr>
<td>Xs</td>
<td>0.420</td>
</tr>
<tr>
<td>Xss</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td>0.420</td>
</tr>
<tr>
<td>2XL</td>
<td>28</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

---

**No Misses Observed**

---

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

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

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

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

**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.**

*2XL appears to have been reached 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**
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 =**

---

**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>1.227</td>
</tr>
<tr>
<td>2XL</td>
<td>4.806</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.**
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>Class Length</th>
<th>Xpod</th>
<th>No. Need</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 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>Xpod</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2100</td>
<td>23</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>Xpod</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2100</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>0.1670</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>
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.

Survey/Optimum Xpoh = 0.900 0.370 inch
False Call Rate = 0.000

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 =
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 =

XL = 0.370 inch Samples
XL = 2.403 inch
Xm = 1.603 inch
Xs = inch
Xss =
Xlcl =
Xpoh =
Xpodopt =

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

File Name = B1001CL.XLS Data Set Name = B1001CL(CRK #)
Date & Time = 6/4/15 8:19 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 =
Inspector Classwidth @ Xp =
POD @ Xp =

XL = 0.900 inch
Xm = 0.370 inch
Xs = inch
Xss =
Xlcl =
Xpoh =
2XL =

B1001CL.XLS

Large flaw validation failure. Need 20 more large flaws.

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

File Name = B1001CL.XLS Data Set Name = B1001CL(CRK #)
Date & Time = 6/4/15 8:19 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 =
Inspector Classwidth @ Xp =
POD @ Xp =

XL = 0.900 inch
Xm = 0.370 inch
Xs = inch
Xss =
Xlcl =
Xpoh =
2XL =

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>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4000</td>
<td>43</td>
</tr>
<tr>
<td>0.3700</td>
<td>38</td>
</tr>
<tr>
<td>0.3500</td>
<td>36</td>
</tr>
<tr>
<td>0.3090</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>2.403</td>
<td>24</td>
</tr>
<tr>
<td>1.603</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>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.403</td>
<td>24</td>
</tr>
<tr>
<td>1.603</td>
<td>28</td>
</tr>
</tbody>
</table>

---

File Name = B1001CL.XLS
Data Set Name = B1001CL(CRK #)

Directed DOE Options

![Directed DOE Options Diagram](image-url)

No Misses Observed
At Least One Miss Occurred
XL
Xm
Xs
Xss
Xlcl
Xpod
2XL
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***
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.

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

**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.

Survey/Optimum Xpoh = 

NTIAC 90% POD = 0.960 @ 0.360 inch
NTIAC 90/95 POD = 0.900 @ 0.465 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 =
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 =
XL = inch
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 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.**
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  
REACHED

Xpod 90/95 Reached Anywhere?  
Classwidth @ 90/95 Xpod = 0.0590 inch
Classlength @ 90/95 Xpod = 0.2340 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 @ Xpod = 1.0000 inch

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
BestLCL Classlength, Xcl = inch
Samples Needed @ Xcl = inch
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 =

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 =

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.

**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.
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 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.
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 additional 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>0.257</td>
</tr>
<tr>
<td>Xm</td>
<td>0.257</td>
</tr>
<tr>
<td>Xs</td>
<td>0.515</td>
</tr>
<tr>
<td>Xss</td>
<td>0.515</td>
</tr>
<tr>
<td>Xlcl</td>
<td>Xpod</td>
</tr>
<tr>
<td>Xpoh</td>
<td>Xpodopt</td>
</tr>
<tr>
<td>2XL</td>
<td>24</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

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may 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 0.30942.

Warning: No false call analysis.

Note: Xpodopt is within one class width of Xpod.

File Name = B2002.XLS
Data Set Name = B2002(HOLE #)
Date & Time = 6/4/15 8:30 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 =

POH Classlength, Xpoh =

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 =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Survey/Optimum Xpoh =
False Call Rate =

False Call Rate =

Cases 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 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.

Overview:
- Xpod is reached anywhere.
- Classwidth and classlength are calculated.
- Lower confidence bound is determined.
- Best LCL is calculated.
- Classwidth and classlength at Best LCL are calculated.
- User provides a 90/95 POD.
- User's maximum allowed classlength is noted.
- Inspector classwidth is noted.
- POD is noted.
- Probability of hit (POH) is calculated.
- Classwidth and classlength are noted.
- Largest classlength, XL, is noted.
- Samples needed are noted.
- Classlength mid-point, Xm, is noted.
- Smallest classlength, Xs, is noted.
- New smaller classlength, Xss, is noted.
- Best LCL classlength, Xcl, is noted.
- Samples needed are noted.
- Optimum POD classlength, Xpoh, is noted.
- New largest classlength, 2XL, is noted.
- Xm is near verification point.
- Survey optimum Xpoh is noted.
- False call rate is noted.

Analysis File Name: DOEPOD v.1.2.01.PC.Office2010.Win7.xlsm
Analysis File Name: X2002(XHOLE #)
Analysis File Name: 6/4/15 8:30 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.**
CASE 5 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and Xpoh.

- Survey/Optimum Xpoh = 0.0634 inch @ 0.045 inch Samples
- NTIAC 90% POD = 0.900 @ 0.045 inch
- NTIAC 90/95 POD = 0.903 @ 0.070 inch

False Call Rate = with UCL @ 95% =
- Largest Classlength, XL = 0.257 inch 28 Samples
- 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
- Samples Needed @ Xpoh = 0.063 inch 27 Samples
- Opt. POD classlength, Xpodopt = inch
- New Largest Classlength, 2XL = inch
- Xn is Near Verification Point = inch

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

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

MLE (Mean) POD
MLE (95%) LCL

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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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>0.257</td>
<td>28</td>
</tr>
<tr>
<td>0.063</td>
<td>27</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>Xl</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>

**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>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>

---

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.**

File Name = B30011.XLS
Data Set Name = B30011[HOLE #]

### 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>
</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
- Xpod, Class Length, No. Need

*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.***

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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. This indicates that the POH function may be oscillatory. This needs to be checked.

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

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

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

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

**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 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.

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>0.342</td>
<td>0.082</td>
<td></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.

**Alternate Xm = Xpodopt

TABLE C
Class Length | Additional Samples
-------------|-------------------
0.342        | 28
0.082        | 26

Directed DOE Options

File Name = B4001L.XLS
Data Set Name = B4001L(Mpi-d)

* 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.

267
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.**
Warning: No false call analysis.

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

Survey/Optimum Xpoh = 0.5080 - 0.004 inch
27 Samples

NTIAC 90% POD = 0.900 @ 0.440 inch
NTIAC 90/95 POD = 0.901 @ 0.695 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 =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh = 0.610 inch
Samples Needed @ Xpoh = 22
New Largest Classlength, 2XL = 1.958 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)
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.

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 = 0.2000 inch
Classlength @ 90/95 Xpod = 0.5390 inch
Lower Confidence Bound = 0.9174 inch
Best LCL = Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD =
User's Maximum Allowed Classlength = inch
POD @ Xpod = 1.0000

Largest Classlength , XL = 0.979 inch
Samples Needed @ XL = 29
Classlength Mid-point , Xm = 0.710 inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
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 = 0.537 inch
Samples Needed @Xpodopt = 29
Xp = 0.5390 inch

False Call Rate = with UCL @ 95% = 0.3400 - 0.001 inch
Survey/Optimum Xpoh = 0.901 @ 0.315 inch
NTIAC 90% POD = 0.900 @ 0.610 inch
NTIAC 90/95 POD =
**Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.**

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.

Survey/Optimum 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 =
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 =

File Name = C1002BL.XLS
Data Set Name = C1002BL(CRACK #)
Date & Time = 6/4/15 8:47 PM
Xpod 90/95 Reached Anywhere? = REACHED
Classwidth @ 90/95 Xpod = 0.0310 inch
Classlength @ 90/95 Xpod = 0.1080 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 =
POD @ Xpod = 0.9672

NTIAC 90% POD =
MTIAC 90/95 POD =
False Call Rate =

Xp = 0.9672 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 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.

File Name = C1002CL.XLS
Data Set Name = C1002CL(CRACK #)
Date & Time = 6/4/15 8:49 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound @ 95% = 0.901 inch
Best LCL = 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

Classwidth @ 90/95 Xpod = 0.979 inch
Classlength @ 90/95 Xpod = 0.543 inch
Classwidth @ Best LCL = 0.901 inch
Classlength @ Best LCL = 0.543 inch

NTIAC 90% POD =
NTIAC 90/95 POD =
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 =
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 =

XL 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. VALIDATION GAP exists. Xp may VALIDATE between Xp and XL when causes of Misses are understood and corrected.

Survey/Optimum Xpoh = 0.901 @ 0.145 inch Samples

Analysis file name: DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsx
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.
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 Xpoh =

False Call Rate =

CTEPOD Analysis File Name: DOEPOD v1.2.01 PC:08a22010 Win7.xlsm

Analysis File Name: DOEPOD v1.2.01 PC:08a22010 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.

---

**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>
</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>

**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>

File Name = C1003AL.XLS
Data Set Name = C1003AL(CRACK #)

Directed DOE Options

- XL = 0.610
- Xm = 0.262
- Xs = 
- Xss = 
- Xlcl = 
- Xpoh = 
- 2XL = 

**Alternate Xm =**

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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

**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.

---

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

### Data Sheet Details
- **File Name:** C1003CL.XLS
- **Date & Time:** 6/4/15 8:57 PM
- **Data Set Name:** C1003CL(CRACK #)

### Metrics
- **Xpod 90/95 Reached Anywhere?** REACHED
- **Classwidth @ 90/95 Xpod:**
  - **Best LCL:** 0.0130 inch
  - **Best LCL @ 95% POD:** 0.0800 inch
- **Classlength @ 90/95 Xpod:**
  - **User Provided a 90/95 POD @ Xp:** 0.9001 inch
- **User's Maximum Allowed Classlength:**
  - **POD @ Xpod:** 0.000
- **Inspector Classwidth @ Xp:**
  - **POH Classlength, Xpoh:** 0.000
- **POH Classlength, Xpoh:** 0.000
- **Largest Classlength:** 0.918 inch
- **Samples Needed @ XL:** 0.9783
- **Opt. POD classlength, Xpodopt:**
  - **Smallest Classlength, Xs:**
  - **New Smaller Classlength, Xss:**
  - **BestLCL Classlength, Xicl:**
  - **Samples Needed @ Xicl:**
  - **POH Classlength, Xpoh:**
  - **Samples Needed @ Xpoh:**
  - **New Largest Classlength:**
  - **Xm is Near Verification Point:**
  - **Opt. POD classlength, Xpodopt:**
  - **Samples Needed @ Xpodopt:**

### Calculations
- **False Call Rate with UCL @ 95%**
- **Survey/Optimum Xpoh:** 0.000
- **NTIAC 90% POD @ Xp:**
  - **@ 90/95 POD:** 0.908
- **XL is Near Verification Point:**

### Case 1*
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.***

---

### 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 = 0.610</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>
</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>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>
</tbody>
</table>

**Alternate Xm = Xpod opt =**
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 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.***
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 Reached Anywhere? = REACHED
Classwidth @ 90/95 Xpod = 0.590 inch
Classlength @ 90/95 Xpod = 0.5340 inch
Lower Confidence Bound = 0.9001 inch
Best LCL = Classwidth @ Best LCL = Classlength @ Best LCL =
User Provided a 90/95 POD = POD @ Xp =
User's Maximum Allowed Classlength =
Inspector Classwidth at Xp =
POD @ Xpod = 1.0000

Best LCL Classlength, Xlcl =
POH Classlength, Xpoh =
New Largest Classlength, 2XL =
MCL is Near Verification Point =
Opt. POD classlength, Xpodopt =
Largest Classlength, XL =
Smallest Classlength, Xs =
New Smaller Classlength, Xss =
Classes Needed @ XL =
Classes Needed @ Xs =
Claslength Mid-point, Xm =
Smallest Classlength, Xs =
New Smaller Classlength, Xss =
Best LCL Classlength, Xlcl =
Smallest Classlength, Xs =
POH Classlength, Xpoh =
Samples Needed @ Xs =
Opt. POD classlength, Xpodopt =
Largest Classlength, XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =
Xp = 0.5340 inch

False Call Rate = with UCL @ 95% =
0.1570 -0.007 inch

Warning: No false call analysis.

1.602

1.000

0.500

0.000

0.100

0.200

0.300

0.400

0.500

0.600

0.700

0.800

0.900

1.000

Class Length, inch

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.**

**Alternate Xm = Xpodopt = 0.288 28**

**TABLE A**

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

**Table C**

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>0.550</td>
</tr>
<tr>
<td>Xm</td>
<td>0.538</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></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. Extend flaw size range to 1.422.

Warning: No false call analysis.

<table>
<thead>
<tr>
<th>Xp</th>
<th>90/95 POD</th>
<th>MLE (Mean) POD</th>
<th>MLE (95%) LCL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.550 inch</td>
<td>0.496 inch</td>
<td>0.4740 inch</td>
<td>0.9001 inch</td>
</tr>
</tbody>
</table>

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 Xpod =

<table>
<thead>
<tr>
<th>NTIAC 90% POD</th>
<th>NTIAC 90/95 POD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.902 inch @ 0.220 inch</td>
<td>0.901 inch @ 0.385 inch</td>
</tr>
</tbody>
</table>

False Call Rate =

| Largest Classlength, XL = | Samples Needed @ XL = | 0.550 inch |
| Classlength Mid-point, Xm = | Samples Needed @ Xm = | 0.496 inch |
| Smallest Classlength, Xs = | Samples Needed @ Xs = | inches |
| New Smaller Classlength, Xss = | Samples Needed @ Xss = | inches |
| Best LCL Classlength, Xlcl = | Samples Needed @ Xlcl = | inches |
| POD Classlength, Xpoh = | Samples Needed @ Xpoh = | inches |
| New Largest Classlength, 2XL = | Samples Needed @ 2XL = | inches |
| Xn is Near Verification Point = | Opt. POD classlength, Xpodopt = | inches |
| Samples Needed @ Xpodopt = | Xp = | inches |

Warning: No false call analysis.

Large flaw validation failure. Extend flaw size range to 1.422.

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.

Large flaw validation failure. Extend flaw size range to 1.422.

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.

Large flaw validation failure. Extend flaw size range to 1.422.

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.

Large flaw validation failure. Extend flaw size range to 1.422.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first. **Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement. ***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 Samples

File Name = CI001BL.XLS
Data Set Name = CI001BL(CRK #)
Date & Time = 6/4/15 9:06 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
POD @ Xpod
XL = 0.054 Inch
XL = 0.195 Inch
XL = 0.900 Inch
XL = 0.900 Inch
XL = 1.0000 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.**
CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.

Survey/Optimum Xpoh = 0.2400
-0.004 inch
26 Samples

False Call Rate = with UCL @ 95% =

- Largest Classlength, XL = 0.407 inch
- Samples Needed @ XL = 23
- Classlength Mid-point, Xm = inch
- Samples Needed @ Xm =
- Smallest Classlength, Xs = inch
- Samples Needed @ Xs =
- New Smaller Classlength, Xss = inch
- BestLCL Classlength, Xlcl = 0.325 inch
- Samples Needed @ Xlcl = 6
- POH Classlength, Xpoh = 0.324 inch
- Samples Needed @ Xpoh = 7
- 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 POH function may 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 = C3001CL.XLS*
*Data Set Name = C3001CL(CRK #)*

**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 = 0.407 23
Xm =
Xs =
Xss = 0.325 6
Xpod = 0.324 7
2XL =

**Alternate Xm = Xpodopt**
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.

---

**Directed DOE Options**

**TABLE A**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.407</td>
<td>18</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 = 0.345</td>
<td>10</td>
</tr>
<tr>
<td>2XL = 0.814</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 C**

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

**Number of Additional Samples Needed**

File Name = C3002AL.XLS  
Data Set Name = C3002AL(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 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.

Survey/Optimum Xpoh =

MTAC 90% POD =

MTAC 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, 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 =

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.

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.

### 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>0.407</td>
<td>17</td>
</tr>
<tr>
<td>Xm</td>
<td>0.300</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**

**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>
<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 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.

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 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 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.

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>0.407</td>
</tr>
<tr>
<td>Xm</td>
<td>0.300</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>0.4070</td>
<td>58</td>
</tr>
<tr>
<td>0.3700</td>
<td>52</td>
</tr>
<tr>
<td>0.3550</td>
<td>51</td>
</tr>
<tr>
<td>0.3520</td>
<td>35</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>0.4070</td>
<td>58</td>
</tr>
<tr>
<td>0.3700</td>
<td>52</td>
</tr>
<tr>
<td>0.3550</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.

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 POD function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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>0.300</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>
<tr>
<td>Xpod</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>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>

**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>

---

File Name = C3003CL.XLS
Data Set Name = C3003CL(CRK #)

---

**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>0.407</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>
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 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.

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

***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 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.**
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 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.**
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 = 0.1055 inch
False Call Rate = with UCL @ 95% =

Largest Classlength, XL = 0.257 inch
Samples Needed @ XL = 19
Classlength Mid-point, Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
Best LCL Classlength, Xlcl = 0.193 inch
Samples Needed @ Xlcl = 12
POH Classlength, Xpoh = 0.193 inch
Samples Needed @ Xpoh =
New Largest Classlength, 2XL = inch
Xn is Near Verification Point =
Opt. POD classlength, Xpopt = inch
Samples Needed @ Xpopt =

NTIAC 90% POD = 0.900
NTIAC 90/95 POD = 0.904

File Name = C400014.XLS
Data Set Name = C400014(Hole #)
Date & Time = 6/4/15 9:19 PM
Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod
Classlength @ 90/95 Xpod
Lower Confidence Bound @ 90/95 Xpod
Best LCL = 0.8368 inch
Classwidth @ Best LCL = 0.0900 inch
Classlength @ Best LCL = 0.1929 inch
User Provided a 90/95 POD @
User's Maximum Allowed Classlength
Inspector Classwidth @ Xp =
POD @ Xpod =

Class Length, inch
0.000 0.050 0.100 0.150 0.200 0.250 0.300
Probability of Hit (POH) in Class Range

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>File Name</th>
<th>C50011.XLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Set Name</td>
<td>C50011(CRK #)</td>
</tr>
<tr>
<td>Date &amp; Time</td>
<td>6/4/15 9:20 PM</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>inch</td>
</tr>
<tr>
<td>Best LCL</td>
<td>0.8855</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>
</tbody>
</table>

CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.

| Survey/Optimum Xpoh | 0.0681 @0.085 inch |
| NTIAC 90% POD | 0.900 @0.090 inch |
| NTIAC 90/95 POD | 0.932 @0.110 inch |
| False Call Rate | with UCL @95% |
| Largest Classlength, XL | 0.090 inch |
| Samples Needed @ XL | 4 |
| 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 | 4 |
| POH Classlength, Xpoh | 0.090 inch |
| Samples Needed @ Xpoh | |
| New Largest Classlength, 2XL | 0.180 inch |
| Xm is Near Verification Point | |
| Opt. POD classlength, Xpodopt | inch |
| Samples Needed @Xpodopt | |
| Xp | inch |

Analysis File name: DOEPOD v1.2.0.1 PC Office2010 Win7.xlsm

**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</td>
<td>0.090</td>
</tr>
<tr>
<td>Xm</td>
<td>0.090</td>
</tr>
<tr>
<td>Xs</td>
<td>0.090</td>
</tr>
<tr>
<td>Xss</td>
<td>0.090</td>
</tr>
<tr>
<td>Xpoh</td>
<td>0.180</td>
</tr>
<tr>
<td>2XL</td>
<td>0.180</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

---

**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.

---

**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.

---

**NOTE:**

- Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.
- The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown.
- The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.
- Follow sample selection priority in the DOEPOD Manual.
- Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.
- **Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.**
- **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>Xp, 90/95 POD</td>
</tr>
<tr>
<td>MLE(Mean) POD</td>
</tr>
<tr>
<td>MLE(95%) LCL</td>
</tr>
</tbody>
</table>

#### Class Length, inch

<table>
<thead>
<tr>
<th>Classlength @ 90/95 Xpod</th>
<th>Lower Confidence Bound @ 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0230 inch</td>
<td>0.085 inch</td>
</tr>
<tr>
<td>0.0902 inch</td>
<td>0.105 inch</td>
</tr>
</tbody>
</table>

#### Xpod 90/95 Reached Anywhere?
- NOT REACHED

#### Classwidth @ 90/95 Xpod
<table>
<thead>
<tr>
<th>Classwidth @ 90/95 Xpod</th>
<th>Classlength @ Best LCL</th>
<th>Classlength @ Best LCL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0230 inch</td>
<td>0.0230 inch</td>
<td>0.0230 inch</td>
</tr>
<tr>
<td>0.0902 inch</td>
<td>0.0902 inch</td>
<td>0.0902 inch</td>
</tr>
</tbody>
</table>

#### POD @ Xpod
- 0.090 inch

#### User Provided a 90/95 POD @
- 0.085 inch

#### User's Maximum Allowed Classlength
<table>
<thead>
<tr>
<th>Classlength @ Xp =</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.090 inch</td>
</tr>
</tbody>
</table>

#### Inspector Classwidth @ Xp =
<table>
<thead>
<tr>
<th>Classwidth @ Xp =</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.090 inch</td>
</tr>
</tbody>
</table>

#### NTIAC 90% POD =
<table>
<thead>
<tr>
<th>NTIAC 90/95 POD =</th>
<th>@</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.912</td>
<td>0.085</td>
</tr>
<tr>
<td>0.905</td>
<td>0.105</td>
</tr>
</tbody>
</table>

#### NTIAC 90/95 POD =
<table>
<thead>
<tr>
<th>NTIAC 90/95 POD =</th>
<th>@</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.912</td>
<td>0.085</td>
</tr>
<tr>
<td>0.905</td>
<td>0.105</td>
</tr>
</tbody>
</table>

#### Surveys/Optimum Xpoh =
<table>
<thead>
<tr>
<th>Survey/Optimum Xpoh =</th>
<th>@</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0681</td>
<td>0.001</td>
</tr>
</tbody>
</table>

#### False Call Rate =
- with UCL @ 95% =
  - Largest Classlength, XL = 0.090 inch
  - Samples Needed @ XL = 4
  - Classlength Mid-point, Xm = 0.180 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
  - Opt. POD classlength, Xpodopt = 0.180 inch
  - Samples Needed @ Xpodopt = 4
  - XL is Near Verification Point = True
  - Xp = 0.090 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 0.090</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>29</td>
</tr>
<tr>
<td>2XL 0.180</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.

**File Name = C500012.XLS  
Data Set Name = C500012(HOLE #)**

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.

Survey/Optimum Xpod @ 0.0681 inch, 0.001 Inch

Warning: No false call analysis.

NTIAC 90% POD = 0.918 @ 0.095 inch
NTIAC 90/95 POD = 0.908 @ 0.120 inch

False Call Rate = with UCL @ 95% =

Largest Classlength , XL = 0.090 inch
Samples Needed @ XL = 4
Classlength Mid-point , Xm =
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xs =
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 =

File Name = CS00014.XLS
Data Set Name = CS00014(Hole #)
Date & Time = 6/4/15 9:24 PM
Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = Best LCL = 0.8855
Classwidth @ Best LCL = 0.0230 inch
Classlength @ Best LCL = 0.0902 inch
User Provided a 90/95 POD @
User's Maximum Allowed Classlength =
Inspection Classwidth @ Xp = inch
POD @ Xpod =

Classwidth @ 90/95 Xpod = 0.090 inch
Classlength @ 90/95 Xpod = 0.090 inch
User Provided a 90/95 POD @
User's Maximum Allowed Classlength =
Inspection Classwidth @ Xp = 0.090 inch
POD @ Xpod =

False Call Rate = with UCL @ 95% =

Largest Classlength , XL = 0.090 inch
Samples Needed @ XL = 4
Classlength Mid-point , Xm =
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xs =
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 =

File Name = CS00014.XLS
Data Set Name = CS00014(Hole #)
Date & Time = 6/4/15 9:24 PM
Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = Best LCL = 0.8855
Classwidth @ Best LCL = 0.0230 inch
Classlength @ Best LCL = 0.0902 inch
User Provided a 90/95 POD @
User's Maximum Allowed Classlength =
Inspection Classwidth @ Xp = inch
POD @ Xpod =

Classwidth @ 90/95 Xpod = 0.090 inch
Classlength @ 90/95 Xpod = 0.090 inch
User Provided a 90/95 POD @
User's Maximum Allowed Classlength =
Inspection Classwidth @ Xp = 0.090 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.
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**

*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 =**

**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

<table>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.131</td>
<td>29</td>
<td></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.

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

**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 | Xpod | Xpodopt |
| 2.403 | 1.603 | 4.806 |

### TABLE B*

| Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed. |
|---|---|
| Xl | Xm | Xs | Xss | Xlcl | Xpoh | 2xl | Xpod | Xpodopt |
| 3.803 | 2.603 | 5.606 |

---

File Name = C6001AL.XLS
Data Set Name = C6001AL(CRK #)

**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>1.603</td>
</tr>
<tr>
<td>Xs</td>
<td>4.806</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)
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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
Samples = 28

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 = inch
Opt. POD classlength, Xpodopt = inch
Samples Needed @ Xpodopt = inch
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.

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

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 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 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)
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.

File Name = C6002BLXLS
Data Set Name = C6002BL(CRK) #
Date & Time = 6/4/15 9:35 PM
Xp 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xp = 0.0400 inch
Classlength @ 90/95 Xp = 0.0960 inch
Lower Confidence Bound @ 95%
Best LCL = 0.9001 inch
Classwidth @ Best LCL = 0.060 inch
Classlength @ Best LCL = 0.080 inch
User Provided a 90/95 POD @
User’s Maximum Allowed Classlength =
POD @ Xp = 1.0000

CASE 1* - 90/95 Xp 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 = 0.907 @ 0.060 inch
NTIAC 90/95 POD = 0.902 @ 0.080 inch
False Call Rate = 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 =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xicl =
Samples Needed @ Xicl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =

Xp = 0.1800 inch

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.

