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CONTINUATION OF SPACE SHUTTLE
PROBABILISTIC RISK ASSESSMENT, PHASE 3
SAIC DOCUMENT NO. SAICNY95-02-25

PROBABILISTIC RISK ASSESSMENT OF THE SPACE SHUTTLE

A STUDY OF THE POTENTIAL OF LOSING THE VEHICLE DURING NOMINAL OPERATION

VOLUME III: BASIC EVENTS & MINIMAL CUTSETS

PREPARED FOR

US NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
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BY

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A.2. Basic Event Database

Table A.1. Basic Event Data Reference Codes

Source Code	Reference
APU FAULT TREE	Based on APU PRA fault tree developed by sub-contractor Safety Factor Associated
APU PRA	Estimate based on APU PRA performed by sub-contractor Safety Factor Associated
CON. ASSUMP.	Conservative Assumption made by PRA analyst (same as Hypothesis)
E. T.	Based on input from Explosive Technologies
EXPERT OPINION	Rocketdyne Expert Opinion
FLIGHT RULES	Estimate based on procedures as outlined in "Space Shuttle Operational Flight Rules"(JSC, Mission Operations Directorate, Jan. 20, 1989)
GALILEO RTG PRA	"Galileo RTG Risk Assessment Data Analysis" (SAIC, Sept. 30, 1988)
HYPOTHESIS	SSME/MPS estimate based on PRA analyst judgement and experience
HYPOTHESIS-1	ISRB estimate based on PRA analyst judgement and experience
HYPOTHESIS-2	Assumed to be three times CDF estimate
HYPOTHESIS-3	Assumed to be same as CDF estimate
HYPOTHESIS-4	Estimate based on conversations with system experts
HYPOTHESIS-5	Assumed to be one tenth of CDF estimate
HYPOTHESIS-6	Assumed to be ten times CDF estimate
IEEE500	"IEEE Std 500 Reliability Data" (IEEE, 1983)
LOCKHEED PRA	"Space Shuttle Main Propulsion Pressurization System Probabilistic Risk Assessment" (Lockheed, Feb. 1988)
MD APU STUDY	Updated estimate from "McDonnell Douglas APU Study"
MEC REPORT	Estimate based on "MEC Timing Fix. Report"
MOD. APU EST.	Modified APU estimate for similiar component
MPS R.F.D.	"Shuttle Integrated Risk Assessment Program, Main Propulsion System Propellant Management System; Reliability Failure Data" (SAIC, Apr. 1991)
MSFC	MSFC Study which indicated that slag exiting the RSRM nozzle could not cause a catastrophic over-thrust (results were verbally indicated but study was not supplied to SAIC)
NASA HQ	Comparative Study performed in association with NASA HQ to determine landing risk
NPRD-3	"Nonelectric Parts Reliability Data"(ITT Research Institute, 1985)
NPRD-3.B=0.1	A CCF beta factor was applied to the NPRD-3 estimate
NPRD-91	"Nonelectric Parts Reliability Data"(Reliability Analysis Center, 1991)
PHASE 1 STUDY	PRA of the Space Shuttle Phase 1: Space Shuttle Catastrophic Failure Frequency" (SAIC, Aug. 1993)
PRA ANALYSIS	Indicates Major System Interfaces, the estimate is elaborated upon in the contributing system explanation
PRA S/D RESULTS	An estimate based on benign SSME Shutdown probabilities estimated as part of the Catastrophic probability process
PRACA	Estimate based on analysis of "Problem Reporting and Corrective Action" records
PRACA-F	Estimate based on analysis of "Problem Reporting and Corrective Action" field records
PRACA-F (FMC)	Estimate based on analysis of "Problem Reporting and Corrective Action" SSME fuel flow field records
RCKTDYNE:B=.005	CCF of 0.005 on Rocketdyne Input
ROCKETDYNE	Rocketdyne Input-B.Biggs
SAIC MCC PRA	"Risk Analysis Applied to the Space Shuttle Main Engine" (SAIC, June 1994)
SAIC WELD STUDY	"Shuttle Integrated Risk Assessment Program, SSME Weld Risk and Quantified Data Development Program" (SAIC, Sep. 1990)
SF-FRE	Structural Failure Generic estimate for components designed to a safety of factor of 1.4
SSME C/O DATA	"SSME Premature Cutoff Database"-supplied to SAIC by B.Biggs of Rocketdyne
THIOKOL	Based on input from Thiokol
THIOKOL:B=.01	CCF beat factor of 0.01 applied to Thiokol Input
THIOKOL:B=.1	CCF beat factor of 0.1 applied to Thiokol Input
TPS STUDY	"Safety of the Thermal Protection System of the Space Shuttle Orbiter" (Stanford University; Carnegie-Mellon University)
USBI	Based on input from USBI
USBI EXPERT OPI	USBI Expert Opinion