Note: Xpodopt is within one class width of Xpod.

**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>Large flaw validation failure. Need 20 more large flaws.</td>
</tr>
<tr>
<td>Note: Xpodopt is within one class width of Xpod.</td>
</tr>
<tr>
<td><strong>Warning:</strong> No false call analysis.</td>
</tr>
</tbody>
</table>

### DOPOD.v.1.2.01.PC.Office2010.Win7.xlsm Analysis file name:

- **File Name:** C6002CL.XLS
- **Data Set Name:** C6002CL(CRK #)
- **Date & Time:** 6/4/15 9:36 PM
- **Xpod 90/95 Reached Anywhere?** REACHED
  - **Classwidth @ 90/95 Xpod:** 0.0620
  - **Classlength @ 90/95 Xpod:** 0.2370
  - **Lower Confidence Bound @ 95%:** 0.9050
  - **Best LCL Classlength:**
  - **Classwidth @ Best LCL:**
  - **Classlength @ Best LCL:**
  - **User Provided a 90/95 POD @:**
  - **User's Maximum Allowed Classlength:**
  - **POD @ Xpod:** 1.0000

#### Classwidth & Classlength

<table>
<thead>
<tr>
<th>Classwidth</th>
<th>Classlength</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0620</td>
<td>0.2370</td>
</tr>
</tbody>
</table>

#### Largest Classlength, XL
- **XL:** 2.403
- **Samples Needed @ XL:** 27

#### Smallest Classlength, Xs
- **Xs:** 0.085
- **Samples Needed @ Xs:** 0.105

#### New Smaller Classlength, Xss
- **Xss:** 0.085
- **Samples Needed @ Xss:** 0.105

#### Best LCL Classlength, Xlcl
- **Xlcl:** 2.403
- **Samples Needed @ Xlcl:** 27

#### POD @ Xpod
- **Xpod:** 0.085
- **POD:** 0.9050

#### Opt. POD classlength, Xpodopt
- **Xpodopt:** 0.128
- **POD:** 0.911

#### Survey/Optimum Xpod
- **Survey/Optimum Xpod:** 0.128
- **POD:** 0.911

#### False Call Rate
- **False Call Rate:** 0.001
- **with UCL @ 95%:** 0.085

### 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.

- **NTIAC 90% POD:** 0.911
- **NTIAC 90/95 POD:** 0.933
- **False Call Rate:** 0.001
- **with UCL @ 95%:** 0.085
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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 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.

File Name = C6003AL.XLS
Data Set Name = C6003AL(CRK #)
Date & Time = 6/4/15 9:37 PM
	Xpod 90/95 Reached Anywhere? REACHED
	Classwidth @ 90/95 Xpod = 0.0680 inch
	Classlength @ 90/95 Xpod = 0.2480 inch
	Lower Confidence Bound = 0.9001 inch
	Hit/Miss Xp, 90/95 POD = 2.403 inch
	MLE(Mean) POD = 27
	MLE(95%) LCL = 28
	Best LCL = 1.603 inch
	Classlength @ Best LCL = 0.265 inch
	Classwidth @ Best LCL = 0.600 inch
	User Provided a 90/95 POD @ = @ 0.902 inch
	User's Maximum Allowed Classlength = @ 0.900 inch
	Pod @ Xp = 1.000 inch

Survey/Optimum Xpoh = 0.000 inch Samples
NTIAC 90% POD = 0.902 @ 0.265 inch
NTIAC 90/95 POD = 0.900 @ 0.600 inch
False Call Rate = with UCL @ 95% =
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
BestLCL Classlength, Xlcl = l
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

Analysis file name: DOEPOD v 1.2.01 PC 06152010 Win 7.xsm

Large flaw validation failure. Need 19 more large flaws.

概率、判断、置信区间等。
**Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.**

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

**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. 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>1.2270</td>
<td>45</td>
<td>1.6030</td>
<td>28</td>
</tr>
<tr>
<td>0.4600</td>
<td>59</td>
<td>0.5320</td>
<td>28</td>
</tr>
<tr>
<td>0.4000</td>
<td>56</td>
<td>0.5320</td>
<td>28</td>
</tr>
<tr>
<td>0.3700</td>
<td>36</td>
<td>0.5320</td>
<td>28</td>
</tr>
</tbody>
</table>

**TABLE B**

**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.*
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.

**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 = inch
- Samples Needed @ Xlcl =
- POH Classlength, Xpoh = inch
- Samples Needed @ Xpoh =
- Opt. POD classlength, Xpodopt = inch
- New Larger Classlength, 2XL = inch
- Xm is Near Verification Point =
- Samples Needed @ Xpodopt =
- Xp = inch

### Detection Probability
- (Utilization of DOEPOD results requires approval of Engineering Authority)
- Large flaw validation failure. Need 19 more large flaws.

### Probability of Hit (POH) in Class Range

- Probability of Hit (POH) @ 95%
- Lower Confidence Bound @ 95%
- Hit/Miss

### Class Length
- Xp, 90/95 POD
- MLE(Mean) POD
- MLE(95%) LCL

### File Name = C6003BL.XLS
- Data Set Name = C6003BL(CRK #)
- Date & Time = 6/4/15 9:38 PM
- REACHED
  - Xpod 90/95 Reached Anywhere?
  - Classwidth @ 90/95 Xpod = 0.9000 inch
  - Lower Confidence Bound @ Best LCL = 0.0680 inch
  - Classwidth @ Best LCL = 0.2480 inch
  - Classlength @ Best LCL = 0.9000 inch
  - User Provided a 90/95 POD @ = 0.0680 inch
  - User's Maximum Allowed Classlength = 1.0000 inch
  - POD @ Xp = 0.9001 inch

### Survey/Optimum Xpoh =
- NTIAC 90% POD = 0.900 @ 0.155 inch
- NTIAC 90/95 POD = 0.900 @ 0.155 inch

### False Rate =
- Largest Classlength, XL = 2.403 inch
- Classlength Mid-point, Xm = 1.603 inch
- Smallest Classlength, Xs = inch
- New Smaller Classlength, Xss = inch
- BestLCL Classlength, Xlcl = inch
- Samples Needed @ Xlcl =
- POH Classlength, Xpoh = inch
- Samples Needed @ Xpoh =
- Opt. POD classlength, Xpodopt = inch
- New Larger Classlength, 2XL = inch
- Xm is Near Verification Point =
- 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.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD manual.

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

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

**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 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.

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.2340 inch
Classlength @ 90/95 Xpod = 0.9001 inch
Lower Confidence Bound @ 95% = 0.0000 inch
Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD = 1.0000
User's Maximum Allowed Classlength =
Inspection Classwidth @ Xp =
POD @ Xpod =

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 = 0.902 @ 0.110 inch
NTIAC 90/95 POD = 0.901 @ 0.175 inch
False Call Rate =

Largest Classlength, XL = 2.403 inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 1.603 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 =
Samples Needed @ Xp = 0.2340 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 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>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**
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)

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.

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

***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)

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 = 0.0976 - 0.004 inch 28 Samples

NTIAC 90% POD = 0.901 @ 0.350 inch
NTIAC 90/95 POD = 0.901 @ 0.580 inch

False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 0.342 inch
Samples Needed @ XL = 27
Classlength Mid-point , Xm =
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl = 0.213 inch
Samples Needed @ Xlcl = 11
POH Classlength, Xpoh = 0.199 inch
POH Classlength, Xlcl =
 Samples Needed @ Xpoh = 13
New Largest Classlength , 2XL =
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =

File Name = C7002L.XLS
Data Set Name = C7002L(Lpi-a)
Date & Time = 6/4/15 9:43 PM
Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod =
Classlength @ 90/95 Xpod =
Lower Confidence Bound =
Best LCL = 0.0444
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
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.

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

*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.**
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</td>
<td>0.342</td>
</tr>
<tr>
<td>Xm</td>
<td>0.251</td>
</tr>
<tr>
<td>Xs</td>
<td>0.251</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.

Xpod,Class Length No. Need

### File Name =
C7003L.XLS

### Data Set Name =
C7003L(Lpi-d)
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.

Case file: 1.2.0.12.FC.OC.0902010.WT1.0m

Survey/Optimum Xpod = 0.901 @ 0.075 inch
NTIAC 90% POD = 0.901 @ 0.075 inch
NTIAC 90/95 POD = 0.902 @ 0.120 inch

False Call Rate = with UCL @ 95% =
Largest Classlength, XL = 0.095 inch
Samples Needed @ XL = 17
Classlength Mid-point, Xm = 0.080 inch
Samples Needed @ Xm = 26
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 class length, Xpardo = inch
Samples Needed @ Xpardo =
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.

**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>0.0700</td>
<td>70</td>
<td>17</td>
</tr>
<tr>
<td>0.0650</td>
<td>37</td>
<td>26</td>
</tr>
<tr>
<td>0.0640</td>
<td>64</td>
<td>26</td>
</tr>
<tr>
<td>0.0630</td>
<td>64</td>
<td>26</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>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0700</td>
<td>0.0730</td>
<td>17</td>
</tr>
<tr>
<td>0.0700</td>
<td>0.0730</td>
<td>26</td>
</tr>
<tr>
<td>0.0650</td>
<td>0.0680</td>
<td>26</td>
</tr>
<tr>
<td>0.0640</td>
<td>0.0680</td>
<td>26</td>
</tr>
<tr>
<td>0.0630</td>
<td>0.0680</td>
<td>26</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>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0700</td>
<td>0.0730</td>
<td>17</td>
</tr>
<tr>
<td>0.0700</td>
<td>0.0730</td>
<td>26</td>
</tr>
<tr>
<td>0.0650</td>
<td>0.0680</td>
<td>26</td>
</tr>
<tr>
<td>0.0640</td>
<td>0.0680</td>
<td>26</td>
</tr>
<tr>
<td>0.0630</td>
<td>0.0680</td>
<td>26</td>
</tr>
</tbody>
</table>
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.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be 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 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>0.5930</td>
<td>73</td>
<td>0.5690</td>
<td>23</td>
</tr>
<tr>
<td>0.5780</td>
<td>34</td>
<td>0.5790</td>
<td>17</td>
</tr>
<tr>
<td>0.5760</td>
<td>31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.5730</td>
<td>46</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>0.5930</td>
<td>73</td>
</tr>
<tr>
<td>0.5780</td>
<td>34</td>
</tr>
<tr>
<td>0.5760</td>
<td>31</td>
</tr>
<tr>
<td>0.5730</td>
<td>46</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 largest 4 class lengths are shown.

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

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

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

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 0.786.

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.

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.
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.204.

Note: Xpopt is within one class width of 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.**
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 Xpod = 0.2770 -0.001 Inch 20 Samples
NTIAC 90% POD = 0.900 0.405 Inch
NTIAC 90/95 POD = 0.901 0.665 Inch
False Call Rate = with UCL @ 95%

Largest Classlength, XL = 0.684 Inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 0.612 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 = 0.291 Inch
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Best POD classlength, Xp = 0.5790 Inch
Static POD classlength, Xp =
Samples Needed @Xp = 0.5790 Inch

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 1.737.

File Name = C8003(3).xls
Data Set Name = C8003(3)(LCL.NO.)
Date & Time = 6/4/15 9:54 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0130 Inch
Classlength @ 90/95 Xpod = 0.5790 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 =
Inspection Classwidth @ Xp =
POD @ Xpod = 1.0000

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, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
Opt. POD classlength, Xpodopt =
Static POD classlength, Xp =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Static POD classlength, Xp =
Static POD classlength, 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 Xpod = 0.2770 -0.001 Inch 20 Samples
NTIAC 90% POD = 0.900 0.405 Inch
NTIAC 90/95 POD = 0.901 0.665 Inch
False Call Rate = with UCL @ 95%

Largest Classlength, XL = 0.684 Inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 0.612 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 = 0.291 Inch
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Best POD classlength, Xp = 0.5790 Inch
Static POD classlength, Xp =
Samples Needed @Xp = 0.5790 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.**

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

**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.

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

**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>Xpodopt</td>
</tr>
</tbody>
</table>

**2XL** = 2.542

**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** = 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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

**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>Xpodopt</td>
</tr>
</tbody>
</table>

**2XL** = 2.542

**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** = 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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

**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>Xpodopt</td>
</tr>
</tbody>
</table>

**2XL** = 2.542

**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** = 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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

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

<table>
<thead>
<tr>
<th>Xpod, Class</th>
<th>Length</th>
<th>No. Need</th>
<th>Xpod, Class</th>
<th>Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpodopt</td>
<td></td>
<td></td>
<td>XL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XL</td>
<td></td>
<td></td>
<td>Xm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
<td></td>
<td>Xs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
<td></td>
<td>Xs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
<td></td>
<td>Xlcl</td>
<td></td>
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</tr>
<tr>
<td>Xlcl</td>
<td></td>
<td></td>
<td>Xpoh</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
<td></td>
<td>2XL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
<td></td>
<td>2.542</td>
<td>29</td>
<td></td>
</tr>
</tbody>
</table>

**FILE NAME**
C9003(3)L.xls

**DATA SET NAME**
C9003(3)L(CK. NO.)
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.***

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>TABLE C</td>
<td></td>
</tr>
</tbody>
</table>

Table C
Directed DOE Options

**Alternate Xm = Xpodopt**

**FILE NAME = C9004[3]L.xls**
**DATA SET NAME = C9004[3]L(NO.)**

**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 Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.

Warning: No false call analysis.

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?
Classwidth @ 90/95 Xpod = 0.0210 inch
Classlength @ 90/95 Xpod = 0.1200 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 inch

Warning: No false call analysis.
Large flaw validation failure. Need 15 more large flaws.
Although \( X_{poh} \) appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the \( POH \) function may be oscillatory. This needs to be checked.

The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. 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**
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpoh = 0.9950 - 0.004 inch
NTIAC 90% POD = @ inch
NTIAC 90/95 POD = @ inch
False Call Rate = with UCL @ 95%

Largest Classlength , XL = 1.188 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 = 1.188 inch
Samples Needed @ Xpoh = 26
New Largest Classlength , 2XL = 2.376 inch
Xn is Near Verification Point = inch
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.
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.

Warning: No false call analysis.

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

File Name = CA003[3]L.xls
Data Set Name = CA003[3](LCK. NO.)
Date & Time = 6/4/15 10:06 PM

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 1.188 inch
Classlength @ 90/95 Xpod = 0.540 inch
Lower Confidence Bound = 0.0670 inch
Best LCL = 0.3240 inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ POH @ Xpod = 1.0000

User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xo = inch
Best LCL Classlength, Xlcl = inch
POH Classlength, Xpoh = inch

POD @ Xpod = inch

Largest Classlength, XL = 1.000 inch
Samples Needed @ XL = 1.000
Classlength Mid-point, Xm = 0.600 inch
Samples Needed @ Xm = 0.600
Smallest Classlength, Xs = 0.3240 inch
Samples Needed @ Xs = 0.3240
New Smaller Classlength, Xss = inch
Largest Classlength, Xl = 1.000 inch
Samples Needed @ Xl = 1.000
Opt. POD classlength, Xpodopt = inch
New Largest Classlength, 2XL = inch
Xm is Near Verification Point = inch
False Call Rate = 0.000 with UCL @ 95% =

Survey/Optimum Xpoh = 0.000 inch
Samples Needed @ Xpoh = Samples

NTIAC 90% POD = 0.900 @ 0.260 inch
NTIAC 90/95 POD = 0.900 @ 0.600 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.
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.

NTIAC 90% POD = 0.900
NTIAC 90/95 POD = 0.905

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

**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.

Large flaw validation failure. Need 16 more large flaws.

Note: Xpodopt is within one class width of Xpod.

Warning: No false call analysis.

FILE NAME = CB002[3L.xls
DATA SET NAME = CB002[3L(CK. NO.)
FILE DATE & TIME = 6/4/15 10:08 PM

Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0330 inch
Classlength @ 90/95 Xpod = 0.3060 inch
Lower Confidence Bound = 0.9050 inch
Best LCL = inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ POD @ Xp = 1.0000

User’s Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod = inch

Xp = 1.435 inch
0.992 inch

False Call Rate = 0.2730 -0.012 inch 26 Samples

NTIAC 90% POD = 0.906 @ 0.150 inch
NTIAC 90/95 POD = 0.904 @ 0.195 inch

Largest Classlength , XL = 1.435 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.992 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 =
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.295 inch
Samples Needed @Xpodopt = 2
Xp = 0.3060 inch

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.
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 0.000 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 =
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 = 0.4980 inch

NTIAC 90% POD = 0.902 @ 0.210 inch
NTIAC 90/95 POD = 0.900 @ 0.345 inch

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.***

### 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>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 1.435</td>
<td></td>
<td>XL = 1.435</td>
<td></td>
</tr>
<tr>
<td>Xm = 0.992</td>
<td></td>
<td>Xm = 0.992</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 =**

#### 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 = 1.435</td>
<td></td>
<td>XL = 1.435</td>
<td></td>
</tr>
<tr>
<td>Xm = 0.992</td>
<td></td>
<td>Xm = 0.992</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 =**

---

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

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.

File Name = CC001(3).xls
Data Set Name = CC001(3)(CK. NO.)
Date & Time = 6/4/15 10:10 PM
Xpod 90/95 Reached Anywhere?
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

NTIAC 90% POD = 1.000 @ 0.005 inch
NTIAC 90/95 POD = 0.904 @ 0.075 inch
False Call Rate = 0.000

Survey/Optimum Xpoh = 1.000
Samples Needed @ XL = 26
Samples Needed @ Xm = 20
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
Xp =

Class Length, inch
Probability of Hit (POH), Lower Confidence Bound at 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 C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.562</td>
<td>26</td>
</tr>
<tr>
<td>0.616</td>
<td>20</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**
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.

**False Call Rate =**

<table>
<thead>
<tr>
<th>Survey/Optimum Xpoh</th>
<th>NTIAC 90% POD</th>
<th>NTIAC 90/95 POD</th>
</tr>
</thead>
<tbody>
<tr>
<td>@ 0.000 inch</td>
<td>0.011</td>
<td>0.093</td>
</tr>
<tr>
<td>@ 0.050 inch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>@ 0.070 inch</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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 =
- 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 =

**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

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

**Warning:** No false call analysis.

**File Name =** CC002[3]L.xls
**Data Set Name =** CC002[3](CK. NO.)

**Date & Time =** 6/4/15 10:19 PM
- Xp 90/95 Reached Anywhere?
- Classwidth @ 90/95 Xpod =
- Lower Confidence Bound =
- Classwidth @ Best LCL =
- Classlength @ Best LCL =
- User Provided a 90/95 POD @
- User's Maximum Allowed Classlength =
- POD @ Xp =

**FILE NAME:** Data Set Name = CC002[3](CK. NO.)

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.
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.

MLE Divergence Warning: Initial results listed.

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)

1. 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.

2. Case 2
   - Xp is Near Verification Point
     - Opt. POD classlength, Xpodopt
     - Samples Needed @ Xpodopt

3. Case 3
   - 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.***

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.

File Name = CD001[3].xls
Data Set Name = CD001[3](LCK, NO. )
Date & Time = 6/4/15 10:28 PM

Xpod 90/95 Reached Anywhere?
Class width @ 90/95 Xpod = 0.0570 inch
Class length @ 90/95 Xpod = 0.2350 inch
Lower Confidence Bound = 0.9050 inch
Best LCL =
Class width @ Best LCL =
Class length @ Best LCL =
User Provided a 90/95 POD =
User's Maximum Allowed Class length =
Inspector Class length @ Xo =
POD @ Xpod = 1.0000

NTIAC 90% POD = 1.000 inch @ 0.005 inch
NTIAC 90/95 POD =
False Call Rate = with UCL @ 95% =
Largest Class length , XL = 0.495 inch
Samples Needed @ XL =
Class length Mid-point , Xm = 0.308 inch
Samples Needed @ Xm =
Smallest Class length , Xs =
Samples Needed @ Xs =
New Smaller Class length, Xss =
Best LCL Class length , Xcl =
Samples Needed @ Xcl =
POH Class length , Xpoh =
Samples Needed @ Xpoh =
New Largest Class length , 2XL =
Xm is Near Verification Point =
Opt. POD class length, Xpodopt = 0.138 inch
Samples Needed @ Xpodopt = 26
Xo = 0.0570 inch

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.

Survey/Optimum Xpoh = 0.2240 -0.019 inch 26 Samples

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 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 = CE011(6).xls
Data Set Name = CE011(6)(CRK #)

Date & Time = 6/4/15 10:31 PM

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.0060 inch
Classlength @ 90/95 Xpod = 0.0240 inch
Lower Confidence Bound = 0.0400 inch
Best LCL = 0.0440 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

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 = 0.000 inch @ 0.030 inch
False Call Rate = with UCL @ 95% =
FP Rate = 0.000 inch

Largest Classlength , XL = 0.069 inch
Samples Needed @ XL = 43
Classlength Mid-point , Xm = 0.049 inch
Samples Needed @ Xm = 14
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
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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 VALIDATES 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 successful.

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

Warning: No false call analysis.

<table>
<thead>
<tr>
<th>POD @ Xpod</th>
<th>False Call Rate</th>
<th>Survey/Optimum Xpoh</th>
<th>NTIAC 90% POD</th>
<th>NTIAC 90/95 POD</th>
<th>Samples Needed @ Xpoh</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.937 @ 0.005 inch</td>
<td>0.949 @ 0.010 inch</td>
<td>1 inch</td>
</tr>
</tbody>
</table>

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

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 =
- 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 = 0.010 inch

File Name = CE0126(J).xls
Data Set Name = CE0126(CRKR #)
Date & Time = 6/4/15 10:33 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 @ Xp =

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 = 0.010 inch

Warning: No false call analysis.

Large flaw validation successful.

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

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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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</td>
<td>0.069</td>
</tr>
<tr>
<td>Xm</td>
<td>0.028</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>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>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>Additional Samples</th>
</tr>
</thead>
<tbody>
<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

---

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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 flaw.
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 = 0.933 with UCL @ 95% = 0.030 inch
False Call Rate = 0.000 inch Samples

File Name = CE012(6)L.xls
Data Set Name = CE012(6)L(CRK #)
Date & Time = 6/4/15 10:41 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0100 inch
Classlength @ 90/95 Xpod = 0.0480 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 inch

Xp = 0.350 inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
New Largest Classlength, 2XL =
Smallest Classlength, Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl =
Samples Needed @ Xooh =
Samples Needed @ XL =
Samples Needed @ Xs =
Classlength Mid-point, Xm =
Samples Needed @ Xm =
Smallest Classlength, Xs =
Classwidth @ Best LCL =

Classwidth @ 90/95 Xpod = 0.0100 inch
Classlength @ 90/95 Xpod = 0.0480 inch
User Provided a 90/95 POD @
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod = 1.0000 inch

XL =
Samples Needed @ XL =
Xs =
Xss =
Xlcl =
Xpoh =
Xss =
POH Classlength, Xpoh =
New Largest Classlength, 2XL =
Smallest Classlength, Xs =

Warning: No false call analysis.

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

Large flaw validation failure. Need 1 more large flaw.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.**

- **POH Classlength, Xpoh:** Not applicable
- **New Largest Classlength, 2XL:** Not applicable
- **Xm is Near Verification Point:** Not applicable
- **Opt. POD classlength, Xpodopt:** Not applicable
- **Survey/Optimum Xp:** 0.138 inch
- **False Call Rate:** 0.000 with UCL @ 95%
- **False Call Analysis:** Not applicable
- **Warning:** No false call analysis.

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

- **POH, Lower Confidence Limit, LCL:**
  - **Probability of Hit (POH):** Not applicable
  - **Lower Confidence Bound @ 95%:** Not applicable
- **Class Length, POD @ Xp, 90/95 POD:**
  - **MLE(Mean) POD:** Not applicable
  - **MLE(95%) LCL:** Not applicable
- **Classwidth @ 90/95 Xpod:** Not applicable
- **Classlength @ 90/95 Xpod:** Not applicable
- **Lower Confidence Bound @ Best LCL:** Not applicable
- **Best LCL:** Not applicable
- **Classwidth @ Best LCL:** Not applicable
- **Classlength @ Best LCL:** Not applicable
- **User Provided a 90/95 POD @:** Not applicable
- **User's Maximum Allowed Classlength:** Not applicable
- **Inspector Classwidth @ Xp:** Not applicable
- **POD @ Xpod:** Not applicable

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

- **POH, Lower Confidence Limit, LCL:**
  - **Probability of Hit (POH):** Not applicable
  - **Lower Confidence Bound @ 95%:** Not applicable
- **Class Length, POD @ Xp, 90/95 POD:**
  - **MLE(Mean) POD:** Not applicable
  - **MLE(95%) LCL:** Not applicable
- **Classwidth @ 90/95 Xpod:** Not applicable
- **Classlength @ 90/95 Xpod:** Not applicable
- **Lower Confidence Bound @ Best LCL:** Not applicable
- **Best LCL:** Not applicable
- **Classwidth @ Best LCL:** Not applicable
- **Classlength @ Best LCL:** Not applicable
- **User Provided a 90/95 POD @:** Not applicable
- **User's Maximum Allowed Classlength:** Not applicable
- **Inspector Classwidth @ Xp:** Not applicable
- **POD @ Xpod:** Not applicable

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

- **POH, Lower Confidence Limit, LCL:**
  - **Probability of Hit (POH):** Not applicable
  - **Lower Confidence Bound @ 95%:** Not applicable
- **Class Length, POD @ Xp, 90/95 POD:**
  - **MLE(Mean) POD:** Not applicable
  - **MLE(95%) LCL:** Not applicable
- **Classwidth @ 90/95 Xpod:** Not applicable
- **Classlength @ 90/95 Xpod:** Not applicable
- **Lower Confidence Bound @ Best LCL:** Not applicable
- **Best LCL:** Not applicable
- **Classwidth @ Best LCL:** Not applicable
- **Classlength @ Best LCL:** Not applicable
- **User Provided a 90/95 POD @:** Not applicable
- **User's Maximum Allowed Classlength:** Not applicable
- **Inspector Classwidth @ Xp:** Not applicable
- **POD @ Xpod:** Not applicable
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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>0.138</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 | Xpod, Class Length | No. Need |
|---------------------|----------|--------------------|----------|

**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>0.138</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)

**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 @ Xpoh:** 0

### Parameters:

- **Xpod 90/95 Reached Anywhere?** NOT REACHED
- **Classwidth @ 90/95 Xpod:** 0.3684 Inch
- **Classlength @ 90/95 Xpod:** 0.1210 Inch
- **Lower Confidence Bound:** 0.0010 Inch
- **Best LCL:** 0.0000 Inch
- **MLE (Mean) POD:** 0.1220 Inch
- **MLE (95%) LCL:** 0.0000 Inch
- **User Provided a 90/95 POD:** 0.700 Inch
- **User’s Maximum Allowed Classlength:** 0.1210 Inch
- **Inspector Classwidth @ Xp:** 0.0000 Inch
- **POD @ Xp:** 0.0000 Inch
- **Inspector Classlength @ Xp:** 0.0000 Inch
- **Best LCL Classlength, Xlcl:** 0.0000 Inch
- **Samples Needed @ Xlcl:** 0
- **POH Classlength, Xpoh:** 0.0000 Inch
- **Samples Needed @ Xpoh:** 0
- **New Largest Classlength, 2XL:** 0.700 Inch
- **Xm is Near Verification Point:**
- **Opt. POD classlength, Xpodopt:** 0.0000 Inch
- **Samples Needed @ Xpodopt:** 0
- **New Smaller Classlength, Xss:** 0.0000 Inch
- **Smallest Classlength, Xs:** 0.0000 Inch
- **Smallest Samples Needed @ Xs:** 0
- **Classlength Midpoint, Xm:** 0.0000 Inch
- **Samples Needed @ Xm:** 0
- **Classlength @ Best LCL:** 0.0000 Inch
- **Best LCL Classlength, Xcl:** 0.0000 Inch
- **Samples Needed @ Xcl:** 0
- **Largest Classlength, XL:** 0.700 Inch
- **Samples Needed @ XL:** 0

### Analysis File Name:

- **NTIAC 90% POD @ Xp:** 0.000 Inch
- **NTIAC 90/95 POD @ Xp:** 0.000 Inch
- **False Call Rate =** 0.000
- **with UCL @ 95% =**

### Table:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probability of Hit (POH) in Class Range</td>
<td>0.000</td>
</tr>
<tr>
<td>Lower Confidence Bound @ 95%</td>
<td>0.000</td>
</tr>
<tr>
<td>Hit/Miss</td>
<td>0.000</td>
</tr>
<tr>
<td>Xp, 90/95 POD</td>
<td>0.000</td>
</tr>
<tr>
<td>MLE (Mean) POD</td>
<td>0.000</td>
</tr>
<tr>
<td>MLE (95%) LCL</td>
<td>0.000</td>
</tr>
</tbody>
</table>

### Diagram:

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

---

**404**
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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></td>
</tr>
<tr>
<td>XL</td>
<td>0.700</td>
</tr>
<tr>
<td>2XL</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>Xpod, 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>
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.
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.
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.
Texas Instruments, Inc.

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 = 0.000

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 =
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 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.

**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>0.700</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 |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

File Name = CE031(5L.xls
Data Set Name = CE031(5L(CRK #)

Directed DOE Options

Number of Additional Samples Needed

<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>0.700</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.

413
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.

File Name = CE032(6)D.xls
Data Set Name = CE032(CR{K #)
Date & Time = 6/4/15 10:58 PM
Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = REACHED
Classwidth = 0.000 inch
Lower Confidence Bound = 0.000 inch
Hit/Miss
MLE(Mean) POD
MLE(95%) LCL
User Provided a 90/95 POD @
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod = 1.0000

Survey/Optimum Xpoh =

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 = 29
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 = 0.0650 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."
Note: Xpod opt 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.

### Table C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.350</td>
</tr>
<tr>
<td>Xm</td>
<td>0.285</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 = 0.258 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>0.258</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>0.258</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)
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may 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>
<thead>
<tr>
<th>Xpod, Class Length</th>
<th>No. Need</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alternate Xm</strong></td>
<td><strong>Xpodopt</strong></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE C**

Class Length | Additional Samples |
---|---|
XL = | 0.138 |
Xm = | 29 |
Xs = | |
Xss = | |
Xlcl = | |
Xpoh = | |
2XL = | |

File Name = CE041(6)D.xls
Data Set Name = CE041(6)D(CIK NO.)
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, Xcl = inch
Samples Needed @ Xcl =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @ Xpodopt =

NTIAC 90% POD = @ inch
NTIAC 90/95 POD = @ 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.

**Alternate Xm = Xpodopt**

*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.**
Large flaw validation failure. Extend flaw size range to 0.162.

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.

Warning: No false call analysis.

False Call Rate = with UCL @ 95% =

- Largest Classlength, XL = 0.069 inch
- Samples Needed @ XL =
- Classlength Mid-point, Xm = 0.059 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 =
- Xm is Near Verification Point =
- Samples Needed @ Xpodopt =

Survey/Optimum Xpoh = 0.000 inch Samples
NTIAC 90% POD = 0.933 @ 0.040 inch
NTIAC 90/95 POD = 0.900 @ 0.045 inch

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

File Name = CED42(6).xls
Data Set Name = CED42(6)(CRK NO.)
Date & Time = 6/4/15 11:04 PM
Xpod 90/95 Reached Anywhere? = REACHED
Classwidth @ 90/95 Xpod = 0.030 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 @ Xpod = 1.0000

Largest Classlength , XL = 0.162 inch
Smallest Classlength, Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl =
Opt. POD classlength, Xpodopt =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Samples Needed @ Xpodopt =

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.**

### Directed DOE Options

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.069</td>
</tr>
<tr>
<td>Xm</td>
<td>0.059</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 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)

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.

### 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.

<table>
<thead>
<tr>
<th>POD @ Xpod</th>
<th>Survey/Optimum</th>
<th>NTIAC 90% POD</th>
<th>NTIAC 90/95 POD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2480</td>
<td>0.2480 - 0.002 Inch</td>
<td>@ 0.185 inch</td>
<td>@ 0.225 inch</td>
</tr>
</tbody>
</table>

### False Call Rate with UCL @ 95%:

- Largest Classlength, XL = 0.350 inch
- Samples Needed @ XL =
- Classlength Mid-point, Xm = 0.301 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 =
- Xp = 0.2620 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>
<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>Xpoh</td>
</tr>
<tr>
<td>2XL</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =

425
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](image_url)

**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
- Xpodopt

**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>
<th>0.138</th>
<th>29</th>
</tr>
</thead>
</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.
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>Xs</th>
<th>Xlcl</th>
<th>Xpoh</th>
<th>2XL</th>
<th>Xpodopt</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.350</td>
<td>0.268</td>
<td>0.700</td>
<td>22</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>Xs</th>
<th>Xlcl</th>
<th>Xpoh</th>
<th>2XL</th>
<th>Xpodopt</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.268</td>
<td>0.700</td>
<td>0.700</td>
<td>29</td>
<td>29</td>
</tr>
</tbody>
</table>

### TABLE C
Selected class lengths

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.350</td>
<td>27</td>
</tr>
<tr>
<td>0.268</td>
<td>22</td>
</tr>
<tr>
<td>0.700</td>
<td>29</td>
</tr>
</tbody>
</table>

### Directed DOE Options

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.350</td>
<td>27</td>
</tr>
<tr>
<td>0.268</td>
<td>22</td>
</tr>
<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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.

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

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.**
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.**
File Name = CE061(6).xls
Data Set Name = CE061(6)(CRK NO.)

Class Length, inch

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

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 = 0.000 inch Samples

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
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

Large flaw validation failure. Extend flaw size range to 0.189.

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

Warning: No false call analysis.

Xp 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 =

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 =

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 =
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked. The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

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

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

***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>
<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></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>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 C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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 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</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>0.138</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt = 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>
<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.

Before adding flawed samples to satisfy elements 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)

Warning: No false call analysis.

File Name = CE071(6).xls
Data Set Name = CE071(6)(CRK NO. )
Date & Time = 6/4/15 11:25 PM

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 35.000 inch
Classlength @ 90/95 Xpod = 35.000 inch
Lower Confidence Bound = 0.7791
Best LCL = 0.0060
Classwidth @ Best LCL = 35.000 inch
Classlength @ Best LCL = 35.000 inch
User Provided a 90/95 POD @ = 0.9000
User's Maximum Allowed Classlength = 35.000 inch
Inspector Classwidth @ Xp = 0.3470
POD @ Xpod = 0.9000

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

Survey/Optimum Xpoh = 0.3470
28 Samples

False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 0.350 inch
Samples Needed @ XL = 27
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 = 0.347
Samples Needed @ Xpoh = 28
New Largest Classlength , 2XL = 0.700 inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =
Xp =

Probability of Hit (POH) in Class Range,
Lower Confidence Limit, LCL

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 the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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 flaw.
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>0.069</td>
</tr>
<tr>
<td>Xm</td>
<td>0.035</td>
</tr>
<tr>
<td>Xs</td>
<td></td>
</tr>
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<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>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.

---

*File Name = CE072(6)D.xls*  
*Data Set Name = CE072(6)D(CRK NO.)*
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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be 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

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 = CE072(6)LR.xls**
**DATA SET NAME = CE072(6)LR CRK 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>0.350</td>
</tr>
<tr>
<td>Xm</td>
<td>0.250</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 = 0.350**
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.
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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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 =

False Call Rate = with UCL @ 95% =

XL = 0.178 inch
Xm = 0.111 inch
Xs = inch
Xss = inch
Xlcl = inch
Xpoh = inch
Xpodopt = inch
Xp = 0.0380 inch

Large flaw validation failure. Need 10 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.

<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 = 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>**Alternate Xm = Xpodopt =</td>
<td></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.**

<table>
<thead>
<tr>
<th>TABLE C</th>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.178</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xm = 0.111</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>**Alternate Xm = Xpodopt =</td>
<td></td>
<td></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 = 0.178</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xm = 0.111</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>**Alternate Xm = Xpodopt =</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**No Misses Observed**

**At Least One Miss Occurred**

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

455
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 Xpod = 0.000 inch Samples
NTIAC 90% POD = 0.913 inch
NTIAC 90/95 POD = 0.907 inch
False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 0.979 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.523 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xicl =
Samples Needed @ Xicl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
Xp = 0.2790 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 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.

<table>
<thead>
<tr>
<th>Case Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.178</td>
</tr>
<tr>
<td>Xm</td>
<td>0.119</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 = 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

### 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>

### 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>
</table>

---

* File Name = D1001BD.XLS
  Data Set Name = D1001BD(CRACK #)

**Directed DOE Options**

<table>
<thead>
<tr>
<th>No. of Additional Samples Needed</th>
<th>XLM</th>
<th>XMM</th>
<th>XSS</th>
<th>XLCL</th>
<th>XPOH</th>
<th>2XL</th>
<th>XPOD</th>
<th>XPODOpt</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td>0.119</td>
<td>0.178</td>
<td>0.000</td>
<td>0.020</td>
<td>0.040</td>
<td>0.060</td>
<td>0.080</td>
<td>0.100</td>
</tr>
<tr>
<td>0.120</td>
<td>0.140</td>
<td>0.160</td>
<td>0.180</td>
<td>0.200</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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.

**Survey/Optimum Xpod**
- NTIAC 90% POD = 0.905 @ 0.095 inch
- NTIAC 90/95 POD = 0.901 @ 0.115 inch

**False Call Rate**
- with UCL @ 95% = 0.000

**Analysis File name:** DOEPOD_v1.2.0.1_PC-06a2010_Win7.xlsm

**File Name:** D1001BL.XLS
**Data Set Name:** D1001BL(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.
Warning: 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.
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.

CASE 1A - 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 = 0.1170 -0.001 Inch 27 Samples

NTIAC 90% POD = 0.911 @ 0.090 Inch
NTIAC 90/95 POD = 0.907 @ 0.105 Inch

False Call Rate = with UCL @ 95% =

Largest Classlength , XL = 0.979 Inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.523 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 , XL =
Xm is Near Verification Point
Opt. POD classlength, Xpodopt = 0.152 Inch
Samples Needed @Xpodopt = 29
Xp = 0.1530 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 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.***

\[\text{Number of Additional Samples Needed} \]

\[\begin{array}{c|c}
\text{Class Length} & \text{Additional Samples} \\
\hline
XL & 0.979 \\
Xm & 0.523 \\
Xs & \\
Xss & \\
Xlcl & \\
Xpoh & \\
2XL & \\
**Alternate Xm** & 0.152 \\
Xpodopt & 29 \\
\end{array}\]
Warning: No false call analysis.

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

Survey/Optimum Xpoh = 0.1490 - 0.022 inch = 0.127 inch Samples = 28

Xp = 0.178 inch
Xs = 0.110 inch
Xcl = 0.356 inch
X0 = 0.060 inch
Xs = 0.044 inch
XL = 0.008 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.***

**Table C**

<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></td>
</tr>
<tr>
<td>Xpoh</td>
<td>0.149</td>
</tr>
<tr>
<td>2XL</td>
<td>0.356</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>XL</td>
<td></td>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xm</td>
<td></td>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xs</td>
<td></td>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xss</td>
<td></td>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xlcl</td>
<td></td>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
<td>Xs</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td></td>
<td>Xs</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>
</tbody>
</table>

**No Misses Observed**

**At Least One Miss Occurred**

**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.***

---

467
Large flaw validation failure. Need 13 more large flaws.

Warning: No false call analysis.

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

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.

File Name = D1002AL.XLS
Data Set Name = D1002AL(CRACK #)

Class Width @ 90/95 Xpod = 0.900
Class Length @ 90/95 Xpod = 0.901

Class Width @ Best LCL = 0.170
Class Length @ Best LCL = 0.265

Xp = 0.979
Xpoh = 0.170
Xm = 0.489

False Call Rate = 0.000

Survey/Optimum Xpoh = 0.901 @ 0.170 Inch
NTIAC 90% POD = 0.900 @ 0.265 Inch
NTIAC 90/95 POD = 0.891 @ 0.170 Inch

Largest Classlength, XL = 0.979 Inch
Smallest Classlength, Xs = 0.489 Inch
New Smaller Classlength, Xss = 0.290 Inch
New Largest Classlength, 2XL = 0.901 Inch
Xm is Near Verification Point = False
POH Classlength, Xpoh = 0.900
POD @ Xp = 1.000
POD @ Xpoh = 0.900
POD @ XL = 0.900

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>No. Need</th>
<th>Table C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod, Class Length</td>
<td>Additional Samples</td>
</tr>
<tr>
<td>0.000</td>
<td>0.200</td>
</tr>
<tr>
<td>0.400</td>
<td>0.600</td>
</tr>
<tr>
<td>0.800</td>
<td>1.000</td>
</tr>
<tr>
<td>1.200</td>
<td>1.400</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.

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
False Call Rate = with UCL @ 95% =
Largest Classlength, XL = 0.178 inch
Samples Needed @ XL = 27
Classlength Mid-point, Xm = 0.115 inch
Samples Needed @ Xm = 11
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xcl = inch
Samples Needed @ Xcl = 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 =

Warning: No false call analysis.

File Name = D100280.XLS
Data Set Name = D100280(CRACK X)
Date & Time = 6/4/15 11:51 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0450 inch
Lower Confidence Bound = 0.9001
Best LCL =
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @
User's Maximum Allowed Classlength = inch
POD @ Xp = 1.0000

D1002BD(XLS)
D1002BD(CRACK #)

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 @ Xp = 1.0000 

Best LCL 
Classwidth @ Best LCL 
Classlength @ Best LCL 
User Provided a 90/95 POD @ 
User's Maximum Allowed Classlength 
POD @ Xp = 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 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.

**False Call Rate =** 0.000 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 =** 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 =** inch

**Survey/Optimum Xpoh =** 0.000 inch Samples

- **NTIAC 90% POD =** 0.901 @ 0.125 inch
- **NTIAC 90/95 POD =** 0.900 @ 0.295 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: Detection Probability

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection Probability</td>
<td>0.9050</td>
</tr>
<tr>
<td>Lower Confidence Bound @ 95%</td>
<td>0.0250</td>
</tr>
<tr>
<td>Upper Confidence Bound @ 95%</td>
<td>0.0400</td>
</tr>
<tr>
<td>Class-width @ 90/95 Xpod</td>
<td>0.1170</td>
</tr>
<tr>
<td>Class-length @ 90/95 Xpod</td>
<td>0.1780</td>
</tr>
<tr>
<td>User Provided a 90/95 POD @</td>
<td>0.1050</td>
</tr>
<tr>
<td>POD @ Xpod</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

### Diagram: Graph Analysis

- **Survey/Optimum Xpoh =** 0.000 inch
- **False Call Rate =** 0.000 with UCL @ 95% = 0.178 inch

### Notes:

- **CASE 1**: 90/95 Xp 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 13 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>
<thead>
<tr>
<th>Xpod,Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.178</td>
<td></td>
</tr>
<tr>
<td>0.117</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>

D1002CD.XLS

D1002CD(CRACK #)

File Name =

Data Set Name =

Directed DOE Options

<table>
<thead>
<tr>
<th>Table C</th>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.178</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xm = 0.117</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>**Alternate Xm = 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.
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 =
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 =
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 = 0.978
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.

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.
Large flaw validation failure. Need 5 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.

D1003AL.XLS
Data Set Name = D1003AL(CRACK #)

Date & Time = 6/4/15 11:59 PM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.000 inch
Best LCL = 0.0170 inch
Classwidth @ Best LCL = 0.1020 inch
Classlength @ Best LCL = 0.9001 inch
User Provided a 90/95 POD @
User’s Maximum Allowed Classlength =
POD @ Xpod = 1.0000 inch

File Name = D1003AL.XLS

NTIAC 90% POD = 0.903 @ 0.055 inch
NTIAC 90/95 POD = 0.909 @ 0.070 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 =
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 = 0.102 inch
Samples Needed @ Xpodopt = 29
Xp = 0.1020 inch

480
Although Xpod appears to have been reached at a point, there are misses at larger class lengths this indicates that the POh function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

**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.

Survey/Optimum Xpoh = 0.931 @ 0.020 inch
NTIAC 90% POD = 0.920 @ 0.025 inch
False Call Rate = with UCL @ 95% =
- Largest Classlength, XL = 0.178 inch
- Samples Needed @ XL =
- Classlength Mid-point, Xm = 0.110 inch
- Smallest Classlength, Xs = inch
- Samples Needed @ Xs =
- New Smaller Classlength, Xss = inch
- NTIAC 90/95 POD =
- NTIAC 90% POD =
- 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.

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

***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 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 #)
NO. 6/5/15 12:05 AM

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.0080 inch
Classlength @ 90/95 Xpod = 0.0830 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 @ 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 = 0.000 inch
NTIAC 90% POD = 0.936 @ 0.003 inch
NTIAC 90/95 POD = 0.920 @ 0.005 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, Xlcl =
Samples Needed @ Xlcl =
POD Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
Xp = 0.0830 inch

Analysis file name: DOEPOD_v.1.2.01_PC.06a2010.Win7.xlsm

Legend:
- 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 resolved first.

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

**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>XL</th>
<th>0.610</th>
</tr>
</thead>
<tbody>
<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>Xpod</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>
<th>Xpod, Class Length</th>
<th>No. Need</th>
</tr>
</thead>
</table>

### 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.**
Large flaw validation failure. Need 11 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.
**Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.**

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

**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>0.1260</td>
<td>52</td>
<td>0.1780</td>
<td>27</td>
</tr>
<tr>
<td>0.1190</td>
<td>53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.1170</td>
<td>38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.1160</td>
<td>38</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>0.1780</td>
<td>27</td>
</tr>
</tbody>
</table>

No Misses Observed
At Least One Miss Occurred

Additional Samples Needed

File Name = D1003CD.XLS
Data Set Name = D1003CD\(\text{CRACK #}\)
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.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.**

---

### Directed DOE Options

#### TABLE A*

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

**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><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><strong>Alternate Xm</strong></td>
<td>Xpodopt</td>
</tr>
</tbody>
</table>

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

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

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

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

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

***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.
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may 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>0.550</td>
</tr>
<tr>
<td>Xm</td>
<td>0.538</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 = 0.288

---

### 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>0.288</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>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<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. Need 6 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.

** Alternate Xm = Xpodopt

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 1A: 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 = 0.550 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.538 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
Opt. POD classlength, Xpodopt = 0.288 inch
Samples Needed @Xpodopt = 28

Surveys/ 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

File Name = D2002BL.XLS
Data Set Name = D2002BL(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.***
### Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

Large flaw validation failure. Need 6 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.

### Table

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOH</td>
<td>0.9077</td>
</tr>
<tr>
<td>LCL</td>
<td>0.9040</td>
</tr>
<tr>
<td>False Call Rate</td>
<td>0.0000</td>
</tr>
<tr>
<td>Survey/Optimum Xpoh</td>
<td>0.0000 Inch</td>
</tr>
</tbody>
</table>

### Graph

- **Title:** Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
- **Legend:**
  - Probability of Hit (POH) in Class Range
  - Lower Confidence Bound @ 95%
  - Hit/Miss
  - Xp, 90/95 POD
  - MLE(Mean) POD
  - MLE(95%) LCL

### Notes

- **File Name:** D2002CD.XLS
- **Data Set Name:** D2002CD
- **Date & Time:** 6/5/15 12:16 AM
- **Xpod 90/95 Reached Anywhere?** REACHED
- **Classwidth @ 90/95 Xpod**
  - 0.0150 inch
- **Classlength @ 90/95 Xpod**
  - 0.0360 inch
- **Lower Confidence Bound**
  - 0.0200 inch
- **Best LCL**
  - 0.0460 inch
- **Classwidth @ Best LCL**
  - 0.1150 inch
- **Classlength @ Best LCL**
  - 0.1440 inch
- **User Provided a 90/95 POD @**
  - 1.0000
- **User's Maximum Allowed Classlength**
  - 0.9077 inch
- **Inspector Classwidth @ Xp**
  - 0.9040 inch
- **POD @ Xpod**
  - 0.9060 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.

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.

Survey/Optimum Xpoh = 0.3400 - 0.005 inch
Samples = 28

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

**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 0.645.
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 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. Extend flaw size range to 0.9.

Note: Xpodopt is within one class width of Xpod.

Warning: No false call analysis.

File Name = D3001BL.XLS
Data Set Name = D3001BL(CRK #)

Date & Time = 6/5/15 12:19 AM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod == 0.0880 inch
Classlength @ 90/95 Xpod == 0.3000 inch
Lower Confidence Bound @ 95% Best LCL == 0.9001 inch
Classwidth @ Best LCL == 0.8997 inch
Classlength @ Best LCL == 0.9001 inch
User Provided a 90/95 POD @ 0.288 inch
POD @ Xpod == 0.288 inch

User's Maximum Allowed Classlength == 1.0000 inch
POH Classlength, Xpoh == 0.407 inch
New Largest Classlength, 2XL == 1.0000 inch
Xm is Near Verification Point = False Call Rate =

Survey/Optimum Xpoh = 0.2120 -0.001 Inch 26 Samples

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.

Xp = 0.3000 inch

False Call Rate = with UCL @ 95% =

Largest Classlength , XL = 0.407 inch
Samples Needed @ XL = 37
Classlength Mid-point , Xm = 0.345 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 =
Opt. POD classlength, Xpodopt = 0.288 inch
New Largest Classlength, 2XL = 1.0000 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.**
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 alternative target Xpod points. Only largest 4 class lengths are shown.

Follow sample selection priority in the DOEPOD Manual.

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

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

***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 Diagram](image-url)

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

<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>

**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>

**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>0.407</td>
</tr>
<tr>
<td>Xm</td>
<td>0.355</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** = 0.249
29 additional samples needed.
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

**File Name** = D3003AL.XLS
**Data Set Name** = D3003AL(CRK #)
**Date & Time** = 6/5/15 12:21 AM

**Xpod 90/95 Reached Anywhere?**
- **Classwidth @ 90/95 Xpod** = NOT REACHED
- **Lower Confidence Bound** = 0.8444 inch
- **Best LCL** = 0.2350 inch
- **Classlength @ Best LCL** = 0.0250 inch
- **User Provided a 90/95 POD @** = inch
- **User's Maximum Allowed Classlength =** inch
- **Inspection Classwidth @ Xp** = inch
- **POD @ Xpod** = inch

**POH Classlength, Xpoh** = 0.814 inch
**New Larger 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)**

**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 $L_{CL}$ 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.**
Large flaw validation failure. Extend flaw size range to 0.648.

Warning: No false call analysis.

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

MLE Divergence Warning: Initial results listed.

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 C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.407</td>
<td></td>
</tr>
<tr>
<td>Xm = 0.265</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 = 0.176</strong></td>
<td>15</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></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.

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

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

***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 0.648.

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

Warning: No false call analysis.

**False Call Rate** = with UCL @ 95% =
- Largest Classlength , XL = 0.407 inch
- Samples Needed @ XL =
- Classlength Mid-point , Xm = 0.265 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 =
- Xm is Near Verification Point =
- Samples Needed @ Xpodopt =

**Survey/Optimum Xpoh**
- NTIAC 90% POD = 0.903 @ 0.135 inch
- NTIAC 90/95 POD = 0.901 @ 0.185 inch

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

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

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.