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
AAOAAFRA1CFLK06	COMMON CAUSE FAILURE; APU/HYD	MD APU STUDY			1.92E-04
AAOAAFRA1CFLK12	COMMON CAUSE FAILURE; APU/HYD	MD APU STUDY			1.92E-04
AAOAAFRA1CFLK16	COMMON CAUSE FAILURE; APU/HYD	MD APU STUDY			1.92E-04
AAOAAFRA1CFLK20	COMMON CAUSE FAILURE; APU/HYD	MD APU STUDY			1.92E-04
AAOAAFRA1CFOK04	COMMON CAUSE FAILURE; ASCENT WITH OK	MD APU STUDY	5	Lognormal	1.92E-04
AAOAAFRA1IFLK06	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	MD APU STUDY			6.23E-03
AAOAAFRA1IFLK12	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	MD APU STUDY			6.23E-03
AAOAAFRA1IFLK16	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	MD APU STUDY			6.23E-03
AAOAAFRA1IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	MD APU STUDY			6.23E-03
AAOAAFRA1IFOK04	APU/HYD UNIT 1 INDEPENDENT FAILURE;	MD APU STUDY			6.23E-03
AAOAAFRA1LFLK06	LEAKAGE INDUCED FAILURE; APU/HYD	MD APU STUDY			1.00E-01
AAOAAFRA1LFLK12	LEAKAGE INDUCED FAILURE; APU/HYD	MD APU STUDY			1.00E-01
AAOAAFRA1LFLK16	OWN LEAK INDUCED FAILURE; APU/HYD	MD APU STUDY			1.00E-01
AAOAAFRA1LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	MD APU STUDY			1.00E-01
AAOAAFRA1LOLK16	OTHER UNIT LEAK INDUCED FAILURE; APU/HYD	MD APU STUDY			0.00E+00
AAOAAFRA1LOLK20	OTHER UNIT LEAK INDUCED FAILURE; APU/HYD	MD APU STUDY			0.00E+00
AAOAAFRA2IFLK06	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	MD APU STUDY			6.23E-03
AAOAAFRA2IFLK12	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	MD APU STUDY			6.23E-03
AAOAAFRA2IFLK16	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	MD APU STUDY			6.23E-03
AAOAAFRA2IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	MD APU STUDY			6.23E-03
AAOAAFRA2IFOK04	APU/HYD UNIT 2 INDEPENDENT FAILURE;	MD APU STUDY			6.23E-03
AAOAAFRA2LFLK16	OWN LEAK INDUCED FAILURE; APU/HYD	MD APU STUDY			1.00E-01
AAOAAFRA2LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	MD APU STUDY			1.00E-01
AAOAAFRA2LOLK06	LEAKAGE INDUCED FAILURE; APU/HYD	MD APU STUDY			8.00E-03
AAOAAFRA2LOLK12	LEAKAGE INDUCED FAILURE; APU/HYD	MD APU STUDY			8.00E-03
AAOAAFRA2LOLK16	OTHER UNIT LEAK INDUCED FAILURE; APU/HYD	MD APU STUDY			0.00E+00
AAOAAFRA2LOLK20	OTHER UNIT LEAK INDUCED FAILURE; APU/HYD	MD APU STUDY			0.00E+00
AAOAAFRA3IFLK06	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	MD APU STUDY			6.23E-03
AAOAAFRA3IFLK12	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	MD APU STUDY			6.23E-03
AAOAAFRA3IFLK16	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	MD APU STUDY			6.23E-03
AAOAAFRA3IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	MD APU STUDY			6.23E-03
AAOAAFRA3IFOK04	APU/HYD UNIT 3 INDEPENDENT FAILURE;	MD APU STUDY			6.23E-03
AAOAAFRA3LFLK16	OWN LEAK INDUCED FAILURE; APU/HYD	MD APU STUDY			1.00E-01
AAOAAFRA3LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	MD APU STUDY			1.00E-01
AAOAAFRA3LOLK06	LEAKAGE INDUCED FAILURE; APU/HYD	MD APU STUDY			8.00E-03
AAOAAFRA3LOLK12	LEAKAGE INDUCED FAILURE; APU/HYD	MD APU STUDY			8.00E-03
AAOAAFRA3LOLK16	OTHER UNIT LEAK INDUCED FAILURE; APU/HYD	MD APU STUDY			0.00E+00
AAOAAFRA3LOLK20	OTHER UNIT LEAK INDUCED FAILURE; APU/HYD	MD APU STUDY			0.00E+00
ACOCADWDB01OV	CABLE DB01 BROKEN/FAILS/SHORTS	IEEE500			5.36E-10
ACOCADWDB02OV	CABLE DB02 BROKEN/FAILS/SHORTS	IEEE500			5.36E-10
ACOCADWDB04OV	CABLE DB04 BROKEN/FAILS/SHORTS	IEEE500			5.36E-10
ACOCADWDBO3OV	CABLE DB03 BROKEN/FAILS/SHORTS	IEEE500			5.36E-10