---

**Directed DOE Options**

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.407</td>
<td></td>
</tr>
<tr>
<td>Xm = 0.265</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>
<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.
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 = 0.0764 inch
LSU LCL = 0.0020 inch
UCL = 0.095 inch
Opt. POD classlength, Xpodopt = 0.0764 inch
Xp = 0.257 inch
Xp is Near Verification Point

Large Classlength , XL = 0.257 inch
New Largest Classlength , 2XL = 0.257 inch
Xm is Near Verification Point

False Call Rate = 0.0764
with UCL @ 95% = 0.002 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.**

***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 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>No. Need</th>
<th>XL = 0.090</th>
<th>Xs = 0.090</th>
<th>Xs = 0.090</th>
<th>Xs = 0.180</th>
<th>2XL = 0.180</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td></td>
<td>2XL</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>XL = 0.090</th>
<th>Xs = 0.090</th>
<th>Xs = 0.090</th>
<th>Xs = 0.180</th>
<th>2XL = 0.180</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td></td>
<td>2XL</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 C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.090</td>
<td>4</td>
</tr>
<tr>
<td>Xs = 0.090</td>
<td>4</td>
</tr>
<tr>
<td>Xss = 0.090</td>
<td>4</td>
</tr>
<tr>
<td>Xpoh = 0.090</td>
<td>29</td>
</tr>
<tr>
<td>2XL = 0.180</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

---

* No Misses Observed
  □ At Least One Miss Occurred
  △ XL
  ○ Xm
  ◊ Xs
  ≈ Xss
  ▲ Xlcl
  □ Xpoh
  ▪ 2XL
  □ Xpod
  ● Xpodopt
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

File Name = D6001AL.XLS
Data Set Name = D6001AL(CRK #)
Date & Time = 6/5/15 12:28 AM

Xpod 90/95 Reached Anywhere?  NO
Classwidth @ 90/95 Xpod = 0.8931 inch
Classlength @ 90/95 Xpod = 0.0800 inch
Lower Confidence Bound = 0.8931 inch
Best LCL = 0.0800 inch
Classlength @ Best LCL = 0.2620 inch
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod =

NTIAC 90% POD = 0.901
NTIAC 90/95 POD =
False Call Rate =
Survey/Optimum Xpoh = 1.6030
Samples @ Xpoh = 28

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.**
Large flaw validation failure. Need 20 more large flaws.

Warning: No false call analysis.

FILE NAME: D6018BL.XLS
DATA SET NAME: D6018BL(CRK #)
DATE & TIME: 6/5/15 12:30 AM

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 = 0.901 @ 0.315 inch

<table>
<thead>
<tr>
<th>Pod @ Xpod =</th>
<th>0.000 inch Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTIAC 90% POD</td>
<td>0.901 @ 0.315 inch</td>
</tr>
<tr>
<td>NTIAC 90/95 POD</td>
<td>0.000 inch</td>
</tr>
</tbody>
</table>

False Call Rate = with UCL @ 95% =

- 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, 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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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>
<thead>
<tr>
<th>Xpoh</th>
<th>2Xl</th>
<th>Xs</th>
<th>Xss</th>
<th>Xlcl</th>
<th>Xl</th>
<th>Xm</th>
<th>Xm</th>
<th>Xs</th>
<th>Xpoh</th>
<th>2XL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5000</td>
<td>1.1000</td>
<td>0.7000</td>
<td>0.5000</td>
<td>0.4000</td>
<td>0.3000</td>
<td>0.2000</td>
<td>0.1000</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>Xs</th>
<th>Xss</th>
<th>Xlcl</th>
<th>Xl</th>
<th>Xm</th>
<th>Xm</th>
<th>Xs</th>
<th>Xpoh</th>
<th>2XL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5000</td>
<td>1.1000</td>
<td>0.7000</td>
<td>0.5000</td>
<td>0.4000</td>
<td>0.3000</td>
<td>0.2000</td>
<td>0.1000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE C
Additional Samples

<table>
<thead>
<tr>
<th>Xpoh</th>
<th>2Xl</th>
<th>Xs</th>
<th>Xss</th>
<th>Xlcl</th>
<th>Xl</th>
<th>Xm</th>
<th>Xm</th>
<th>Xs</th>
<th>Xpoh</th>
<th>2XL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5000</td>
<td>1.1000</td>
<td>0.7000</td>
<td>0.5000</td>
<td>0.4000</td>
<td>0.3000</td>
<td>0.2000</td>
<td>0.1000</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.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may 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.

Survey/Optimum Xpoh = 1.6030
-0.300 inch
28 Samples

False Call Rate = with UCL @ 95%

NTIAC 90% POD = 0.900 @ 0.575 inch
NTIAC 90/95 POD =

Largest Classlength, XL = 2.403 inch
Samples Needed @ XL = 28
Classlength Mid-point, Xm =
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh = 1.603 inch
Samples Needed @ Xpoh =
New Largest Classlength, 2XL = 4.806 inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =

1.000
0.900
0.800
0.700
0.600
0.500
0.400
0.300
0.200
0.100
0.000

0.000
0.500
1.000
1.500
2.000
2.500
3.000

0.000
0.050
0.100
0.150
0.200
0.250
0.300
0.350
0.400
0.450
0.500
0.550
0.600
0.650
0.700
0.750
0.800
0.850
0.900
0.950
1.000

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

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

Probability of Hit (POH) in Class Range

Class Length, inch

Data File Name = D6003AL.XLS
Data Set Name = D6003AL(CRK # )
Date & Time = 6/5/15 12:33 AM
Xpod 90/95 Reached Anywhere? = NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = Best LCL = 0.8388 inch
Classwidth @ Best LCL = 0.0130 inch
Classwidth @ Best LCL = 0.1183 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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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 = D6003BL.XLS
Data Set Name = D6003BL(CRK #)

Date & Time = 6/5/15 12:35 AM
Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.8813
Best LCL = inch
Classwidth @ Best LCL = 0.0680
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod =

POH Classlength, Xpoh =
Samples Needed @ Xpoh = 28
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =

Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound =
Best LCL = inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod =

Warning: No false call analysis.

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

Survey/Optimum Xpoh = 1.6030 inch
False Call Rate = with UCL @ 95% =
Largest Classlength, XL = 2.403 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 = 1.603 inch
Samples Needed @ Xpoh = 28
New Largest Classlength, 2XL = 4.806 inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ 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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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 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 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.

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

**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 inches
- **False Call Rate =** 0.0450 inches
- **Opt. POD classlength, Xpodopt =**
  - 1.603 inches
  - 28 samples
- **Largest Classlength, XL =** 2.403 inches
  - 28 samples
- **New Largest Classlength, 2XL =** 4.306 inches
  - 28 samples
- **Xm is Near Verification Point =** 0.0680 inches
- **Classlength Mid-point, Xm =**
  - 1.100 inches
  - 28 samples
- **Smallest Classlength, Xs =**
  - 0.900 inches
  - 28 samples
- **New Smaller Classlength, Xss =**
  - 0.780 inches
  - 28 samples
- **POH classlength, Xpoh =**
  - 2.403 inches
  - 28 samples
- **Best LCL Classlength, Xlcl =**
  - 0.881 inches
  - 28 samples
- **Probabilty of Hit (POH) in Class Range**
- **Lower Confidence Bound @ 95%**
- **Best LCL =** 0.2620 inches
- **MLE (Mean) POD @** 1.603 inches
- **MLE (95%) LCL @** 0.900 inches
- **Hit / Miss**

**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.
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 = D7001L(Uti-a-1)
Date & Time = 6/5/15 12:39 AM

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.0833 inch
Lower Confidence Bound = 0.0220 inch
Best LCL = 0.0833 inch
Classlength @ Best LCL = 0.1690 inch
User Provided a 90/95 POD = 0.074 inch
User's Maximum Allowed Classlength = 0.155 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.

False Call Rate = 0.0532
Survey/Optimum Xpoh = 0.074 @ 0.115 inch
False Call Rate with UCL @ 95% = 0.074 @ 0.115 inch

Largest Classlength, XL = 0.342 inch
Samples Needed @ XL = 26
Classlength Mid-point, Xm = 0.169 inch
Samples Needed @ Xm = 26
Smallest Classlength, Xs = 0.0833 inch
Samples Needed @ Xs = 26
New Smaller Classlength, Xss = 0.0833 inch
BestLCL Classlength, Xicl = 0.0833 inch
Samples Needed @ Xicl = 26
POH Classlength, Xpoh = 0.115 inch
Samples Needed @ Xpoh = 26
Opt. POD classlength, Xpodopt = 0.074 inch
New Largest Classlength, 2XL = 0.0833 inch
Xm is Near Verification Point = False
Xp is Near Verification Point = False

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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>File Name = D7001L.XLS  D7001L(Uti-a-1)</th>
</tr>
</thead>
</table>

### Directed DOE Options

- **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.

**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

<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 = Xpodopt = 0.074**

<table>
<thead>
<tr>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</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 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 = 0.0460 - 0.002 Inch 28 Samples

False Call Rate = 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, Xss =
Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm Near Verification Point =
Opt. POD classlength, Xpodopt = 0.066 Inch
Samples Needed @ Xpodopt = 1

File Name = D7002L.XLS
Data Set Name = D7002L(Uti-a-2)

Date & Time = 6/5/15 12:40 AM

Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod =
Lower Confidence Limit =
Best LCL =
Classwidth @ Best LCL =
Classlength @ Best LCL =
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xo =
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 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 11 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)
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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 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 = D8001[3]L.xls
Data Set Name = D8001[3](CK. NO)
Date & Time = 6/5/15 12:44 AM

Warning: No false call analysis.

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

Large flaw validation failure. Need 11 more large flaws.

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 = 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 Larger 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.
Large flaw validation failure. Extend flaw size range to 0.132.

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 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>

**Alternate Xm = Xpod =** 0.095

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

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

<table>
<thead>
<tr>
<th>File Name</th>
<th>D8002(3).xls</th>
<th>Data Set Name</th>
<th>D8002(3)(LCL.MP.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date &amp; Time</td>
<td>6/5/15 12:48 AM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xpod 90/95 Reached Anywhere?</td>
<td>REACHED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classwidth @ 90/95 Xpod</td>
<td>inch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Confidence Bound</td>
<td>inch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Best LCL</td>
<td>inch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classwidth @ Best LCL</td>
<td>inch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classlength @ Best LCL</td>
<td>inch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>User Provided a 90/95 POD @</td>
<td>inch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POD @ Xp</td>
<td>inch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xpod = 0.684 inch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.000 inch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.000 inch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.901 inch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.903 inch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.5620 inch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.5420 inch</td>
<td></td>
<td></td>
<td></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.

False Call Rate = with UCL @ 95% =

- Largest Classlength , XL = 0.684 inch
- Samples Needed @ XL =
- Classlength Mid-point , Xm = 0.563 inch
- Samples Needed @ Xm =
- Smallest Classlength, Xs =
- Samples Needed @ Xs =
- New Smaller Classlength, Xss =
- BestLCL Classlength, Xcl =
- Samples Needed @ Xcl =
- POH Classlength, Xpo =
- Samples Needed @ Xpo =
- 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 = 0.901 @ 0.220 inch
NTIAC 90/95 POD = 0.903 @ 0.255 inch

New Larger 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 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>

**TABLE C**

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

<table>
<thead>
<tr>
<th>0.684</th>
<th>0.563</th>
</tr>
</thead>
</table>

**Alternate Xm =**

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

Large flaw validation failure. Extend flaw size range to 0.126.

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.

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 =
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 =

Survey/Optimum Xpoh =
NTIAC 90% POD = 0.925 @ 0.060 inch
NTIAC 90/95 POD = 0.933 @ 0.065 inch

D8003(3)D.xls
Data Set Name = D8003(3)D(CK.NO.)
Date & Time = 6/5/15 12:50 AM
Xpod 90/95 Reached Anywhere? Yes
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 = 1.0000

File Name = D8003(3)D.xls
Data Set Name = D8003(3)D(CK.NO.)
Date & Time = 6/5/15 12:50 AM
Xpod 90/95 Reached Anywhere? Yes
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 = 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 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.**
Large flaw validation failure. Extend flaw size range to 0.828.

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.

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

Additional 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.
Warning: No false call analysis.

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

Survey/Optimum Xpoh = 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.
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.
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

False Call Rate = 0.000

**Warning:** No false call analysis.

Xp = 0.320 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)

Warning: No false call analysis.

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

File Name = D9002(3)L.xls
Data Set Name = D9002(3)L(CK.NO.)
Date & Time = 6/5/15 12:59 AM
Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.7169
Best LCL = 0.0400
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod =

- Probability of Hit (POH), Lower Confidence Limit, LCL
- Class Length,
- Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
- Probability of Hit (POH) in Class Range
- Xp, 90/95 POD
- MLE(Mean) POD
- MLE(95%) LCL

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 =
- 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

Survey/Optimum Xpoh = 0.000 Inch Samples

- NTIAC 90% POD = 0.900 @ 0.005 inch
- NTIAC 90/95 POD =

554
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may 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 0.189.

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.

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

FILE NAME = D9003(D).xls
DATA SET NAME = D9003(D)(CK. NO.)
Date & Time = 6/5/15 1:02 AM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0020 inch
Classlength @ 90/95 Xpod = 0.0630 inch
Lower Confidence Bound = 0.9050 inch
Best LCL = 0.005 inch
Classwidth @ Best LCL = 0.1040 inch
Best LCL Classlength, Xcl = 0.015 inch
POD @ Xpod = 1.0000
POD @ Xpod = 0.000

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 Xmoh = 0.000 Inch
NTIAC 90% POD = 0.999 @ 0.005 inch
NTIAC 90/95 POD = 0.993 @ 0.015 inch

False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 0.160 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.105 inch
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL Classlength, Xcl =
Samples Needed @ Xcl =
POD Classlength, Xpod =
Samples Needed @ Xpod =
Opt. POD classlength, Xpodopt =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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 2.064. 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.

Data Name = D9003JLS.xls
Data Set Name = D9003JLS(CK. NO.)
Date & Time = 6/5/15 1:19 AM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0170 inch
Classlength @ 90/95 Xpod = 0.6880 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
POD @ Xpod = 0.000

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.

Survey/Optimum Xpoh = 0.000 Inch Samples

NTIAC 90% POD = 0.900 @ 0.110 inch
NTIAC 90/95 POD = 0.906 @ 0.160 inch
False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 1.271 inch
Samples Needed @ XL =
Classlength Mid-point , Xm = 0.846 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 =
Samples Needed @Xpodopt =
Xp = 1.1580 inch

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 alternative target Xpod points. Only largest 4 class lengths are shown.

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

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

***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 alternative target Xpod points. Only largest 4 class lengths are shown.

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

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

***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.

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

***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>Selected class lengths with existing misses.</td>
<td>Selected class lengths with no misses. Additional samples at these class lengths will achieve the Xpod listed.</td>
</tr>
</tbody>
</table>

Xpod, Class Length No. Need

**Alternate Xm = Xpodopt**

**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 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.**
Probabilty of Hit (POH), Lower Confidence Limit, LCL

Class Length, Detection Probability

(Utilization of DOEPOD results requires approval of Engineering Authority)

File Name = D9004(3)L.xls
Data Set Name = D9004(3)LC (CK. NO.)

Date & Time = 6/5/15 1:33 AM
Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = NOT REACHED
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.7791
Best LCL = 0.0010
Classlength @ Best LCL = 0.2940
User Provided a 90/95 POD @ inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod =

Xp, 90/95 POD
MLE(Mean) POD
MLE(95%) LCL

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

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 = 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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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>1.500</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**

---

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first. **Satisfying the Alternate Xm requirement removes the need to meet the adjacent Xm requirement.***

**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 Xpod = 1.2450 +/- 0.018 inch
Best LCL = 0.3410 inch
Largest Classlength, XL = 2.542 inch
Smallest Classlength, Xs = 0.0040 inch
New Smaller Classlength, Xss = 0.0040 inch
Best LCL Classlength, Xlcl = 0.3410 inch
POH Classlength, Xpoh = 1.2450 inch
New Largest Classlength, 2XL = 2.543 inch

False Call Rate = with UCL @ 95% =
Opt. POD classlength, Xpodopt = 1.245 inch
Classwidth @ 90/95 Xpod = 0.7169 inch
Classlength @ 90/95 Xpod = 0.0040 inch
Lower Confidence Bound = 0.3410 inch
Best LCL = 0.0040 inch
Classwidth @ Best LCL = 0.0040 inch
Classlength @ Best LCL = 0.3410 inch
User Provided a 90/95 POD =
User's Maximum Allowed Classlength = 0.0040 inch
Inspector Classwidth @ Xo =
POD @ Xpod =

File Name = D9005(3)L.xls
Data Set Name = D9005(3)L(CK. NO.)
Date & Time = 6/5/15 1:38 AM
Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.7169 inch
Best LCL = 0.0040 inch
Classwidth @ Best LCL = 0.0040 inch
Classlength @ Best LCL = 0.3410 inch
User Provided a 90/95 POD =
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xo =
POD @ Xpod =

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

Survey/Optimum Xpod = 1.2450 +/- 0.018 inch
Best LCL = 0.3410 inch
Largest Classlength, XL = 2.542 inch
Smallest Classlength, Xs = 0.0040 inch
New Smaller Classlength, Xss = 0.0040 inch
Best LCL Classlength, Xlcl = 0.3410 inch
POH Classlength, Xpoh = 1.2450 inch
New Largest Classlength, 2XL = 2.543 inch

False Call Rate = with UCL @ 95% =
Opt. POD classlength, Xpodopt = 1.245 inch
Classwidth @ 90/95 Xpod = 0.7169 inch
Classlength @ 90/95 Xpod = 0.0040 inch
Lower Confidence Bound = 0.3410 inch
Best LCL = 0.0040 inch
Classwidth @ Best LCL = 0.0040 inch
Classlength @ Best LCL = 0.3410 inch
User Provided a 90/95 POD =
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xo =
POD @ Xpod =

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.

Survey/Optimum Xpod = 1.2450 +/- 0.018 inch
Best LCL = 0.3410 inch
Largest Classlength, XL = 2.542 inch
Smallest Classlength, Xs = 0.0040 inch
New Smaller Classlength, Xss = 0.0040 inch
Best LCL Classlength, Xlcl = 0.3410 inch
POH Classlength, Xpoh = 1.2450 inch
New Largest Classlength, 2XL = 2.543 inch

False Call Rate = with UCL @ 95% =
Opt. POD classlength, Xpodopt = 1.245 inch
Classwidth @ 90/95 Xpod = 0.7169 inch
Classlength @ 90/95 Xpod = 0.0040 inch
Lower Confidence Bound = 0.3410 inch
Best LCL = 0.0040 inch
Classwidth @ Best LCL = 0.0040 inch
Classlength @ Best LCL = 0.3410 inch
User Provided a 90/95 POD =
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xo =
POD @ Xpod =

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.

Survey/Optimum Xpod = 1.2450 +/- 0.018 inch
Best LCL = 0.3410 inch
Largest Classlength, XL = 2.542 inch
Smallest Classlength, Xs = 0.0040 inch
New Smaller Classlength, Xss = 0.0040 inch
Best LCL Classlength, Xlcl = 0.3410 inch
POH Classlength, Xpoh = 1.2450 inch
New Largest Classlength, 2XL = 2.543 inch

False Call Rate = with UCL @ 95% =
Opt. POD classlength, Xpodopt = 1.245 inch
Classwidth @ 90/95 Xpod = 0.7169 inch
Classlength @ 90/95 Xpod = 0.0040 inch
Lower Confidence Bound = 0.3410 inch
Best LCL = 0.0040 inch
Classwidth @ Best LCL = 0.0040 inch
Classlength @ Best LCL = 0.3410 inch
User Provided a 90/95 POD =
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xo =
POD @ Xpod =

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.

Survey/Optimum Xpod = 1.2450 +/- 0.018 inch
Best LCL = 0.3410 inch
Largest Classlength, XL = 2.542 inch
Smallest Classlength, Xs = 0.0040 inch
New Smaller Classlength, Xss = 0.0040 inch
Best LCL Classlength, Xlcl = 0.3410 inch
POH Classlength, Xpoh = 1.2450 inch
New Largest Classlength, 2XL = 2.543 inch

False Call Rate = with UCL @ 95% =
Opt. POD classlength, Xpodopt = 1.245 inch
Classwidth @ 90/95 Xpod = 0.7169 inch
Classlength @ 90/95 Xpod = 0.0040 inch
Lower Confidence Bound = 0.3410 inch
Best LCL = 0.0040 inch
Classwidth @ Best LCL = 0.0040 inch
Classlength @ Best LCL = 0.3410 inch
User Provided a 90/95 POD =
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xo =
POD @ Xpod =

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.

Survey/Optimum Xpod = 1.2450 +/- 0.018 inch
Best LCL = 0.3410 inch
Largest Classlength, XL = 2.542 inch
Smallest Classlength, Xs = 0.0040 inch
New Smaller Classlength, Xss = 0.0040 inch
Best LCL Classlength, Xlcl = 0.3410 inch
POH Classlength, Xpoh = 1.2450 inch
New Largest Classlength, 2XL = 2.543 inch

False Call Rate = with UCL @ 95% =
Opt. POD classlength, Xpodopt = 1.245 inch
Classwidth @ 90/95 Xpod = 0.7169 inch
Classlength @ 90/95 Xpod = 0.0040 inch
Lower Confidence Bound = 0.3410 inch
Best LCL = 0.0040 inch
Classwidth @ Best LCL = 0.0040 inch
Classlength @ Best LCL = 0.3410 inch
User Provided a 90/95 POD =
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xo =
POD @ Xpod =

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.

Survey/Optimum Xpod = 1.2450 +/- 0.018 inch
Best LCL = 0.3410 inch
Largest Classlength, XL = 2.542 inch
Smallest Classlength, Xs = 0.0040 inch
New Smaller Classlength, Xss = 0.0040 inch
Best LCL Classlength, Xlcl = 0.3410 inch
POH Classlength, Xpoh = 1.2450 inch
New Largest Classlength, 2XL = 2.543 inch

False Call Rate = with UCL @ 95% =
Opt. POD classlength, Xpodopt = 1.245 inch
Classwidth @ 90/95 Xpod = 0.7169 inch
Classlength @ 90/95 Xpod = 0.0040 inch
Lower Confidence Bound = 0.3410 inch
Best LCL = 0.0040 inch
Classwidth @ Best LCL = 0.0040 inch
Classlength @ Best LCL = 0.3410 inch
User Provided a 90/95 POD =
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xo =
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 requirement removes the need to meet the adjacent Xm requirement.

***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 0.291.

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 = 0.0940 -0.001 Inch 20 Samples
NTIAC 90% POD = 0.940 @ 0.015 Inch
NTIAC 90/95 POD = 0.927 @ 0.020 Inch
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, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.094 Inch
Samples Needed @Xpodopt = 20
Xp = 0.0970 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. Extend flaw size range to 1.554.
Any highlighted Misses are RED and shown in Column A of this data sheet.

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

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

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.

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

Sample Analysis File name: DOEPOD_v1.2.01_PC.Office2010.Win7.xlsm

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

Analysis File name: DOEPOD_v1.2.01_PC.Office2010.Win7.xlsm

File Name = D9006(3)L.xls
Data Set Name = D9006(3)(CRACK)

Date & Time = 6/5/15 1:58 AM
Xpod 90/95 Reached Anywhere?
Class Width @ 90/95 Xpod =
Class Length @ 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 =
POD @ Xpod =

Best LCL Class Length, Xlcl =
Samples Needed @ Xlcl =
POH Class Length, Xpoh =
Samples Needed @ Xpoh =
New Largest Class Length, 2XL =

False Call Rate = with UCL @ 95% =

Survey/Optimum Xpoh = 0.000 Inch Samples

NTIAC 90% POD = 0.918 @ 0.030 Inch

NTIAC 90/95 POD = 0.903 @ 0.100 Inch

Largest Class Length , XL = 0.889 Inch
Samples Needed @ XL =
Class Length Mid-point , Xm = 0.742 Inch
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 = 0.6590 Inch

570
Although Xpod appears to have been reached at a point, there are misses at larger class lengths; this indicates that the POH function may 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>0.889</td>
<td>0.742</td>
<td></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 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>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</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.

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
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

DA001(3).xlsx Data Set Name = DA001(3)(CK. NO.)

Date & Time = 6/5/15 2:17 AM
Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.8931 inch
Best LCL = 0.0190 inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ =
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp =
POD @ Xpod =

BestLCL Classlength, Xlcl =
Sampler Needed @ Xlcl = 
POH Classlength, Xpoh =
Sampler Needed @ Xpoh = 
New Largest Classlength, 2XL =
Xm is Near Verification Point = 
Opt. POD classlength, Xpodopt =
Sampler Needed @ Xpodopt = 
Xp =

Class Length, Inch

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

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.

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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)

<table>
<thead>
<tr>
<th>Probability of Hit (POH), Lower Confidence Limit, LCL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xp, 90/95 POD, LCL</td>
</tr>
</tbody>
</table>

### Class Length, inch

<table>
<thead>
<tr>
<th>Class Length, inch</th>
<th>Samples Needed</th>
<th>Xp</th>
<th>Xpoh</th>
<th>2XL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.40</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.60</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.40</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.60</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Survey/Optimum Xpoh = 1.6920 - 0.500 inch

- **1.692** inch samples
- **false call rate** = 574

### False Call Rate = with UCL @ 95% =

- **Largest Classlength**, **XL** = 1.696 inch
- **Samples Needed @ XL** = 23 inch
- **Classlength Mid-point**, **Xm** = 1.696 inch
- **Samples Needed @ Xm** = 23 inch
- **Smallest Classlength**, **Xs** = 1.696 inch
- **Samples Needed @ Xs** = 23 inch
- **New Smaller Classlength**, **Xss** = 1.696 inch
- **Best LCL Classlength**, **Xlcl** = 1.696 inch
- **Samples Needed @ Xlcl** = 23 inch
- **POH Classlength**, **Xpoh** = 1.696 inch
- **Samples Needed @ Xpoh** = 23 inch
- **New Largest Classlength**, **2XL** = 1.696 inch
- **Xn is Near Verification Point** = 1.696 inch
- **Opt. POD classlength, Xpodopt** = 1.696 inch
- **Samples Needed @ Xpodopt** = 23 inch

### File Name = DA001(3)L.xls

### Date & Time = 6/5/15 2:19 AM

**NOT REACHED**

Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.8931 inch
Best LCL = 0.8931 inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = 0.8931 inch
User Provided a 90/95 POD = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ 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***
Warning: No false call analysis.

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

Survey/Optimum Xpoh = 0.2150 - 0.036 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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.

**Alternate Xm = 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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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. Extend flaw size range to 0.261.

Survey/Optimum Xpoh = 0.215
False Call Rate = with UCL @ 95% = 0.000
Opt. POD classlength, Xpof = 0.151

Small flaw size range to 0.261.

Large flaw validation failure. Extend flaw size range to 0.261.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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:** Large flaw validation failure. Need 15 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. 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.

### Analysis

- **File Name:** DA003(3)L.xls
- **Data Set Name:** DA003(3)L
- **Date & Time:** 6/5/15 2:24 AM
- **Xpod 90/95 Reached Anywhere?** REACHED
- **Classwidh @ 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**
- **POH Classlength, Xpoh**
- **New Largest Classlength, 2XL**
- **New Smaller Classlength, Xss**
- **BestLCL Classlength, Xcl**
- **POH Classlength, Xpoh**
- **Opt. POD classlength, Xpodopt**
- **Samples Needed @ Xpodopt**
- **Samples Needed @ Xp**
- **M. MLE Divergence Warning: Initial results listed.**
- **Warning:** No false call analysis.

### Graph

- **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**

### Table

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTIAC 90% POD</td>
<td>@ 0.900 inch</td>
</tr>
<tr>
<td>NTIAC 90/95 POD</td>
<td>@ 0.350 inch</td>
</tr>
<tr>
<td>False Call Rate</td>
<td>with UCL @ 95%</td>
</tr>
<tr>
<td>Largest Classlength, XL</td>
<td>1.696 inch</td>
</tr>
<tr>
<td>Samples Needed @ XL</td>
<td>17</td>
</tr>
<tr>
<td>Classlength Mid-point, Xm</td>
<td>0.560 inch</td>
</tr>
<tr>
<td>Samples Needed @ Xm</td>
<td>11</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>POH 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>Xm is Near Verification Point</td>
<td></td>
</tr>
<tr>
<td>Opt. POD classlength, Xpodopt</td>
<td>inch</td>
</tr>
<tr>
<td>Samples Needed @ Xpodopt</td>
<td></td>
</tr>
<tr>
<td>Samples Needed @ Xp</td>
<td></td>
</tr>
</tbody>
</table>

### Notes

- **DA003(3)L.xls**
- **Data Set Name:** DA003(3)L
- **File Name:** DA003(3)L.xls
- **Date & Time:** 6/5/15 2:24 AM

### Additional Information

- **Warning:** No false call analysis.
- **MLE Divergence Warning:** Initial results listed.
- **Warning:** 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. Follow sample selection priority in the DOEPOD Manual.

Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be 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**

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>No. Need</th>
<th>Xpod</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.9950</td>
<td>77</td>
<td>1.1880</td>
</tr>
<tr>
<td>0.9900</td>
<td>80</td>
<td>0.6220</td>
</tr>
<tr>
<td>0.9840</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>0.5400</td>
<td>127</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>Class Length</th>
<th>No. Need</th>
<th>Xpod</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.696</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>0.560</td>
<td>11</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.*

*Follow sample selection priority in the DOEPOD Manual.*

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

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

**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 = 0.470
False Call Rate = 0.000

Analysis File Name: DOEPOD.x1m
Data Set Name: DB001(3)(CK. NO.)
File Name = DB001(3)(D.xls)
Data Set Name = DB001(3)(D(CK. NO.))
Date & Time = 6/5/15 2:25 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 = inch
User Provided a 90/95 POD = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = 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 requirements.**

***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.

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.
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. 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*

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.235</td>
<td>14</td>
</tr>
<tr>
<td>Xm = 0.116</td>
<td>20</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>
<tbody>
<tr>
<td>0.1690</td>
<td>26</td>
</tr>
<tr>
<td>0.1510</td>
<td>67</td>
</tr>
<tr>
<td>0.1470</td>
<td>67</td>
</tr>
<tr>
<td>0.1380</td>
<td>52</td>
</tr>
<tr>
<td>0.1300</td>
<td>117</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.

File Name = D8002(3)XL.xls
Data Set Name = D8002(3)(LCL, NO.)
Date & Time = 6/5/15 2:29 AM

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod =
Classlength @ 90/95 Xpod =
Lower Confidence Bound @ 90/95 Xpod =
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 Xpoh = 0.000 Inch
Samples @ Xpoh =

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = 1.435 Inch
Samples Needed @ XL = 17
Classlength Mid-point, Xm = 1.085 Inch
Samples Needed @ Xm = 23
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 =

Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Need 16 more large flaws.

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 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.

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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>0.235</td>
</tr>
<tr>
<td>Xm</td>
<td>0.235</td>
</tr>
<tr>
<td>Xs</td>
<td>0.470</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**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.235</td>
</tr>
<tr>
<td>Xm</td>
<td>0.235</td>
</tr>
<tr>
<td>Xs</td>
<td>0.470</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>Number of Additional Samples Needed</th>
<th>File Name = DB003(3)D.xls</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td>Data Set Name = DB003(3)D(CK. NO.)</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 = 0.9920 -0.006 inch
26 Samples

- NTIC 90% POD = @ inch
- NTIC 90/95 POD = @ inch
- False Call Rate = with UCL @ 95% =
  - Largest Classlength , XL = 1.435 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
  - BestLCL Classlength, Xlcl = inch
  - Samples Needed @ Xlcl =
  - POD Classlength, Xpoh = 1.076 inch
  - Samples Needed @ Xpoh = 20
  - New Largest Classlength , 2XL = 2.870 inch
  - Xn is Near Verification Point =
  - Opt. POD classlength, Xpodopt = inch
  - Samples Needed @ Xpodopt =
  - Xp = inch

**File Name:** DB003(J)L.xls
**Data Set Name:** DB003(JL)(LK. NO.)
**Date & Time:** 6/5/15 2:31 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 @ Xp =
- POD @ Xp =

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 @ Xp =
- POD @ Xp =

**File Name:** DB003(J)L.xls
**Data Set Name:** DB003(JL)(LK. NO.)
**Date & Time:** 6/5/15 2:31 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 @ Xp =
- POD @ Xp =

**File Name:** DB003(J)L.xls
**Data Set Name:** DB003(JL)(LK. NO.)
**Date & Time:** 6/5/15 2:31 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 @ Xp =
- POD @ 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.**
### 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.

Warning: No false call analysis.

### Parameters
- **File Name:** DC0013JD.xls
- **Data Set Name:** DC0013JD(CK. NO.)
- **Date & Time:** 6/5/15 2:32 AM

**xpod 90/95 Reached Anywhere?**
- **Class Width @ 90/95 xpod:**
- **Lower Confidence Bound @ 95%**
- **Best LCL:**
- **Class Width @ Best LCL:**
- **Class Length @ Best LCL:**
- **User Provided a 90/95 POD:**
- **User's Maximum Allowed Class Length:**
- **POD @ xpod:**

**Probabilities of Hit (POH), Lower Confidence Bound (LCL):**
- **X pod, 90/95 POD:**
- **MLE (Mean) POD:**
- **MLE (95%) LCL:**

**Analysis**
- **Best LCL:**
- **Largest Class Length, XL:**
- **Samples Needed @ XL:**
- **Opt. POD class length, Xpodopt:**
- **False Call Rate:**
- **with UCL @ 95%:**

**Survey/Optimum xpod:**
- **Optimal POD:**
- **@ 0.000**
- **@ 0.030**
- **@ 0.040**

**False Call Rate:**
- **with UCL @ 95%:**
- **Largest Class Length:**
- **Samples Needed @ XL:**
- **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:**
- **Samples Needed @ Xpodopt:**
- **New Largest Class Length:**
- **Xn is Near Verification Point:**
- **Xm is Near Verification Point:**
- **Opt. POD class length, Xpodopt:**
- **Samples Needed @ Xpodopt:**

### CASE 1
- 90/95 xpod is reached. xpod used to satisfy XL and Xm requirements. xpod 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.***
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.

Survey/Optimum Xpoh = 0.000 inch @ 0.180 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 =
New Smaller Classlength, Xss =
Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =

Xp = 0.3480 inch

598
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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 3 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.

Survey/Optimum Xpoh = 0.276 inch

False Call Rate = 0.000 with UCL @ 95% = 0.060 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 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>0.2390</td>
<td>43</td>
</tr>
<tr>
<td>0.1870</td>
<td>55</td>
</tr>
<tr>
<td>0.1820</td>
<td>64</td>
</tr>
<tr>
<td>0.1790</td>
<td>37</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>0.2760</td>
<td>26</td>
</tr>
<tr>
<td>0.2150</td>
<td>17</td>
</tr>
<tr>
<td>0.1950</td>
<td>23</td>
</tr>
<tr>
<td>0.1930</td>
<td>23</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>0.276</td>
<td>26</td>
</tr>
<tr>
<td>0.215</td>
<td>17</td>
</tr>
<tr>
<td>0.193</td>
<td>23</td>
</tr>
<tr>
<td>0.193</td>
<td>23</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.
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 Inch Samples

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = 1.562 Inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 1.061 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 = 0.8950 Inch

**File Name**: DC002(3)L.xls
**Data Set Name**: DC002(3)L(CK. NO.)
**Date & Time**: 6/5/15 2:47 AM

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 =

DC002(3)(L).xls

**File Name**: DC002(3)L.xls
**Data Set Name**: DC002(3)L(CK. NO.)
**Date & Time**: 6/5/15 2:47 AM

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 =

DC002(3)(L).xls

**File Name**: DC002(3)L.xls
**Data Set Name**: DC002(3)L(CK. NO.)
**Date & Time**: 6/5/15 2:47 AM

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 =

DC002(3)(L).xls
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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</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>
<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>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>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>
<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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.
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.**
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.

### Detection Probability

Utilization of DOEPOD results requires approval of Engineering Authority.

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>POD (90/95)</td>
<td>0.9050</td>
</tr>
<tr>
<td>MLE (Mean) POD</td>
<td>0.903</td>
</tr>
<tr>
<td>MLE (95%) LCL</td>
<td>0.901</td>
</tr>
<tr>
<td>Best LCL</td>
<td>0.185 inch</td>
</tr>
<tr>
<td>Classwidth at Best LCL</td>
<td>0.3480 inch</td>
</tr>
<tr>
<td>Inspector Classwidth @ Xp</td>
<td>1.562 inch</td>
</tr>
<tr>
<td>User Provided 90/95 POD</td>
<td>0.185 inch</td>
</tr>
<tr>
<td>User's Maximum Allowed Classlength</td>
<td>0.235 inch</td>
</tr>
<tr>
<td>POD @ Xp</td>
<td>0.119 inch</td>
</tr>
</tbody>
</table>

#### 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**: 0.903 @ 0.185 inch
- **False Call Rate**: 0.000 with UCL @ 95% = 1.612 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 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>No Misses Observed</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>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>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table B*</th>
<th>No Misses Observed</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>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>
<td></td>
<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>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>
<tr>
<td><strong>Alternate Xm = Xpodopt</strong></td>
<td></td>
</tr>
</tbody>
</table>

File Name = DC003(3)L.xls
Data Set Name = DC003(3)L(CK. NO.)

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 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.**

**Survey/Optimum Xpoh** = 0.215 - 0.090 inch

**Samples Needed @ Xpoh** = 26

**False Call Rate** = with UCL @ 95%

- **Largest Classlength**, XL = 0.215 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 = 0.215 inch
- **Samples Needed @ Xpoh** = 26
- **New Largest Classlength**, 2XL = 0.430 inch
- **Xm is Near Verification Point** = inch
- **Opt. POD classlength**, Xpodopt = inch
- **Samples Needed @ Xpodopt** = inch

- **POH Classlength**, Xp = inch

**File Name** = DDO013(D).xls

**Data Set Name** = DDO013(D)(CK. NO.)

**Date & Time** = 6/5/15 3:00 AM

**Xpod 90/95 Reached Anywhere?**

- **Classwidth @ 90/95 Xpod** = inch
- **Classlength @ 90/95 Xpod** = inch
- **Lower Confidence Bound** = 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** =
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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 = 0.4950 -0.100 inch 26 Samples

NTIAC 90% POD = 0.900 @ 0.640 inch
NTIAC 90/95 POD =

False Call Rate = with UCL @ 95% =

Largest Classlength , XL = 0.495 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 = 0.495 inch
Samples Needed @ Xpoh = 26
New Largest Classlength , 2XL = 0.990 inch
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 0.9. Only largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

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

- **Survey/Optimum Xpoh**: 0.2970 inch
  - @ 0.370 inch
  - 26 samples

- **False Call Rate** with UCL @ 95% =
  - Largest Classlength, XL = 0.495 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 = 0.495 inch
  - Samples Needed @ Xpoh = 26
  - New Largest Classlength, 2XL = 0.990 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 = 0.495</td>
<td>26</td>
</tr>
<tr>
<td>Xm = 0.495</td>
<td></td>
</tr>
<tr>
<td>Xs = 0.500</td>
<td></td>
</tr>
<tr>
<td>Xss = 0.990</td>
<td>29</td>
</tr>
<tr>
<td>Xlcl = 0.990</td>
<td></td>
</tr>
<tr>
<td>Xpoh = 0.990</td>
<td></td>
</tr>
<tr>
<td>2XL = 0.990</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.

**Alternate Xm =**

Xpodopt =

---

* 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.
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

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, Xlcl = inch
Samples Needed @ Xlcl =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =
Xp = inch

File Name = DD003\3D.xls
Data Set Name = DD003\3D(CK. NO. )
Date & Time = 6/5/15 3:04 AM
Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.3152 inch
Best LCL = 0.0120 inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD =
User's Maximum Allowed Classlength = inch
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.

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

### Directed DOE Options

**Alternate Xm = Xpodopt =**

**Additional Samples**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.430</td>
<td>29</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.
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 = 0.4220 - 0.056 inch Samples
28

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = 0.422 inch
Samples Needed @ XL = 28
Classlength Mid-point, Xm = 0.844 inch
Samples Needed @ Xm = 28
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 = 0.422 inch
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.

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

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 = 0.422</td>
<td>28</td>
</tr>
<tr>
<td>Xm = 0.422</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 = 0.844</td>
<td>29</td>
</tr>
<tr>
<td>2XL = 28</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, Class</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE C**

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

---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may 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 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.**
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 = 0.000 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 =
- Best LCL Classlength, Xlcl =
- Samples Needed @ Xlcl =
- POD Classlength, Xpoh =
- Samples Needed @ Xpoh =
- New Largest Classlength, 2XL =
- Xn is Near Verification Point =
- Opt. POD classlength, Xpodopt =
- Samples Needed @ Xpodopt =
- Xp = inch

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 =
- Best LCL Classlength, Xlcl =
- Samples Needed @ Xlcl =
- POD Classlength, Xpoh =
- Samples Needed @ Xpoh =
- New Largest Classlength, 2XL =
- Xn is Near Verification Point =
- Opt. POD classlength, Xpodopt =
- Samples Needed @ Xpodopt =
- Xp = inch

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 =
- Best LCL Classlength, Xlcl =
- Samples Needed @ Xlcl =
- POD Classlength, Xpoh =
- Samples Needed @ Xpoh =
- New Largest Classlength, 2XL =
- Xn is Near Verification Point =
- Opt. POD classlength, Xpodopt =
- Samples Needed @ Xpodopt =
- Xp = inch

 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.

Survey/Optimum Xpoh = 0.8091 -0.092 Inch

28 Samples

False Call Rate =

NTIAC 90% POD =

0.809 inch

28

0.092 inch

False Call Rate = with UCL @ 95%

4.168 inch

Note: 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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

**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.**

---

**Directed DOE Options**

### TABLE C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.809</td>
<td>28</td>
</tr>
<tr>
<td>1.618</td>
<td>29</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)

Warning: No false call analysis.

MLE Divergence Warning: Initial results listed.

File Name = F10001BA.XLS
Data Set Name = F10001BA(CRACK #)
Date & Time = 6/5/15 3:14 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

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

Survey/Optimum Xpoh = 0.8091 -0.092 Inch
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
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
Xp =

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.**
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. Extend flaw size range to 1.74999.

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

File Name = F10002AA.XLS
Data Set Name = F10002AA(CRACK #)
Date & Time = 6/5/15 3:17 AM

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 Xpod = 0.5182 -0.001 inch
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
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths, this indicates that the POH function may be oscillatory. This needs to be checked.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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 2.03181.

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.

Largest Classlength , XL = 0.809 inch
Samples Needed @ XL = 45
Classlength Mid-point , Xm = 0.650 inch
Samples Needed @ Xm = 20
Smallest Classlength, Xs = 0.050 inch
Samples Needed @ Xs = 50
New Smaller Classlength, Xss = 0.010 inch
Best LCL Classlength, Xlcl = 0.595 inch
Samples Needed @ Xlcl = 120
POH Classlength, Xpoh = 0.595 inch
Samples Needed @ Xpoh = 120
New Larger Classlength , 2XL = 1.000 inch
Xn is Near Verification Point = False
Opt. POD classlength, Xpodopt = 0.595 inch
Samples Needed @Xpodopt = 120
False Call Rate = 0.000
Survey/Optimum Xpoh = 0.901 @ 0.595 inch

NTIAC 90% POD = 0.0660 inch
NTIAC 90/95 POD = 0.5833 inch

Warning: Large flaw validation failure. Extend flaw size range to 1.74999. Extend flaw size range to 1.74999.

Large flaw validation failure. Extend flaw size range to 1.74999.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.***

---

**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>1.618</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.

**F10003AA(XLS)**

F10003AA(CRACK #)
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)

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.

### File Name = F10003BA.XLS  
Data Set Name = F10003BA(Crack #)

<table>
<thead>
<tr>
<th>Date &amp; Time</th>
<th>6/5/15 3:25 AM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod 90/95 Reached Anywhere?</td>
<td>REACHED</td>
</tr>
<tr>
<td>Classwidth @ 90/95 Xpod</td>
<td>0.0900 inch</td>
</tr>
<tr>
<td>Lower Confidence Bound</td>
<td>0.0045 inch</td>
</tr>
<tr>
<td>Classlength @ 90/95 Xpod</td>
<td>0.9001 inch</td>
</tr>
<tr>
<td>Lower Confidence Bound</td>
<td>Best LCL</td>
</tr>
<tr>
<td>Classwidth @ 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></td>
</tr>
<tr>
<td>User's Maximum Allowed Classlength</td>
<td>inch</td>
</tr>
<tr>
<td>Inspector Classwidth @ Xp</td>
<td>1.0000</td>
</tr>
<tr>
<td>POD @ Xpod</td>
<td></td>
</tr>
</tbody>
</table>

### Table:

<table>
<thead>
<tr>
<th>POD @ Xpod</th>
<th>Survey/Optimum Xpoh</th>
<th>NTIAC 90% POD</th>
<th>NTIAC 90/95 POD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.809</td>
<td>0.902</td>
<td>0.435 inch</td>
<td>@ 0.435 inch</td>
</tr>
<tr>
<td>0.901</td>
<td>0.901</td>
<td>0.525 inch</td>
<td>@ 0.525 inch</td>
</tr>
<tr>
<td>False Call Rate with UCL @ 95%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Largest Classlength, XL =</td>
<td></td>
<td>0.809 inch</td>
<td></td>
</tr>
<tr>
<td>Samples Needed @ XL =</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classlength Mid-point, Xm =</td>
<td></td>
<td>0.600 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></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></td>
<td></td>
</tr>
<tr>
<td>BestLCL Classlength, Xcl =</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Samples Needed @ Xcl =</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>POH Classlength, Xpoh =</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Samples Needed @ Xpoh =</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt. POD classlength, Xpodopt =</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Largest Classlength, 2XL =</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xn is Near Verification Point Point =</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Samples Needed @ Xp =</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xp = 0.5333</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Diagram:

- **Probability of Hit (POH) in Class Range**
- **Lower Confidence Bound @ 95%**
- **Hit/Miss**

- **Xp, 90/95 POD**
- **MLE(Mean) POD**
- **MLE(95%) LCL**

### Notes:

- 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.

---

Case: 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.

**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**
- NTIAC 90% POD: 0.902 @ 0.435 inch
- NTIAC 90/95 POD: 0.901 @ 0.525 inch

**False Call Rate**
- with UCL @ 95%:
  - Largest Classlength, XL = 0.809 inch
  - Samples Needed @ XL =
  - Classlength Mid-point, Xm = 0.600 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 =
  - Xn is Near Verification Point =
  - Samples Needed @ Xp =
  - Xp = 0.5333 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.

**Alternate Xm = Xpodopt
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 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 = F10003CA.XLS
Data Set Name = F10003CA(CRACK #)

Date & Time = 6/5/15 3:26 AM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.082 inch
Classlength @ 90/95 Xpod = 0.600 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 =
POD @ Xpod =
POD @ Xp = 0.809 inch

Xp =
Class Length, inch
0.000 0.100 0.200 0.300 0.400 0.500 0.600 0.700 0.800 0.900
Probability of Hit (POH)
Lower Confidence Bound @ 95%
Warning: No false call analysis.

Survey/Optimum Xpoh = 0.5182 @ 0.001 inch 26 Samples
False Call Rate = 0.5182 - 0.001 inch
Survey/Optimum Xpoh = 0.901 @ 0.305 inch
NTIAC 90% POD = 0.901 @ inch
NTIAC 90/95 POD = 0.901 @ 0.635 inch

Warning: No false call analysis.

Classlength Mid-point, Xm =
Samples Needed @ Xm =
Smallest Classlength, Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xicl =
Samples Needed @ Xicl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
Xp = 0.600 inch

Prob(POH) in Class Range
Class Length, inch
0.000 0.100 0.200 0.300 0.400 0.500 0.600 0.700 0.800 0.900
Probability of Hit (POH)
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.***

<table>
<thead>
<tr>
<th>TABLE C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class Length</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>XL = 0.809</td>
</tr>
<tr>
<td>Xm = 0.683</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>
<tr>
<td><strong>Alternate Xm =</strong> Xpodopt = 0.592 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.***
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.

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

Survey/Optimum Xpod = 0.000 Inch

- NTIAC 90% POD = 0.0064 Inch
- NTIAC 90/95 POD = 0.0270 Inch
- False Call Rate = 0.000 with UCL @ 95%

- Largest Classlength, XL = 0.086 Inch
- Samples Needed @ XL = 6
- Classlength Mid-point, Xm = 0.0010 Inch
- Samples Needed @ Xm = 6
- Smallest Classlength, Xs = 0.0000 Inch
- Samples Needed @ Xs = 6
- New Smaller Classlength, Xss = 0.0000 Inch
- Best LCL Classlength, Xlcl = 0.0000 Inch
- Samples Needed @ Xlcl = 6
- POH Classlength, Xpoh = 0.0000 Inch
- Samples Needed @ Xpoh = 6
- New Largest Classlength, 2XL = 0.086 Inch
- Xn is Near Verification Point = False
- Opt. POD classlength, Xpodopt = 0.0000 Inch
- Samples Needed @ Xpodopt = 6

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.

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

***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>
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<tr>
<td>Xss</td>
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</tr>
<tr>
<td>Xlcl</td>
<td></td>
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<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>

**0.086**

**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.

---

* Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may 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.***
Probability of Hit (POH),
Lower Confidence Limit, LCL

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

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

File Name = F10601BL.XLS
Data Set Name = F10601BL(CRACK #)
Date & Time = 6/5/15 3:33 AM
Case 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

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

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

FILE NAME: F1060CD.XLS
DATE & TIME: 6/5/15 3:35 AM

NOT REACHED
Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = inch
Classwidth @ Best LCL = inch
Lower Confidence Bound = 0.0127 inch
Best LCL = 0.0010 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

PTAIC 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
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @ Xpodopt =

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 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)

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 - 0.001 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 =
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 = 0.042 Inch
Samples Needed @ Xpodopt = 29
Xp =

File Name = F10602AD.XLS
Data Set Name = F10602AD(CRACK #)
Date & Time = 6/5/15 3:37 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 =
Inspector Classwidth @ Xp =
POD @ Xpod = 1.0000

NTIAC 90% POD = 0.919 @ 0.040 Inch
NTIAC 90/95 POD = 0.914 @ 0.055 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.**
CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.

Warning: No false call analysis.

Survey/Optimum Xpoh = 0.2410 inch
False Call Rate = 0.2410

FILE NAME = F10602AL.XLS
FILE DATASET NAME = F10602AL(CRACK #)
Date & Time = 6/5/15 3:37 AM
Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.8931 inch
Best LCL = 0.8931 inch
Classwidth @ Best LCL = 0.2000 inch
Classlength @ Best LCL = 0.3420 inch
User Provided a 90/95 POD @ inch
User's Maximum Allowed Classlength @ inch
Inspector Classwidth @ Xp = inch
POD @ Xp = inch

Xp = 0.342 inch

NTIAC 90% POD = 0.907 @ 0.135 inch
NTIAC 90/95 POD = 0.901 @ 0.190 inch

Xpoh = 0.342 inch
XL = 0.342 inch
Xlcl = 0.342 inch
New Largest Classlength, 2XL = 0.684 inch

Prob. of Hit (POH) in Class Range

Class Length, inch

Probability of Hit (POH) in Class Range

Lower Confidence Bound @ 95%
Hit/Miss

MLE (Mean) POD
MLE (95%) LCL

Analysis File name: DOEPOD_v.1.2.01_PC.OFICE2010_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.

Survey/Optimum Xpod = 0.0350 - 0.001 Inch
22 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.

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

***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.

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.

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 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 \pm 0.001 inch

False Call Rate = with UCL @ 95% =

Latest Classlength, XL = 0.043 inch
Samples Needed @ XL = 0
Classlength Mid-point, Xm = 0.043 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, Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
NTIAC 90% POD = 0.913 @ 0.040 inch
NTIAC 90/95 POD = 0.901 @ 0.055 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.

### 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</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>0.042 29</td>
</tr>
<tr>
<td>Xpodopt</td>
<td></td>
</tr>
</tbody>
</table>

*File Name = F10602CD.XLS Data Set Name = F10602CD(CRACK #)*

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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 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>2</td>
</tr>
<tr>
<td>Xs = 0.342</td>
<td>2</td>
</tr>
<tr>
<td>Xss = 0.684</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 Occured □ 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.

---

667
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.*
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.**

- Xpod 90/95 Reached Anywhere? NOT REACHED
- Classwidth @ 90/95 Xpod = inch
- Classlength @ 90/95 Xpod = inch
- Lower Confidence Bound =
  - 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 =

- NTIAC 90% POD = @ inch
- NTIAC 90/95 POD = @ inch

**False Call Rate =** with UCL @ 95% =

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

**Analysis file name:** DOEPOD-v.1.2.01.F10603AL.XLS

**File Name =** F10603AL.XLS
**Data Name =** F10603AL(CRACK #)

**Date & Time =** 6/5/15 3:43 AM

- POD @ Xpod = 0.342 inch
- Samples Needed @ Xp = 2
- False Call Rate = 0.342
- 0.342 inch

**Survey/Optimum Xpoh = 0.2410 -0.100 inch 28 Samples**

**Problem:**
- XL = 0.904 inch
- Xcl = 0.907 inch
- Xmn = 0.095 inch
- Xp = 0.2410 inch
- Xmn = 0.125 inch
- Xp = 0.684 inch
- Xmn = 28 inch
- Xp = 670 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.
Large flaw validation failure. Extend flaw size range to 0.129.

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).

Warning: No false call analysis.

False Call Rate = with UCL @ 95%

Survey/Optimum Xpod = 0.0330 - 0.001 Inch  18 Samples

NTIAC 90% POD = 0.965 @ 0.025 Inch
NTIAC 90/95 POD = 0.932 @ 0.025 Inch

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

File Name = F10603BD.XLS
Data Set Name = F10603BD(CRACK #)
Date & Time = 6/5/15 3:45 AM
Xpod 90/95 Reached Anywhere? REACHED
Classwidth @ 90/95 Xpod = 0.0110 inch
Classlength @ 90/95 Xpod = 0.0430 inch
Lower Confidence Bound = 0.001
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 = 1.0000
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, 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 =

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 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>Xpod</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>0.042 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.

F10603BD.XLS

F10603BD(CRACK #)

Directed DOE Options

**No Misses Observed**

**At Least One Miss Occurred**

\( XL = \) 0.043

\( Xm = \) 0.043

\( Xs = \) 

\( Xss = \) 

\( Xlcl = \) 

\( Xpoh = \) 

\( 2XL = \) 

\( **Alternate Xm = \) 

\( Xpodopt = \) 0.042 29

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.
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 2Xo to extend VALIDATION. 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.

File Name = F10603BL.XLS
Data Set Name = F10603BL(CRACK #)
Date & Time = 6/5/15 3:45 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
Inspector Classwidth @ Xo
POD @ Xpod

Classwidth @ 90/95 Xpod
Classlength @ 90/95 Xpod
User's Maximum Allowed Classlength
Inspector Classwidth @ Xo
POD @ Xpod

Survey/Optimum Xpod = 0.0900 - 0.003 inch 27 Samples
NTIAC 90% POD = 0.903 @ 0.110 inch
NTIAC 90/95 POD = 0.905 @ 0.155 inch
False Call Rate = with UCL @ 95% =
Largest Classlength, XL = 0.342 inch
Samples Needed @ XL =
Classlength Mid-point, Xm = 0.315 inch
Samples Needed @ Xm = 0
Smallest Classlength, 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 = 0.2870 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.

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

**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 0.129.

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).

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.

---

**No Misses Observed**

**At Least One Miss Occurred**

**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)

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 = 0.2410 inch
False Call Rate = with UCL @ 95% =

File Name = F10603C.XLS
Data Set Name = F10603C(CRACK #)
Date & Time = 6/5/15 3:47 AM
Xpod 90/95 Reached Anywhere? = NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.8531 inch
Best LCL = 0.2000 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 = 0.342 inch
POD @ Xp =

Fit 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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

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.

**Alternate Xm = Xpodopt**
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)**

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

**Warning:** No false call analysis.

**File Name** = F12201AL.XLS

**Data Set Name** = F12201AL(CRACK #)

**Date & Time** = 6/5/15 3:50 AM

**NOT REACHED**

**Xpod 90/95 Reached Anywhere?**

- **Classwidth @ 90/95 Xpod** = inch
- **Classlength @ 90/95 Xpod** = inch
- **Lower Confidence Bound @ 95%**
  - **Best LCL** = 0.7411 inch
  - **Classwidth @ Best LCL** = inch
  - **Classlength @ Best LCL** = inch
- **User Provided a 90/95 POD @**
- **User's Maximum Allowed Classlength @**
- **POD @ Xpod** = inch

**Best LCL Classlength, Xlcl =** inch

- **New Largest Classlength, 2XL =** inch
- **Xm is Near Verification Point =**
- **Opt. POD classlength, Xpodopt =** inch

**Classwidth @ Xp =**

- **Classlength @ Xp =**

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

**TESTS**

- **MLE(Mean) POD =**
- **MLE(95%) LCL =**

**Largest Classlength , XL =**

- **Samples Needed @ XL =** 28

**Smallest Classlength, Xs =**

- **Samples Needed @ Xs =**

**New Smaller Classlength, Xss =**

- **Samples Needed @ Xss =**

**POH Classlength, Xpoh =**

- **Samples Needed @ Xpoh =**

**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 =**

- **Samples Needed @ Xss =**

**POH Classlength, Xpoh =**

- **Samples Needed @ Xpoh =**

**Largest Classlength , XL =** 0.610 inch

- **Samples Needed @ XL =** 28

**Opt. POD classlength, Xpodopt =**

- **Samples Needed @Xpodopt =**

**NTIAC 90% POD =**

- **With UCL @ 95% =**

**False Call Rate =**

- **with UCL @ 95% =**

**Samples Needed @ Xlcl =** 28

- **Xm is Near Verification Point =**

**Opt. POD classlength, Xpodopt =**

- **Samples Needed @Xpodopt =**

<table>
<thead>
<tr>
<th>Probability of Hit (POH) in Class Range</th>
<th>Lower Confidence Bound @ 95%</th>
<th>Hit/Miss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xp, 90/95 POD</td>
<td>MLE(Mean) POD</td>
<td>MLE(95%) LCL</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.

Survey/Optimum Xpoh = 0.1170 - 0.001 inch 26 Samples

NTIAC 90% POD = 0.913 @ 0.140 inch
NTIAC 90/95 POD = 0.908 @ 0.170 inch

False Call Rate = with UCL @ 95% = 0.1170 - 0.001 inch

Largest Classlength , XL = 0.178 inch
Samples Needed @ XL = 21
Classlength Mid-point , Xm = 0.178 inch
Samples Needed @ Xm = 21
Smallest Classlength, Xs = 0.178 inch
Samples Needed @ Xs = 21
New Smaller Classlength, Xss = 0.178 inch
BestLCL Classlength, Xlcl = 0.178 inch
Samples Needed @ Xlcl = 21
POH Classlength, Xpoh = 0.178 inch
Samples Needed @ Xpoh = 21
New Largest Classlength, 2XL = 0.356 inch
Xm is Near Verification Point = 0.356 inch
Opt. POD classlength, Xpodopt = 0.356 inch
Samples Needed @Xpodopt = 21
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.***

---

### Table C

<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></td>
</tr>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td>0.356</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.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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>
<thead>
<tr>
<th>TABLE A</th>
<th>TABLE B</th>
<th>TABLE C</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.979</td>
<td>Xpoh = 0.610</td>
<td>Xpodopt = 1.958</td>
</tr>
<tr>
<td>Xm = 0.610</td>
<td>XL = 1.958</td>
<td><strong>Alternate Xm</strong> = Xpodopt =</td>
</tr>
<tr>
<td>Xs = 1.958</td>
<td><strong>Alternate Xm</strong> = Xpodopt =</td>
<td></td>
</tr>
<tr>
<td>Xss =</td>
<td><strong>Alternate Xm</strong> = Xpodopt =</td>
<td></td>
</tr>
<tr>
<td>Xlcl =</td>
<td><strong>Alternate Xm</strong> = Xpodopt =</td>
<td></td>
</tr>
<tr>
<td><strong>Alternate Xm</strong> = Xpodopt =</td>
<td><strong>Alternate Xm</strong> = Xpodopt =</td>
<td></td>
</tr>
</tbody>
</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.

Table C

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpoh</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td>0.356 29</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =

Table C*

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

F12201CD.XLS

F12201CD(CRACK #)

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.

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 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>Xs</th>
<th>Xss</th>
<th>XL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.178</td>
<td>0.178</td>
<td>0.356</td>
<td>5</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>0.178</td>
<td>5</td>
</tr>
<tr>
<td>0.178</td>
<td>5</td>
</tr>
<tr>
<td>0.356</td>
<td>29</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =**

![Directed DOE Options](image)

**TABLE C**

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>Xs</th>
<th>Xss</th>
<th>XL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.178</td>
<td>0.178</td>
<td>0.356</td>
<td>5</td>
</tr>
</tbody>
</table>

File Name = F12202AD.XLS
Data Set Name = F12202AD(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.**
**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.

**Survey/Optimum Xpoh =** 0.4990 - 0.003 inch Samples = 28

**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
- POD Classlength, Xpoh = 0.568 inch
- Samples Needed @ Xpoh = 9
- New Largest Classlength, 2XL = inch
- Xn is Near Verification Point = inch
- Opt. POD classlength, Xpodopt = inch
- Samples Needed @ Xpodopt = inch

**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 =** inch
**Classlength @ 90/95 Xpod =** inch
**Lower Confidence Bound =**
- Best LCL = 0.8609 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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.

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

Warning: No false call analysis.

File Name = F12202BD.XLS
Data Set Name = F12202BD(CRACK #)
Date & Time = 6/5/15 4:01 AM
Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.8739 inch
Best LCL = 0.0750 inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ inch
User’s Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod =

User Provided a 90/95 POD @ =
User’s Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod =

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

False Call Rate =

False Call Rate =

Survey/Optimum Xpoh = 0.1110 @ 0.090 inch
NTIAC 90% POD = 0.912 @ 0.090 inch
NTIAC 90/95 POD = 0.904 @ 0.115 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. Extend flaw size range to 1.617.

Note: Xpodopt is within one class width of Xpod.
Warning: No false call analysis.

FILE NAME = F12202BL.XLS
DATA SET NAME = F12202BL(CRACK #)

Date & Time = 6/5/15 4:02 AM
Xpod 90/95 Reached Anywhere? = REACHED
Classwidth @ 90/95 Xpod = 0.200 inch
Classlength @ 90/95 Xpod = 0.5390 inch
Lower Confidence Bound = 0.9152 inch
Best LCL = inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD = Inch
POD @ Xpod = 1.0000

User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod = 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.

Survey/Optimum Xpoh = 0.3400 inch @ 0.001 Inch 28 Samples
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 = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xicl =
Samples Needed @ Xicl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.537 inch
Samples Needed @Xpodopt = 29
Xp = 0.5390 inch

FILE NAME = F12202BL.XLS
DATA SET NAME = F12202BL(CRACK #)

Date & Time = 6/5/15 4:02 AM
Xpod 90/95 Reached Anywhere? = REACHED
Classwidth @ 90/95 Xpod = 0.200 inch
Classlength @ 90/95 Xpod = 0.5390 inch
Lower Confidence Bound = 0.9152 inch
Best LCL = inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD = Inch
POD @ Xpod = 1.0000

User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod = 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.

Survey/Optimum Xpoh = 0.3400 inch @ 0.001 Inch 28 Samples
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 = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xicl =
Samples Needed @ Xicl =
POH Classlength, Xpoh =
Samples Needed @ Xpoh =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.537 inch
Samples Needed @Xpodopt = 29
Xp = 0.5390 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 = 0.537 29**

---

<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 = 0.710</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>

**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>
<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>29</td>
<td>Xlcl</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 (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 =

- NTIC 90% POD = 0.906 @ 0.125 inch
- NTIC 90/95 POD = 0.904 @ 0.185 inch

False Call Rate =

- 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, Xpoodpt = inch
- Samples Needed @Xpoodpt =

File Name = F12202CD.XLS
Data Set Name = F12202CD(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.
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 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**
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 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>0.178</td>
</tr>
<tr>
<td>Xm</td>
<td>0.178</td>
</tr>
<tr>
<td>Xs</td>
<td>0.178</td>
</tr>
<tr>
<td>Xss</td>
<td>0.356</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>

**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 Xpod, Class Length No. Need

Table C:

<table>
<thead>
<tr>
<th>Number of Additional Samples Needed</th>
<th>Class Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>35.00</td>
<td>28</td>
</tr>
<tr>
<td>30.00</td>
<td>28</td>
</tr>
<tr>
<td>25.00</td>
<td></td>
</tr>
<tr>
<td>20.00</td>
<td></td>
</tr>
<tr>
<td>15.00</td>
<td></td>
</tr>
<tr>
<td>10.00</td>
<td></td>
</tr>
<tr>
<td>5.00</td>
<td></td>
</tr>
<tr>
<td>0.00</td>
<td></td>
</tr>
</tbody>
</table>

**No Misses Observed**

**At Least One Miss Occurred**

Δ XL

○ Xm

○ Xs

○ Xss

△ Xlcl

△ Xpoh

▲ 2XL

△ Xpod

◆ Xpodopt
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.

![Directed DOE Options](image_url)

### 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>1.220</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.
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.

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.

File Name = F12203BD.XLS
Data Set Name = F12203BD
Date & Time = 6/5/15 4:10 AM

Xpod 90/95 Reached Anywhere? REACHED
Class width @ 90/95 Xpod = 0.0430 inch
Lower Confidence Bound = 0.9001
Best LCL = 0.0430 inch
Class length @ Best LCL = 0.1190 inch
User Provided a 90/95 POD =
User's Maximum Allowed Class length =
Inspector Class width @ Xp =
POD @ Xpod = 1.0000

User Provided a 90/95 POD @ =
User's Maximum Allowed Class length =
Inspector Class width @ Xp =
POD @ Xpod =

False Call Rate = with UCL @ 95% =
Largest Class length , XL = 0.178 inch
Samples Needed @ XL =
Class length Mid-point , Xm = 0.149 inch
Samples Needed @ Xm = 29
Smallest Class length, Xs =
New Smaller Class length, Xss =
BestLCL Class length, Xcl =
Samples Needed @ Xcl =
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

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 1.605.

**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.

---

**File Name:** F12203BL.XLS  
**Data Set Name:** F12203BL(CRACK #)  
**Date & Time:** 6/5/15 4:11 AM

<table>
<thead>
<tr>
<th>Xp, 90/95 POD</th>
<th>Class Length, inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.610</td>
<td>0.568</td>
</tr>
<tr>
<td>0.529</td>
<td>0.333</td>
</tr>
</tbody>
</table>

**Survey/Optimum Xpoh**

<table>
<thead>
<tr>
<th>NTIAC 90% POD</th>
<th>@</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.902</td>
<td>0.305</td>
</tr>
</tbody>
</table>

**NTIAC 90/95 POD**

<table>
<thead>
<tr>
<th>@</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.902</td>
</tr>
</tbody>
</table>

**False Call Rate**

<table>
<thead>
<tr>
<th>with UCL @ 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.610 inch</td>
</tr>
<tr>
<td>0.568 inch</td>
</tr>
</tbody>
</table>

**POH Classlength, Xpoh**

<table>
<thead>
<tr>
<th>@</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.529 inch</td>
</tr>
</tbody>
</table>

**New Largest Classlength, 2XL**

<table>
<thead>
<tr>
<th>@</th>
</tr>
</thead>
<tbody>
<tr>
<td>29 inch</td>
</tr>
</tbody>
</table>

**Xp**

<table>
<thead>
<tr>
<th>@</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.3330 -0.001 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 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

NTIAC 90% POD = 0.933 @ 0.055 inch
NTIAC 90/95 POD = 0.929 @ 0.065 inch

False Call Rate = with UCL @ 95% = 0.178 inch

Largest Classlength, XL = 0.178 inch
Samples Needed @ XL = 17

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 = 0.178 inch
Samples Needed @ Xpoh = 17

New Largest Classlength, 2XL = 0.356 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)
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may 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.

<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>0.610 inch</td>
</tr>
</tbody>
</table>

### Analysis File Name: DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsx

**Date & Time:** 6/5/15 4:14 AM

**Xpod 90/95 Reached Anywhere?** ReACHED

- **Classwidth @ 90/95 Xpod:** 0.2000 inch
- **Classlength @ 90/95 Xpod:** 0.5190 inch
- **Lower Confidence Bound @ 95% Best LCL:** 0.9253 inch
- **Classwidth @ Best LCL:** 0.300 inch
- **Classlength @ Best LCL:** 0.415 inch
- **User Provided a 90/95 POD @ POD @ Xpod:** 1.0000 inch

**User’s Maximum Allowed Classlength:** Not specified

**Inspector Classwidth @ Xp:** 0.2000 inch

**POD @ Xpod:** 0.610 inch

**Largest Classlength, XL =** 1.0000 inch

**Samples Needed @ XL =** 29

**Classlength Mid-point, Xm =** 0.519 inch

**Samples Needed @ Xm =** 28

**Smallest Classlength, Xs =** 0.3210 inch

**New Smaller Classlength, Xss =** 0.300 inch

**BestLCL Classlength, Xlcl =** Not specified

**Samples Needed @ Xlcl =** Not specified

**POH Classlength, Xpoh =** Not specified

**New Larger Classlength, 2XL =** Not specified

**Xn is Near Verification Point =** Not specified

**Opt. POD classlength, Xpodopt =** 0.519 inch

**Samples Needed @Xpodopt =** 29

**Samples Needed @ Xp =** 0.5190 inch

**Survey/Optimum Xp =** 0.3210 inch @ 0.002 inch

**NTIAC 90% POD =** 0.901 inch @ 0.300 inch

**NTIAC 90/95 POD =** 0.902 inch @ 0.415 inch

**False Call Rate =** Not specified

**with UCL @ 95% =** Not specified

**Largest Classlength , XL =** 0.610 inch

**Samples Needed @ XL =** Not specified

**Classlength Mid-point , Xm =** 0.543 inch

**Samples Needed @ Xm =** Not specified

**Smallest Classlength, Xs =** Not specified

**New Smaller Classlength, Xss =** Not specified

**BestLCL Classlength, Xlcl =** Not specified

**Samples Needed @ Xlcl =** Not specified

**POH Classlength, Xpoh =** Not specified

**New Larger Classlength, 2XL =** Not specified

**Xn is Near Verification Point =** Not specified

**Opt. POD classlength, Xpodopt =** 0.519 inch

**Samples Needed @Xpodopt =** 29

**Samples Needed @ Xp =** 0.5190 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.**

**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.

File Name = F20002AA.XLS
Data Set Name = F20002AA(Crack #)
Date & Time = 6/5/15 4:16 AM

Xpod 90/95 Reached Anywhere? Not Reached
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.6518 inch
Best LCL = 0.6518 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 =

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.

**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)

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.

- XL = 0.655
- Xm = 0.564
- Xs = 1.309
- Xss = 27
- Xlcl = 28
- Xpoh = 29
- **Alternate Xm = Xpodopt**

---

![Directed DOE Options](image_url)
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 = 0.0540 inch
False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 0.054 inch
Samples Needed @ XL = 28
Classlength Mid-point , Xm = 0.108 inch
Samples Needed @ Xm = 28
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
Best LCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh = 0.054 inch
Samples Needed @ Xpoh = 28
New Largest Classlength , 2XL = 0.108 inch
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @Xpodopt =
Xp = 0.054 inch

Prob of Hit (POH) in Class Range

- 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 resolved first.

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

**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>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>XL</td>
<td>Xm</td>
<td>Xs</td>
<td>Xss</td>
<td>Xlcl</td>
<td>Xpoh</td>
<td>2XL</td>
<td>Xpod</td>
<td>Xpodopt</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

TABLE C
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>0.768 29</td>
</tr>
</tbody>
</table>

*File Name = F20852AL.XLS*

**Data Set Name = F20852AL(CRACK #)**
### Detection Probability

Utilization of DOEPOD results requires approval of Engineering Authority.

**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:** 0.0480 -0.001 inch
- **Samples Needed:** 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
- **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:**
- **Opt. POD classlength, Xpodopt:** inch

### Graphical Representation

- **File Name:** F20852BD.XLS
- **Data Set Name:** F20852BD(CRACK #)
- **Date & Time:** 6/5/15 4:22 AM
- **File Name:** DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsm

### Table

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probability of Hit (POH) in Class Range</td>
<td>0.905</td>
</tr>
<tr>
<td>Lower Confidence Bound @ 95%</td>
<td>0.130</td>
</tr>
<tr>
<td>Hit/Miss</td>
<td>0.0480</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>0.0100</td>
</tr>
<tr>
<td>Best LCL</td>
<td>0.0540</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><strong>Classwidth @ Best LCL</strong></td>
<td>0.4931</td>
</tr>
<tr>
<td><strong>Classlength @ Best LCL</strong></td>
<td>0.0100</td>
</tr>
<tr>
<td><strong>User's Maximum Allowed Classlength</strong></td>
<td>0.0540</td>
</tr>
<tr>
<td><strong>Best LCL</strong></td>
<td>inch</td>
</tr>
<tr>
<td><strong>Largest Classlength, XL</strong></td>
<td>inch</td>
</tr>
<tr>
<td><strong>Samples Needed @ XL</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Classlength Mid-point, Xm</strong></td>
<td>inch</td>
</tr>
<tr>
<td><strong>Samples Needed @ Xm</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Smallest Classlength, Xs</strong></td>
<td>inch</td>
</tr>
<tr>
<td><strong>New Smaller Classlength, Xss</strong></td>
<td>inch</td>
</tr>
<tr>
<td><strong>Best LCL Classlength, Xlcl</strong></td>
<td>inch</td>
</tr>
<tr>
<td><strong>Samples Needed @ Xlcl</strong></td>
<td></td>
</tr>
<tr>
<td><strong>POH Classlength, Xpoh</strong></td>
<td>inch</td>
</tr>
<tr>
<td><strong>Samples Needed @ Xpoh</strong></td>
<td></td>
</tr>
<tr>
<td><strong>New Largest Classlength, 2XL</strong></td>
<td>inch</td>
</tr>
<tr>
<td><strong>Xn is Near Verification Point</strong></td>
<td>inch</td>
</tr>
<tr>
<td><strong>Opt. POD classlength, Xpodopt</strong></td>
<td>inch</td>
</tr>
<tr>
<td><strong>Samples Needed @ Xpodopt</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Diagram

- **Analysis File name:** DOEPOD_v1.2.01.PC.Office2010.Win7.xlsm
- **Analysis File name:** DOEPOD_v1.2.01.PC.Office2010.Win7.xlsm
- **Analysis File name:** DOEPOD_v1.2.01.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.

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

***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

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>0.384</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>0.384</td>
</tr>
<tr>
<td>Xpoh</td>
<td>0.384</td>
</tr>
<tr>
<td>2XL</td>
<td>0.768</td>
</tr>
<tr>
<td><strong>Alternate Xm</strong></td>
<td><strong>Xpodopt</strong></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>Xpod,Class</td>
<td>X pod</td>
</tr>
</tbody>
</table>

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

---

**Directed DOE Options**

**TABLE C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.384</td>
<td>24</td>
</tr>
<tr>
<td>0.384</td>
<td>24</td>
</tr>
<tr>
<td>0.384</td>
<td>29</td>
</tr>
<tr>
<td><strong>Alternate Xm</strong></td>
<td><strong>Xpodopt</strong></td>
</tr>
</tbody>
</table>

**Number of Additional Samples Needed**

- F20852BL.XLS
- F20852BL(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.**
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>Survey/Optimum Xpoh</td>
<td>0.0480 -0.001 Inch</td>
</tr>
<tr>
<td>False Call Rate with UCL @ 95%</td>
<td>0.0480 -0.001 Inch</td>
</tr>
<tr>
<td>NTIAC 90% POD</td>
<td>0.908 @ 0.095 Inch</td>
</tr>
<tr>
<td>NTIAC 90/95 POD</td>
<td>@ Inch</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>POH 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>

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 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 = 0.108**

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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>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>

<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 Xpoh = 0.3840 - 0.011 Inch 28 Samples

False Call Rate = with UCL @ 95% =

Largest Classlength , XL = inch
Samples Needed @ XL =
Classlength Midpoint , Xm = inch
Samples Needed @ Xm =
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 =

732
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may 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.

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 = 0.1440 inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod =

Xp = 0.144 inch

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 28 Samples

False Call Rate = with UCL @ 95% =

Largest Classlength, XL = 0.144 inch
Samples Needed @ XL = 22
Classlength Mid-point, Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xicl = 0.136 inch
Samples Needed @ Xicl = 23
POH Classlength, Xpoh = 0.144 inch
Samples Needed @ Xpoh =
New Largest Classlength, 2XL = 0.288 inch
Xm is Near Verification Point =
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.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.

False Call Rate = 0.5380 -0.003 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, 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 =

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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.

File Name = F220328.XLS
Data Set Name = F220328(CRACK #)
Date & Time = 6/15/15 4:29 AM

Xpod 90/95 Reached Anywhere? NOT REACHED
Class width @ 90/95 Xpod inch
Lower Confidence Bound @ 95% inch
Best LCL = 0.0200 inch
Class Length @ Best LCL = 0.4920 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 = 0.5380 -0.003 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, Xlcl =
Samples Needed @ Xlcl =
POD @ Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength, 2XL = inch
Xm is Near Verification Point =
Opt. POD class length, Xpoodp = inch
Samples Needed @ Xpoodp =

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>
<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 = Xs = Xss = Xlcl = Xpoh = 2XL = 1.100 29</td>
</tr>
<tr>
<td><strong>Alternate Xm</strong> = Xpodopt =</td>
<td></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>
</table>

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

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

### File Name = F220208L.xls  
Data Set Name = F220208l(CRACK #)

![Graph showing directed DOE options with Xpod values and additional sample needs](image-url)

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

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

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

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

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

**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 Xpoe 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.**
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.

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

***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.

KOLODO.v.1.2.01.PC.Office2010.Win7.xls File name:

Warning: No false call analysis.

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

File Name = F30651AD.XLS
Data Set Name = F30651AD
Date & Time = 6/5/15 4:33 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 0.7411 inch
Classwidth @ Best LCL 0.0140 inch
Classlength @ Best LCL 0.0510 inch
User Provided a 90/95 POD @ inch
User's Maximum Allowed Classlength inch
Inspector Classwidth @ Xp inch
POD @ Xpod 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, Xicl inch
Samples Needed @ Xicl 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
Xp inch

POH Classlength, Xpoh inch

Survey/Optimum Xpoh = 0.000 inch
(0.050 samples)
(0.110 inch)

NTIAC 90% POD = 0.900 @ 0.050 inch
NTIAC 90/95 POD = 0.901 @ 0.110 inch

F30651AD(CRK #)

746
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.

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

**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 Xpoh = 0.3200 inch

False Call Rate = 0.3200 - 0.002

with UCL @ 95% = 0.3200 - 0.002

Analysis file name: DOEPOD_v1.2.01_PC_06022010_Win7.xlsm

Warning: No false call analysis.

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

Survey/Optimum Xpoh = 0.3200 inch

False Call Rate = 0.3200 - 0.002

with UCL @ 95% = 0.3200 - 0.002

Analysis file name: DOEPOD_v1.2.01_PC_06022010_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 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

Survey/Optimum Xpoh = 0.912 @ 0.050 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
Opt. LCL Classlength, Xlcl =
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
Although Xpod appears to have been reached at a point, there are misses at larger class lengths. This indicates that the POH function may 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>Xs =</td>
<td>Xss =</td>
</tr>
<tr>
<td>Xlcl =</td>
<td>Xpoh =</td>
<td>2XL = 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.

<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.
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 = 0.3200 ± 0.002 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, Xicl = inch
Samples Needed @ Xicl =
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 = F30651BL.XLS
Data Set Name = F30651BL(CRK #)
Date & Time = 6/5/15 4:36 AM
Xpod 90/95 Reached Anywhere? = NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = Best LCL = inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ =
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod =

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

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 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>
</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 =** F30651CD.XLS

**Data Set Name =** F30651CD(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.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

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

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

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

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

***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 = 0.0510 -0.003 inch
samples = 28

Possible POD classlength, Xpoh = 0.100 inch
samples = 28

New Largest Classlength, 2XL = 0.200 inch
samples = 28

Opt. POD classlength, Xpodopt = 0.0510 inch
samples = 28

False Call Rate = 0.0510 -0.003 inch
samples = 28

---

File Name = F30633AD.XLS
Data Set Name = F30633AD(CRK #)
Date & Time = 6/5/15 4:40 AM
Xpod 90/95 Reached Anywhere? = NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = Best LCL = 0.7791 inch
Classwidth @ Best LCL = inch
Classlength @ Best LCL = 0.0050 inch
User Provided a 90/95 POD = inch
User's Maximum Allowed Classlength = inch
Inspector Classwidth @ Xp = inch
POD @ Xpod =

---

POH Classlength, Xpoh = 0.100 inch
samples = 28

New Smaller Classlength, Xss = 0.0060 inch
samples = 28

Best LCL Classlength, XLcl = 0.0060 inch
samples = 28

Largest Classlength, XL = 0.200 inch
samples = 28

Classwidth @ Best LCL = 0.100 inch
samples = 28

Classwidth @ Xp = 0.100 inch
samples = 28

Classlength @ Best LCL = 0.0060 inch
samples = 28

Classlength @ Xp = 0.100 inch
samples = 28

Classlength @ Xss = 0.0060 inch
samples = 28

Classlength @ XLcl = 0.0060 inch
samples = 28

Classlength @ Xpoh = 0.100 inch
samples = 28

Classlength @ 2XL = 0.200 inch
samples = 28

---

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

---

Analysis file name: DOEPOD_v.1.2.0.1_PCD.Pro.ex2010.Wi7.xlsx
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 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>0.150</td>
</tr>
<tr>
<td>Xs</td>
<td>0.200</td>
</tr>
<tr>
<td>Xss</td>
<td>0.250</td>
</tr>
<tr>
<td>Xlcl</td>
<td>0.100</td>
</tr>
<tr>
<td>Xpoh</td>
<td>0.200</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt**

---

### Diagram

- 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.***
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
BestLCL Classlength, Xcll =
Samples Needed @ Xcll =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @Xpodopt = inch

0.000 0.050 0.100 0.150 0.200 0.250 0.300 0.350 0.400 0.450 0.500 0.550 0.600 0.650 0.700 0.750 0.800 0.850 0.900 0.950 1.000
0.000 0.050 0.100 0.150 0.200 0.250 0.300 0.350 0.400 0.450 0.500 0.550 0.600 0.650 0.700 0.750 0.800 0.850 0.900 0.950 1.000

Analysis file name: DOEPOD_v.1.2.01_PC.06062010.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.
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.

**Alternate Xm = Xpodopt**
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. It 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>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>Xpodopt =</td>
</tr>
</tbody>
</table>

<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>No Additional Need</td>
<td>No Additional Need</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></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**

| 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>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. It 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.
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 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 0.100 28
Xm 0.100 28
Xs 0.200 29
Xss 0.200 29
Xlcl 0.200 29
Xpoh 0.200 29

*Although Xpod appears to have been reached at a point, there are XMisses at larger class lengths this indicates that the POH function may be oscillatory. This needs to be checked. The class lengths listed in Table A exhibited misses and resulted in LCL below 0.90. Only largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual.

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

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

***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 =** F30653CL.XLS  
**Data Set Name =** F30653CL(CRK #)

**Date & Time =** 6/5/15 4:46 AM

**Xpod 90/95 Reached Anywhere?**  
**Classwidth @ 90/95 Xpod =** inch  
**Lower Confidence Bound @ 95% =** inch

**Best LCL =** 0.7411 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 =**

 carrera  

**Survey/Optimum Xpoh =**

**False Call Rate =** with UCL @ 95% =

**NTIAC 90% POD =** @ 0.900 inch

**NTIAC 90/95 POD =** @ 0.730 inch

**Opt. POD classlength, Xpodopt =** inch

**New Largest Classlength, 2XL =** inch

**Xm is Near Verification Point =**

**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

**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

**Classwidth @ 90/95 Xpod =** inch

**Classlength @ 90/95 Xpod =** inch

**Lower Confidence Bound =**

**Best LCL =** 0.7411 inch  
**Classwidth @ Best LCL =** inch  
**Classlength @ Best LCL =** inch

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.

### 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>
<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></td>
<td>2XL</td>
<td>0.814</td>
</tr>
<tr>
<td>Xm</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>
<tr>
<td><strong>Alternate Xm</strong></td>
<td>Xpod opt</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*File Name = F30653CL.XLS
Data Set Name = F30653CL(CRK #)

---

**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 = 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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

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

---

769
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 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 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 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.**
Warning: No false call analysis.

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

Survey/Optimum Xpod = 0.0760 - 0.007 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
BestLCL Classlength, Xlcl =
Samples Needed @ Xlcl =
POH Classlength, Xpoh = inch
Samples Needed @ Xpoh =
New Largest Classlength , 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = inch
Samples Needed @Xpodopt =

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

Survey/Optimum Xpod = 0.0760 - 0.007 inch 28 Samples
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.
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

File Name = F32251BL.XLS
Data Set Name = F32251BL(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 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 =

Warning: No false call analysis.

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

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

Class Length, inch

Classwidth @ 90/95 Xpod inch
Classlength @ 90/95 Xpod inch
Lower Confidence Bound = 0.2486 inch
Best LCL = 0.0870 inch
Classlength @ Best LCL = 0.3520 inch
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp =
POD @ Xpod =

Survey/Optimum Xpod = 0.3200 -0.044 inch 28 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 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>0.704 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.

Xpod,Class Length No. Need Xpod,Class Length No. Need

No Misses Observed □ At Least One Miss Occured ▲ 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.

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, 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 =

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.

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

File Name = F32251C.XLS
Data Set Name = F32251C(CRK #)
Date & Time = 6/5/15 4:55 AM

Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod inch
Classlength @ 90/95 Xpod inch
Lower Confidence Bound 0.2486 inch
Best LCL 0.0870 inch
Classlength @ Best LCL 0.3520 inch
User Provided a 90/95 POD inch
User's Maximum Allowed Classlength inch
Inspector Classwidth @ Xp inch
POD @ Xpod inch

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

Survey/Optimum Xpoh @ 0.3200 -0.044 inch 28 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 inch
Samples Needed @ Xpodopt

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.**
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 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>0.370</td>
<td>27</td>
</tr>
<tr>
<td>Xm</td>
<td>0.370</td>
<td>27</td>
</tr>
<tr>
<td>Xs</td>
<td>0.740</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>No. Need</th>
<th>Xpod,Class Length</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>No. Need</th>
<th>Xpod,Class Length</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.*

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787
Warning: No false call analysis.

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

Survey/Optimum Xpoh = 0.3520 ± 0.031 Inch  28 Samples

NTIAC 90% POD = 0.901 ± 0.365 Inch
NTIAC 90/95 POD = 0.900 ± 0.695 Inch

False Call Rate = # with UCL @ 95% =
Largest Classlength, XL = 0.370 Inch
Samples Needed @ XL = 27
Classlength Mid-point, XM = 0.365 Inch
Samples Needed @ XM =
Smallest Classlength, XS =
Samples Needed @ XS =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl =
Sampes Needed @ Xlcl =
POH Classlength, Xpoh = 0.370 Inch
Samples Needed @ Xpoh = 27
New Largest Classlength, 2XL = 0.740 Inch
XM is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =
Xp = 0.370 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.

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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.

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

**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.

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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.

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

***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 = 0.3700 inch
False Call Rate = with UCL @ 95%

Analysis file name: DOEPOD.v.1.2.01_PC.DBS2010.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 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 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.

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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.

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

***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**

<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>XID</td>
<td></td>
</tr>
<tr>
<td>XPOH</td>
<td></td>
</tr>
<tr>
<td>2XL</td>
<td>0.496</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)

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.

**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>0.496</td>
</tr>
</tbody>
</table>

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

**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

<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>0.496</td>
<td>29</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.**
CASE 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpoh = 0.1343 inch
False Call Rate = 0.001
Chi Squared = 0.001

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>Xlcl</th>
<th>Xl</th>
<th>Xs</th>
<th>Xss</th>
<th>Xlcl</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.248</td>
<td>28</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.175</td>
<td>28</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>Xlcl</th>
<th>Xl</th>
<th>Xs</th>
<th>Xss</th>
<th>Xlcl</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.496</td>
<td>29</td>
<td></td>
<td></td>
<td></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>0.248</td>
<td>28</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>0.175</td>
<td>28</td>
</tr>
<tr>
<td>2XL</td>
<td>0.496</td>
<td>29</td>
</tr>
</tbody>
</table>

**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.**

---

**Directed DOE Options**

<table>
<thead>
<tr>
<th>File Name</th>
<th>Data Set Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>F40603A.XLS</td>
<td>F40603A(CRK # )</td>
</tr>
</tbody>
</table>

---

<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>Xpodopt</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.***
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.

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| TABLE C |
|------------------|------------------|
| Class Length     | Additional Samples |
| XL               | 0.248             |
| Xm               | 0.248             |
| Xs               | 0.496             |
| Xss              | 0.496             |
| Xlcl             |                   |
| Xpoh             | 0.248             |
| 2XL              | 0.496             |

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

Survey/Optimum Xpoh = 0.1343 ± 0.001 Inch
27 Samples

NTIAC 90% POD = 0.902 ± 0.265 Inch
NTIAC 90/95 POD =

False Call Rate = with UCL @ 95% =

Largest Classlength , XL = 0.248 Inch
Samples Needed @ XL = 28
Classlength Mid-point , Xm =
Samples Needed @ Xm =
Smallest Classlength, Xs =
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xcl =
Samples Needed @ Xcl =
POH Classlength, Xpoh = 0.175 Inch
Samples Needed @ Xpoh = 28
New Largest Classlength, 2XL = 0.496 Inch
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =

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

**Survey/Optimum Xpod =**

- **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 =**
- **POH Classlength, Xpoh =**
- **Samples Needed @ Xpoh =**
- **New Largest Classlength , 2XL =**
- **Xm is Near Verification Point =**
- **Opt. POD classlength, Xpodopt =**
- **Samples Needed @Xpodopt =**

**Class Length, inch**

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

**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 =**

**Classwidth @ 90/95 Xpod =**

- **Classlength @ 90/95 Xpod =**
- **Lower Confidence Bound @ 95%**
- **MLE(Mean) POD**
- **MLE(95%) LCL**

**File Name =**

- **Data Set Name =**

**Date & Time =**

- **Xp, 90/95 POD =**
- **MLE(Mean) POD**
- **MLE(95%) LCL**

**Largest Classlength , XL =**

- **Samples Needed @ XL =**

**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 =**

**POH Classlength, Xpoh =**

- **Samples Needed @ Xpoh =**

**New Largest Classlength , 2XL =**

- **Xm is Near Verification Point =**
- **Opt. POD classlength, Xpodopt =**
- **Samples Needed @Xpodopt =**
- **POH Classlength, Xpoh =**
- **Samples Needed @ Xpoh =**

**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.**
### 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>
</tr>
</thead>
<tbody>
<tr>
<td>NTIAC 90% POD @ Xp</td>
<td>2.403 inch</td>
</tr>
<tr>
<td>NTIAC 90/95 POD @ Xp</td>
<td>4.806 inch</td>
</tr>
<tr>
<td>False Call Rate @ UCL @ 95%</td>
<td>0.143</td>
</tr>
<tr>
<td>Largest Classlength, XL</td>
<td>2.403 inch</td>
</tr>
<tr>
<td>Samples Needed @ XL</td>
<td>28</td>
</tr>
<tr>
<td>90/95 POD Classlength, Xpoh</td>
<td>1.603 inch</td>
</tr>
<tr>
<td>Samples Needed @ Xpoh</td>
<td>28</td>
</tr>
<tr>
<td>Opt. POD classlength, Xpodopt</td>
<td>4.806 inch</td>
</tr>
<tr>
<td>Samples Needed @ Xpodopt</td>
<td>28</td>
</tr>
<tr>
<td>Opt. POD classlength, Xpoh</td>
<td>1.603 inch</td>
</tr>
<tr>
<td>Samples Needed @ Xpoh</td>
<td>28</td>
</tr>
<tr>
<td>smoaller Classlength, Xss</td>
<td>0.300 inch</td>
</tr>
<tr>
<td>Samples Needed @ Xss</td>
<td>28</td>
</tr>
<tr>
<td>New Smaller Classlength, Xs</td>
<td>1.603 inch</td>
</tr>
<tr>
<td>Largest Classlength, Xs</td>
<td>2.403 inch</td>
</tr>
<tr>
<td>Samples Needed @ Xs</td>
<td>28</td>
</tr>
<tr>
<td>Classlength Mid-point, Xm</td>
<td>0.300 inch</td>
</tr>
<tr>
<td>Samples Needed @ Xmn</td>
<td>28</td>
</tr>
<tr>
<td>Smallest Classlength, Xs</td>
<td>0.300 inch</td>
</tr>
<tr>
<td>Samples Needed @ Xs</td>
<td>28</td>
</tr>
<tr>
<td>New Smaller Classlength, Xs</td>
<td>0.300 inch</td>
</tr>
<tr>
<td>samples Needed @ Xs</td>
<td>28</td>
</tr>
<tr>
<td>Best LCL Classlength, Xlcl</td>
<td>0.300 inch</td>
</tr>
<tr>
<td>Samples Needed @ Xlcl</td>
<td>28</td>
</tr>
<tr>
<td>Smallest Classlength, Xs</td>
<td>0.300 inch</td>
</tr>
<tr>
<td>Samples Needed @ Xs</td>
<td>28</td>
</tr>
<tr>
<td>Largest Classlength, Xl</td>
<td>2.403 inch</td>
</tr>
<tr>
<td>Samples Needed @ Xl</td>
<td>28</td>
</tr>
<tr>
<td>90/95 POD Classlength, Xp</td>
<td>1.603 inch</td>
</tr>
<tr>
<td>Samples Needed @ Xp</td>
<td>28</td>
</tr>
</tbody>
</table>

---

**File Name:** F425018.XLS

**Data Set Name:** F42501B(CRK #)

**Date & Time:** 6/5/15 5:13 AM

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

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

**Lower Confidence Bound @ 90/95 Xpod:** 0.300 inch

**Class Length @ Best LCL:** inch

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

**POD @ Xp:** inch

**POH Class Length, Xpoh:**

---

**Analysis File Name:** DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsm

---

**Note:**

- **Class Length @ Xp:**
- **Class Length @ Best LCL:**
- **POD @ 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.

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

***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

<table>
<thead>
<tr>
<th>XLP</th>
<th>XM</th>
<th>XSM</th>
<th>XSS</th>
<th>XLCL</th>
<th>XPOH</th>
<th>2XL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.403</td>
<td>28</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.603</td>
<td>28</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.806</td>
<td>29</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.

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

**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

False Call Rate = with UCL @ 95% =
Large Classlength , XL = 2.403 Inch 28
Samples Needed @ XL = 28
Classlength Mid-point , Xm =
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 = 28
New Largest Classlength , 2XL = 4.806 Inch 28
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ 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 largest 4 class lengths are shown. The class lengths listed in Table B exhibited no misses, and these class lengths provide alternate target Xpod points. Only largest 4 class lengths are shown. Follow sample selection priority in the DOEPOD Manual. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

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

**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>1.603</td>
</tr>
<tr>
<td>Xs</td>
<td>4.806</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><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>
</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. Before adding flawed samples to satisfy elements of Table A or Table B, it is recommended that the cause of the Misses be determined (human factors, unexpected flaw type, etc) and resolved first.

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

**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 = F42501C.XLS**

**Data Set Name = F42501C(CRK #)**
CAST 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

- **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 @**
- **POD @ Xpod**

- **Best LCL Classlength, Xlcl**
- **POH Classlength, Xpoh**
- **New Largest Classlength, 2XL**
- **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.
CASE 5 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and Xpoh.

Survey/Optimum Xpoh = 0.5320 inch @ 0.071 inch 28 Samples

- NTIAC 90% POD = 0.900 @ 0.660 inch
- NTIAC 90/95 POD =
- False Call Rate = 0.5320 -0.071 inch

Large Classlength, XL = 2.403 inch 28 Samples Needed
Classlength Mid-point, Xm = inch
Smallest Classlength, Xs = inch
New Smaller Classlength, Xss = inch
BestLCL Classlength, Xlcl = inch
POH Classlength, Xpoh = 0.5320 inch 28 Samples Needed
Opt. POD classlength, Xpodopt = inch
New Largest Classlength, 2XL = 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 POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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 =

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 = 0.532</td>
<td>28</td>
</tr>
</tbody>
</table>

Directed DOE Options

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.

Xpod, Class Length No. Need Xpod, Class Length No. Need

No Misses Observed At Least One Miss Occurred

0.00 0.50 1.00 1.50 2.00 2.50 3.00 inch

0.000 0.500 1.000 1.500 2.000 2.500 3.000

File Name = F42503B.XLS
Data Set Name = F42503B(CRK #)
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 = 0.4600 @ 0.575 inch
28 Samples

<table>
<thead>
<tr>
<th>NTIAC 90% POD</th>
<th>NTIAC 90/95 POD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.901 @ 0.575 inch</td>
<td>0.901 @ 0.575 inch</td>
</tr>
</tbody>
</table>

False Call Rate = with UCL @ 95% =

<table>
<thead>
<tr>
<th>Largest Classlength, XL</th>
<th>Samples Needed @ XL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.403 inch</td>
<td>28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Classlength Mid-point, Xm</th>
<th>Samples Needed @ Xm</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.3500 inch</td>
<td>28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Smallest Classlength, Xs</th>
<th>Samples Needed @ Xs</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0680 inch</td>
<td>28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>New Smaller Classlength, Xss</th>
<th>Samples Needed @ Xss</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0680 inch</td>
<td>28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Best LCL Classlength, Xlcl</th>
<th>Samples Needed @ Xlcl</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.3500 inch</td>
<td>28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>POH Classlength, Xpoh</th>
<th>Samples Needed @ Xpoh</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.403 inch</td>
<td>28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Largest Classlength, 2XL</th>
<th>Samples Needed @ 2XL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.403 inch</td>
<td>28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Xn is Near Verification Point</th>
<th>Opt. POD classlength, Xpodopt</th>
</tr>
</thead>
<tbody>
<tr>
<td>false call analysis</td>
<td>0.532 inch</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opt. POD classlength, Xpodopt</th>
<th>Samples Needed @ Xpodopt</th>
</tr>
</thead>
<tbody>
<tr>
<td>false call analysis</td>
<td>false call analysis</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>POD @ Xpod</th>
<th>Classlength @ 90/95 Xpod</th>
</tr>
</thead>
<tbody>
<tr>
<td>false call analysis</td>
<td>0.7942 inch</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Classwidth @ 90/95 Xpod</th>
<th>Lower Confidence Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>false call analysis</td>
<td>0.7942 inch</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>User Provided a 90/95 POD</th>
<th>User's Maximum Allowed Classlength</th>
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<tbody>
<tr>
<td>false call analysis</td>
<td>false call analysis</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>POD @ Xpo, 90/95 POD</th>
<th>Lower Confidence Bound @ 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>false call analysis</td>
<td>false call analysis</td>
</tr>
</tbody>
</table>

Xp = 2.403 inch
XN = 0.350 inch
Largest Classlength, XL = 2.403 inch
Smallest Classlength, Xs = 0.0680 inch
New Smaller Classlength, Xss = 0.0680 inch
Best LCL Classlength, Xlcl = 0.3500 inch
POH Classlength, Xpoh = 2.403 inch
Opt. POD classlength, Xpodopt = 0.532 inch

Report Date: 6/5/15 5:20 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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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 = 2.403</td>
</tr>
<tr>
<td>Xm = 0.532</td>
</tr>
</tbody>
</table>

**Alternate Xm**

Number of Additional Samples Needed

<table>
<thead>
<tr>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Samples</td>
</tr>
</tbody>
</table>

**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.

Xpod, Class Length

No. Need

F42503C.XLS

F42503C(CRK #)

Xpodopt

0.00

0.500

1.000

1.500

2.000

2.500

3.000

35.00

30.00

25.00

20.00

15.00

10.00

5.00

0.00

0.000

0.500

1.000

1.500

2.000

2.500

3.000

Inch

File Name = F42503C.XLS
Data Set Name = F42503C(CRK #)

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

File Name = F5001(3)D.xls
Data Set Name = F5001(3)D(CK. NO.)
Date & Time = 6/5/15 5:22 AM
Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.8656
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 =

Warning: No false call analysis.

Largest Classlength , XL = 0.160 inch
Samples Needed @ XL = 26

Classlength Mid-point , Xm = 0.160 inch
Samples Needed @ Xm = 26

Smallest Classlength, Xs = 0.160 inch
Samples Needed @ Xs = 26

New Smaller Classlength, Xss = 0.320 inch

BestLCL Classlength, Xlcl = 0.160 inch
Samples Needed @ Xlcl = 26

POH Classlength, Xpoh = 0.160 inch
Samples Needed @ Xpoh = 26

New Largest Classlength , 2XL = 0.320 inch

Xm is Near Verification Point = inch
Opt. POD classlength, Xpodopt = inch
Samples Needed @Xpodopt = inch

False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 0.160 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
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

Survey/Optimum Xpoh = 0.1600 -0.031 Inch
26 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.**

***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 3.474.

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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>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>0.160</td>
</tr>
<tr>
<td>Xm</td>
<td>0.160</td>
</tr>
<tr>
<td>Xs</td>
<td>0.320</td>
</tr>
<tr>
<td>Xss</td>
<td>0.320</td>
</tr>
<tr>
<td>Xlcl</td>
<td>0.160</td>
</tr>
<tr>
<td>Xpoh</td>
<td>0.320</td>
</tr>
<tr>
<td>2XL</td>
<td>0.320</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt

** 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>
<tr>
<td>0.160</td>
<td>26</td>
</tr>
</tbody>
</table>

*File Name = F5002(3)D.xls  Data Set Name = F5002(3)(CK_NO.)

**Directed DOE Options**

<table>
<thead>
<tr>
<th>Directed DOE Options</th>
<th>FILE = F5002(3)D.xls  DATA SET NAME = F5002(3)(CK NO.)</th>
</tr>
</thead>
</table>

**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>0.160</td>
</tr>
<tr>
<td>Xs</td>
<td>0.320</td>
</tr>
<tr>
<td>Xss</td>
<td>0.320</td>
</tr>
<tr>
<td>Xlcl</td>
<td>0.160</td>
</tr>
<tr>
<td>Xpoh</td>
<td>0.320</td>
</tr>
<tr>
<td>2XL</td>
<td>0.320</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)

Large flaw validation successful.

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

**Warning:** No false call analysis.

### Variables

- **File Name:** FS002(3) L.xls
- **Data Set Name:** FS002(3)(UCK. NO.)
- **Date & Time:** 6/5/15 5:28 AM

<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>0.0490 inch</td>
</tr>
<tr>
<td>Classlength @ 90/95 Xpod</td>
<td>0.3370 inch</td>
</tr>
<tr>
<td>Lower Confidence Bound</td>
<td>0.9050 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>1.0000</td>
</tr>
<tr>
<td>User's Maximum Allowed Classlength</td>
<td>1.1560 inch</td>
</tr>
<tr>
<td>Inspector ClassWidth @ Xp</td>
<td>1.210 inch</td>
</tr>
<tr>
<td>POD @ Xp</td>
<td>0.825 inch</td>
</tr>
</tbody>
</table>

**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

### Analysis

- **Survey/Optimum Xpoh:**
  - NTAC 90% POD = @ inch
  - NTAC 90/95 POD = @ inch

- **False Call Rate:**
  - with UCL @ 95% =
    - Largest Classlength, XL = 1.210 inch
    - Samples Needed @ XL = 8
    - Classlength Mid-point, Xm = 0.825 inch
    - Samples Needed @ Xm = 8
    - Smallest Classlength, Xs = inch
    - Samples Needed @ Xs = inch
    - New Smaller Classlength, Xss = inch
    - Best LCL Classlength, Xcl = inch
    - Samples Needed @ Xcl = inch
    - POD Classlength, Xpod = inch
    - Samples Needed @ Xpod = inch
    - Opt. POD classlength, Xpodopt = inch
    - Samples Needed @ Xpodopt = inch

- **Optimal POD classlength:**
  - Xp = 1.1560 inch

---

**Analysis File name:** DOEPOD_v1.2.01_PC.She.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. Extend flaw size range to 0.216.

MLE Divergence Warning: Initial results listed.

Warning: No false call analysis.

File Name = F5003(3)D.xls
Data Set Name = F5003(3)DCk. NO.
Date & Time = 6/5/15 5:30 AM
Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = 0.0020 inch
Lower Confidence Bound = 0.0050 inch
Best LCL = 0.0050 inch
Classwidth @ Best LCL = 0.0720 inch
Classlength @ Best LCL = 0.9050 inch
User Provided a 90/95 POD =
User's Maximum Allowed Classlength =
POD @ Xpod = 0.160 inch

F5003(3)D.xls

NTIAC 90% POD = 0.995 @ 0.005 inch
NTIAC 90/95 POD = 0.930 @ 0.005 inch
False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 0.160 inch
Samples Needed @ XL = 20
Classlength Mid-point , Xm = 0.105 inch
Samples Needed @ Xm = 8
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 =

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.

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

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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 2.064.

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

### File Name = F5003(3).xls
### Data Set Name = F5003(3)(CRT. NO.)
### Date & Time = 6/5/15 5:41 AM
### REACHED

#### Xpod 90/95 Reached Anywhere?
- 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</th>
<th>Classlength</th>
<th>Lower Confidence Bound</th>
<th>Best LCL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xp</td>
<td>1.210 inch</td>
<td>1.079 inch</td>
<td>0.6880 inch</td>
<td>0.9050</td>
</tr>
</tbody>
</table>

#### New Smaller Classlength, Xss

<table>
<thead>
<tr>
<th>New Smaller Classlength, Xss</th>
<th>Samples Needed @ Xss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0000 inch</td>
<td>16</td>
</tr>
</tbody>
</table>

#### Opt. POD classlength, Xpodopt

<table>
<thead>
<tr>
<th>Opt. POD classlength, Xpodopt</th>
<th>Samples Needed @ Xpodopt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0000 inch</td>
<td>16</td>
</tr>
</tbody>
</table>

#### Smallest Classlength, Xs

<table>
<thead>
<tr>
<th>Smallest Classlength, Xs</th>
<th>Samples Needed @ Xs</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.998 inch</td>
<td>8</td>
</tr>
</tbody>
</table>

#### Smallest Classlength, Xs

<table>
<thead>
<tr>
<th>Smallest Classlength, Xs</th>
<th>Samples Needed @ Xs</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.931 inch</td>
<td>8</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>NTIAC 90% POD</td>
<td>0.998 @ 0.005 inch</td>
</tr>
<tr>
<td>NTIAC 90/95 POD</td>
<td>0.931 @ 0.005 inch</td>
</tr>
</tbody>
</table>

#### Survey/Optimum Xpod

<table>
<thead>
<tr>
<th>Survey/Optimum Xpod</th>
<th>Classwidth</th>
<th>Classlength</th>
<th>XL</th>
<th>Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000 inch</td>
<td>1.210 inch</td>
<td>1.079 inch</td>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>

#### Largest Classlength, XL

<table>
<thead>
<tr>
<th>Largest Classlength, XL</th>
<th>Samples Needed @ XL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.100 inch</td>
<td>16</td>
</tr>
</tbody>
</table>

#### Classlength Mid-point, Xm

<table>
<thead>
<tr>
<th>Classlength Mid-point, Xm</th>
<th>Samples Needed @ Xm</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.079 inch</td>
<td>16</td>
</tr>
</tbody>
</table>

#### Smallest Classlength, Xs

<table>
<thead>
<tr>
<th>Smallest Classlength, Xs</th>
<th>Samples Needed @ Xs</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.998 inch</td>
<td>8</td>
</tr>
</tbody>
</table>

#### New Smaller Classlength, Xss

<table>
<thead>
<tr>
<th>New Smaller Classlength, Xss</th>
<th>Samples Needed @ Xss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0000 inch</td>
<td>16</td>
</tr>
</tbody>
</table>

#### Best LCL Classlength, Xlcl

<table>
<thead>
<tr>
<th>Best LCL Classlength, Xlcl</th>
<th>Samples Needed @ Xlcl</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0000 inch</td>
<td>16</td>
</tr>
</tbody>
</table>

#### POH Classlength, Xpoh

<table>
<thead>
<tr>
<th>POH Classlength, Xpoh</th>
<th>Samples Needed @ Xpoh</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0000 inch</td>
<td>16</td>
</tr>
</tbody>
</table>

#### New Largest Classlength, 2XL

<table>
<thead>
<tr>
<th>New Largest Classlength, 2XL</th>
<th>Samples Needed @ 2 XL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.210 inch</td>
<td>16</td>
</tr>
</tbody>
</table>

#### Xn is Near Verification Point

<table>
<thead>
<tr>
<th>Xn is Near Verification Point</th>
<th>Samples Needed @ Xn</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.079 inch</td>
<td>16</td>
</tr>
</tbody>
</table>

#### Xp

<table>
<thead>
<tr>
<th>Xp</th>
<th>Samples Needed @ Xp</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.210 inch</td>
<td>16</td>
</tr>
</tbody>
</table>

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.

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

***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)

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 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)

POH Classlength, Xpoh = 0.430 inch
Samples Needed @ Xpoh = 26 Samples

New Largest Classlength, 2XL = 0.430 inch
Xm is Near Verification Point = inch
Opt. POD classlength, Xpodopt = inch
Samples Needed @ Xpodopt = 26 Samples

False Call Rate = 0 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 =
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***

---

**Directed DOE Options**

<table>
<thead>
<tr>
<th>TABLE A*</th>
<th>Selected class lengths with existing misses. Each point requires additional samples to achieve the Xpod listed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod, Class Length</td>
<td>No. Need</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>
</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>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 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)

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.**

---

**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.

- **Xpod, Class Length No.**
- **Additional Samples**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 1.188</td>
<td>26</td>
</tr>
<tr>
<td>Xm = 1.188</td>
<td></td>
</tr>
<tr>
<td>Xs =</td>
<td></td>
</tr>
<tr>
<td>Xss =</td>
<td></td>
</tr>
<tr>
<td>Xlid =</td>
<td></td>
</tr>
<tr>
<td>Xpod = 2.376</td>
<td>29</td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =**
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)

#### Warning: No false call analysis.

**Survey/Optimum Xpoh = 0.9810 \( \pm \) 0.400 Inch**

- **26 Samples**

**False Call Rate =**

- 0.840 with UCL @ 95%

### Analysis

- **Class Width @ Xp =** 1.188
- **Class Length @ Xp =** 0.981
- **Best LCL =** 0.981
- **Largest Class Length, XL =** 2.376
- **POH Class Length, Xpoh =** 0.981
- **New Larger Class Length, 2XL =** 2.376
- **Xp 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.
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POh function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.
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>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL</td>
<td>1.435</td>
</tr>
<tr>
<td>Xm</td>
<td>1.435</td>
</tr>
<tr>
<td>Xs</td>
<td>2.870</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></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.

**FILE NAME** F7001(3).xls

**DATA SET NAME** F7001(3)(CK. NO.)
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.

File Name = F7002(3)L.xls
Data Set Name = F7002(3)(CK. NO.)
Date & Time = 6/5/15 6:03 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 = 0.0130
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 =

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

Warning: No false call analysis.

Largest Classlength , XL = 1.435 inch
Samples Needed @ XL = 26 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 = 1.435 inch
Samples Needed @ Xpoh = 26 inch
New Largest Classlength , 2XL = 2.870 inch
Xm is Near Verification Point = inch
Opt. POD classlength, Xpodopt = inch
Samples Needed @Xpodopt = inch
Xp = inch

Survey/Optimum Xpoh = 1.435 -0.300 inch
False Call Rate = with UCL @ 95% = 1.435 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.

**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)

Warning: No false call analysis.

File Name = F7003(3)D.xls
Data Set Name = F7003(3)D(CK. NO.)
Date & Time = 6/5/15 6:05 AM

Xpod 90/95 Reached Anywhere?
Classwidth @ 90/95 Xpod = NOT REACHED
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.8190 inch
Best LCL = 0.0050 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 6 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL, Xpoh, and 2XL.

Survey/Optimum Xpoh = 0.2350 inch. 0.041 inch
Samples Needed @ Xpoh = 26
False Call Rate = with UCL @ 95% =
Largest Classlength, XL = 0.235 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
BestLCL Classlength, Xlcl = inch
Samples Needed @ Xlcl =
POH Classlength, Xpoh = 0.235 inch
Samples Needed @ Xpoh = 26
New Largest Classlength, 2XL = 0.470 inch
Xm is Near Verification Point = inch
Opt. POD classlength, Xpodopt = inch
Samples Needed @Xpodopt =

NTIAC 90% POD = @ inch
NTIAC 90/95 POD = @ inch

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

Survey/Optimum Xpoh = 0.2350 inch. 0.041 inch
Samples Needed @ Xpoh = 26
False Call Rate = with UCL @ 95% =
Largest Classlength, XL = 0.235 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
BestLCL Classlength, Xlcl = inch
Samples Needed @ Xlcl =
POH Classlength, Xpoh = 0.235 inch
Samples Needed @ Xpoh = 26
New Largest Classlength, 2XL = 0.470 inch
Xm is Near Verification Point = inch
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.**

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 = 0.235</td>
<td>26</td>
</tr>
<tr>
<td>Xs =</td>
<td></td>
</tr>
<tr>
<td>Xss =</td>
<td></td>
</tr>
<tr>
<td>Xlcl = 0.470</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.

Xpod, Class Length, No. Need

No Misses Observed

At Least One Miss Occurred

XL ○ Xm ○ Xs ○ Xss  Xlcl ○ 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.**

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

Survey/Optimum Xpoh = 1.4350 inch
False Call Rate = with UCL @ 95% =
Largest Classlength, XL = 1.435 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
BestLCL Classlength, Xlcl = 
Samples Needed @ Xlcl = 
POH Classlength, Xpoh = 1.435 inch
Samples Needed @ Xpoh = 26
New Largest Classlength, 2XL = 2.870 inch
Xm 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 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>1.435</td>
</tr>
<tr>
<td>Xm</td>
<td>1</td>
</tr>
<tr>
<td>Xs</td>
<td>1.435</td>
</tr>
<tr>
<td>Xss</td>
<td>1.435</td>
</tr>
<tr>
<td>Xlcl</td>
<td>2.870</td>
</tr>
<tr>
<td>Xpod</td>
<td>2.870</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.

F7003(3) L.xls

F7003(3) L (CK. NO.)

**Directed DOE Options**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpod</td>
<td>2</td>
</tr>
<tr>
<td>Xpodopt</td>
<td>2</td>
</tr>
</tbody>
</table>
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.**

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

File Name = FB001(3)L.xls
Data Set Name = FB001(3)(UCK, NO.)
Date & Time = 6/5/15 6:09 AM
Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = 0.8739
Best LCL = 0.6000
Classwidth @ Best LCL = inch
Classlength @ Best LCL = inch
User Provided a 90/95 POD @ inch
User's Maximum Allowed Classlength = inch
POD @ Xpod = inch

Largest Classlength, XL = 3.124 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
BestLCL Classlength, Xcl = inch
Samples Needed @ Xcl =
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 =

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 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.

File Name = F8002(3)D.xls
Data Set Name = F8002(3)D(CK. NO.)
Date & Time = 6/5/15 6:11 AM
Warning: No false call analysis.

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

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 the sample selection priority in the DOEPOD Manual.

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

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

***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.

**Directed DOE Options**

<table>
<thead>
<tr>
<th>TABLE C</th>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 1.562</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Xm = 1.562</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Xs = 1.562</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>Xss = 1.562</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>Xlcl = 1.562</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>Xpoh = 3.124</td>
<td>29</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.

File Name = F8002(3)XL.xls
Data Set Name = F8002(3)LC( CK. NO.)
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.

Survey/Optimum Xpoh = 0.2070 -0.007 Inch
26 Samples

**False Call Rate** = with UCL @ 95% =

- Largest Classlength, XL = 0.276 Inch
- Samples Needed @ XL = 2
- 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 = 0.276 Inch
- Samples Needed @ Xlcl = 2
- POH Classlength, Xpoh = 0.276 Inch
- Samples Needed @ Xpoh = 2
- New Largest Classlength, 2XL = 0.552 Inch
- Xn is Near Verification Point =
- Opt. POD classlength, Xpodopt = inch
- Samples Needed @ Xpodopt = inch
- Xp = inch

File Name = FB03(3)D.xls
Data Set Name = FB03(3)D(CK. NO.)
Date & Time = 6/5/15 6:15 AM
Xpod 90/95 Reached Anywhere? NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound @ 95 %
Best LCL = 0.8931
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

<table>
<thead>
<tr>
<th>POD @ Xpoh</th>
<th>Samples Needed @ Xpoh</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.276</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>POD @ Xlcl</th>
<th>Samples Needed @ Xlcl</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.276</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Xp = 0.276 Inch

F8003(3)D.xls

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. 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.

False Call Rate =

Survey/Optimum Xpoh =

0.000 Inch

Samples

NTIAC 90% POD =

\[ \text{inch} \]

NTIAC 90/95 POD =

\[ \text{inch} \]

False Call Rate =

with UCL @ 95% =

Largest Classlength , XL =

1.562 Inch

Samples Needed @ XL =

\[ \text{inch} \]

Classlength Mid-point , Xm =

1.119 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 =

\[ \text{inch} \]

Opt. POD classlength, Xpodopt =

\[ \text{inch} \]

New Largest Classlength , 2XL =

\[ \text{inch} \]

Xm is Near Verification Point =

\[ \text{inch} \]

Samples Needed @ Xpodopt =

\[ \text{inch} \]

\[ Xp = \text{1.0610 Inch} \]

\[ 864 \]
Although Xpod appears to have been reached at a point, there are Misses at larger class lengths. This indicates that the POH function may be oscillatory. This needs to be checked.

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

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.

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

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

***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.**

*Although Xpod appears to have been reached at a point, there are Misses at larger class lengths; this indicates that the POh function may 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 - 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.
CASE 4 - 90/95 Xpod is not reached anywhere. Recommend satisfying XL and the greater of Xpoh or Xlcl.

Survey/Optimum Xpod = 0.2150
False Call Rate = with UCL @ 95%

- Largest Classlength, XL = 0.215 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 = 0.215 inch
- Samples Needed @ Xlcl = 26
- POD Classlength, Xpoh = 0.215 inch
- Samples Needed @ Xpoh = inch
- New Largest Classlength, 2XL = 0.430 inch
- Xn is Near Verification Point = inch
- Opt. POD classlength, Xpodopt = inch
- Samples Needed @ Xpodopt = inch
- Xp = inch

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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.

Survey/Optimum Xpod = 0.4950 inch
Samples Needed @ XL = 26
False Call Rate = with UCL @ 95% =
Largest Classlength , XL = 0.495 inch
Samples Needed @ XL = 26
Classlength Mid-point , Xm = inch
Samples Needed @ Xm =
Smallest Classlength, Xs = inch
Samples Needed @ Xs =
New Smaller Classlength, Xss =
BestLCL Classlength, Xlcl = 0.495 inch
Samples Needed @ Xlcl =
New Largest Classlength , 2XL =
Xn is Near Verification Point =
Opt. POD classlength, Xpodopt =
Samples Needed @ Xpodopt =
Xp = inch

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

File Name = F9002(3).xls
Data Set Name = F9002(3)(CK. NO. )
Date & Time = 6/5/15 6:20 AM
Xpod 90/95 Reached Anywhere? = NOT REACHED
Classwidth @ 90/95 Xpod = inch
Classlength @ 90/95 Xpod = inch
Lower Confidence Bound = Best LCL = 0.3684
Classwidth @ Best LCL = 0.0010 inch
Classlength @ Best LCL = 0.4950 inch
User Provided a 90/95 POD @ = inch
User's Maximum Allowed Classlength =
Inspector Classwidth @ Xp = inch
POD @ Xpod =

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.**

**Alternate Xm = Xpodopt**

---

Tables A and B contain selected class lengths with existing misses or 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>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>0.495</td>
</tr>
<tr>
<td>Xpoh</td>
<td>0.990</td>
</tr>
<tr>
<td>2XL</td>
<td>0.990</td>
</tr>
</tbody>
</table>

**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.**
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 Xpod = 0.2150 - 0.090 inch
26 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.**

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

*Files* F9003(3)D.xls F9003(3)D(CK. NO.)

**Directed DOE Options**

![Graph showing directed DOE options with class lengths and number of additional samples needed.]

### Table A*
Selected class lengths with existing Misses. Each point requires additional samples to achieve the Xpod listed.

<table>
<thead>
<tr>
<th>Class Length</th>
<th>No. Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL = 0.215</td>
<td>26</td>
</tr>
<tr>
<td>Xm = 0.215</td>
<td></td>
</tr>
<tr>
<td>Xs = 0.215</td>
<td></td>
</tr>
<tr>
<td>Xss = 0.215</td>
<td></td>
</tr>
<tr>
<td>Xlcl = 0.430</td>
<td></td>
</tr>
<tr>
<td>Xpoh = 0.430</td>
<td></td>
</tr>
<tr>
<td>2XL = 0.430</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>Xpod</td>
<td></td>
</tr>
</tbody>
</table>

### Table C
Selected class lengths.

<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 = 0.215</td>
<td></td>
</tr>
<tr>
<td>Xs = 0.215</td>
<td></td>
</tr>
<tr>
<td>Xss = 0.215</td>
<td></td>
</tr>
<tr>
<td>Xlcl = 0.430</td>
<td></td>
</tr>
<tr>
<td>Xpoh = 0.430</td>
<td></td>
</tr>
<tr>
<td>2XL = 0.430</td>
<td></td>
</tr>
</tbody>
</table>

**Alternate Xm = Xpodopt =**
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.***
CASE 7 - 90/95 Xpod is not reached anywhere. Recommend satisfying 2XL.

<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>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>0.100</td>
<td>0.100</td>
<td>0.100</td>
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<tr>
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<td>0.200</td>
<td>0.200</td>
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</tr>
<tr>
<td>0.900</td>
<td>0.900</td>
<td>0.900</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.

---

### Directed DOE Options

**TABLE A**

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

| XL = | Xs = | Xss = | Xlcl = | Xpoh = | 2XL = | **Alternate Xm =** | Xpodopt = |
| 1.633 | 29 |

**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)

<table>
<thead>
<tr>
<th>Probability of Hit (POH), Lower Confidence Limit, LCL</th>
</tr>
</thead>
</table>

Class Length, inch

File Name = G10003AD.XLS
Data Set Name = G10003AD(CRACK #)
Date & Time = 6/5/15 6:25 AM

<table>
<thead>
<tr>
<th>Xpod 90/95 Reached Anywhere?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classwidth @ 90/95 Xpod =</td>
</tr>
<tr>
<td>Classlength @ 90/95 Xpod =</td>
</tr>
<tr>
<td>Lower Confidence Bound =</td>
</tr>
<tr>
<td>Best LCL = 0.8190 inch</td>
</tr>
<tr>
<td>Classwidth @ Best LCL =</td>
</tr>
<tr>
<td>Classlength @ Best LCL =</td>
</tr>
<tr>
<td>User Provided a 90/95 POD =</td>
</tr>
<tr>
<td>User's Maximum Allowed Classlength =</td>
</tr>
<tr>
<td>POD @ Xp =</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.

<table>
<thead>
<tr>
<th>Survey/Optimum Xpoh =</th>
</tr>
</thead>
<tbody>
<tr>
<td>False Call Rate = with UCL @ 95% =</td>
</tr>
<tr>
<td>Largest Classlength, XL = 0.178 inch</td>
</tr>
<tr>
<td>Samples Needed @ XL = 28</td>
</tr>
<tr>
<td>Classlength Mid-point, 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 = 0.126 inch</td>
</tr>
<tr>
<td>Samples Needed @ Xlcl = 14</td>
</tr>
<tr>
<td>POH Classlength, Xpoh = 0.126 inch</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 =</td>
</tr>
<tr>
<td>Samples Needed @Xpodopt =</td>
</tr>
<tr>
<td>Xp =</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Raw Text</th>
<th>Median</th>
<th>Mean</th>
<th>90% POD</th>
<th>95% POD</th>
<th>99% POD</th>
<th>99.9% POD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
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<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
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<td>0.000</td>
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<tr>
<td>0.100</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>0.150</td>
<td>0.000</td>
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<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>0.200</td>
<td>0.000</td>
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<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>0.250</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</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.

### Directed DOE Options

**Table C**

<table>
<thead>
<tr>
<th>Class Length</th>
<th>Additional Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL 0.178</td>
<td>28</td>
</tr>
<tr>
<td>Xm 0.126</td>
<td>14</td>
</tr>
<tr>
<td>Xs 0.126</td>
<td></td>
</tr>
<tr>
<td>Xss 0.126</td>
<td></td>
</tr>
<tr>
<td>Xlcl Xpod</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 B**

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

Xpod, Class Length, No. Need

**Alternate Xm = Xpodopt**
Large flaw validation failure. Extend flaw size range to 0.96 inches.

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 = 0.610 inch
Classlength Mid-point, Xm = 0.535 inch
smallest Classlength, Xs = inch
New Smaller Classlength, Xss = inch
Best LCL Classlength, Xlcl = inch
POH Classlength, Xpoh = inch
Opt. POD classlength, Xpodopt = inch
New Largest Classlength, 2XL = inch
Xm is Near Verification Point = inch
Samples Needed @ Xpoh = inch
Samples Needed @ Xpodopt = inch
Samples Needed @ XL = inch
Samples Needed @ Xs = inch
Sample Needed @ Xm = inch
Sample Needed @ Xs = inch
Sample Needed @ Xlcl = inch
Sample 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 largest 4 class lengths are shown.

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

Follow sample selection priority in the DOEPOD Manual.

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

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

***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.
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.**

---

### Directed DOE Options

#### 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>

**Table B**

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

<table>
<thead>
<tr>
<th>Xpod, Calss Length</th>
<th>No. Need</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>Xpod, Calss 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.
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.**
Detection Probability (Utilization of DOEPOD results requires approval of Engineering Authority)
Large flaw validation failure. Extend flaw size range to 0.25356.

Warning: No false call analysis.

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.

Survey/Optimum Xpoh = 0.0516 -0.001 Inch 28 Samples

NTIAC 90% POD = 0.909 @ 0.075 Inch
NTIAC 90/95 POD = 0.907 @ 0.100 Inch

False Call Rate = with UCL @ 95% =

Largest Classlength , XL = 0.242 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 =
New Largest Classlength, 2XL =
Xm is Near Verification Point =
Opt. POD classlength, Xpodopt = 0.077 Inch
Samples Needed @ Xpodopt = 2

File Name = G2001L.XLS
Data Set Name = G2001L(Eol-a)
Date & Time = 6/5/15 6:31 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 = 1.0000

Xp, 90/95 POD =
MLE(Mean) POD =
MLE(95%) LCL =

File Name = DOEPOD.v.1.2.01.PC.Office2010.Win7.xlsmAnalysis file name:
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.
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
A9003(3)L.xls
AA003(3)L.xls
AC001(3)L.xls
CB003(3)L.xls
CE032(6)D.xls
F10601AD.XLS
F10601BD.XLS
F10601CD.XLS
F10602AD.XLS
F10602BD.XLS
F10602CD.XLS
F10603AD.XLS
F10603BD.XLS
F10603CD.XLS
F12201AD.XLS
F12201BD.XLS
F12201CD.XLS
F12202AD.XLS
F12202BD.XLS
F12202CD.XLS
F12203AD.XLS
F12203BD.XLS
F12203CD.XLS
F32251AD.XLS
F32251CD.XLS
F32253AD.XLS
F32253BD.XLS
F8002(3)L.xls
G10003BD.XLS
G10003BL.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.
**ABSTRACT**

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.

**SUBJECT TERMS**

Defects; Flaws; Maximum destructive likelihood; Nondestructive evaluation; Probability of detection