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
ACOGPCF01	GPC 01 FAILS TO FUNCTION	PRACA			1.39E-06
ACOGPCF02	GPC 02 FAILS TO FUNCTION	PRACA			1.39E-06
ACOGPCF03	GPC 03 FAILS TO FUNCTION	PRACA			1.39E-06
ACOGPCF04	GPC 04 FAILS TO FUNCTION	PRACA			1.39E-06
ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	PRACA			1.39E-06
ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	MEC REPORT			1.00E-05
ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	MEC REPORT			1.00E-05
ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	MEC REPORT			1.00E-05
ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	MEC REPORT			1.00E-05
ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	MEC REPORT			1.00E-05
ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	MEC REPORT			1.00E-05
ACOMCNCFR3SRB	MEC FAILS TO PROCESS FIRE 3 CMD	MEC REPORT	5	Lognormal	1.00E-05
ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	PRACA			1.39E-06
ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	PRACA			3.33E-05
ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	PRACA			3.33E-05
ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	PRACA			1.39E-06
ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	PRACA			1.39E-06
ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	PRACA			3.33E-05
ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	PRACA			3.33E-05
ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	PRACA			1.39E-06
ACRCACCLPABSRB	CABLE (REPLACEABLE) CCF (POWER) L SRB BUS A AND B	IEEE500			4.10E-06
ACRCACCRPABSRB	CABLE (REPLACEABLE) CCF (POWER) R SRB BUS A AND B	IEEE500			4.10E-06
ACRCADHL2ASRB	LOCAL WIRE FAILURE(CM) SSSW - PIC L AFT BSM A	IEEE500			3.33E-07
ACRCADHL2BSRB	LOCAL WIRE FAILURE(CM) L FWD BSM B	IEEE500			3.33E-07
ACRCADHR2ASRB	LOCAL WIRE FAILURE(CM)	IEEE500			1.00E-05
ACRCADHR2BSRB	LOCAL WIRE FAILURE(CM)	IEEE500			1.00E-05
ACRCARPL1BSRB	CABLE (REPLACEABLE) FAILURE SSSW - FWD PIC L FWD PIC B	IEEE500			4.10E-05
ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB A FIRE 1	IEEE500			4.10E-05
ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB A FIRE 2	IEEE500			4.10E-05
ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB A ARM	IEEE500			4.10E-05
ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB B FIRE 1	IEEE500			4.10E-05
ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB B FIRE 2	IEEE500			4.10E-05
ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB B ARM	IEEE500			4.10E-05
ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB BUS A	IEEE500			4.10E-05
ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB BUS B	IEEE500			4.10E-05
ACRCARPLSFASRB	CABLE L SEP BOLT FWD A (REPLACEABLE) FAILURE	IEEE500			4.10E-05
ACRCARPLSFBSRB	CABLE L SEP BOLT FWD B (REPLACEABLE) FAILURE	IEEE500			4.10E-05
ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB A FIRE 1	IEEE500			4.10E-05
ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB A FIRE 2	IEEE500			4.10E-05
ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB A ARM	IEEE500			4.10E-05
ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB B FIRE 1	IEEE500			4.10E-05
ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB B FIRE 2	IEEE500			4.10E-05

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB B ARM	IEEE500			4.10E-05
ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB BUS A	IEEE500			4.10E-05
ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB BUS B	IEEE500			4.10E-05
ACRCARPRSFASRB	CABLE R SEP BOLT FWD A (REPLACEABLE) FAILURE	IEEE500			4.10E-05
ACRCARPRSFBSRB	CABLE R SEP BOLT FWD B (REPLACEABLE) FAILURE	IEEE500			4.10E-05
ACRCDFDAL11SRB	CDF ASSY L11 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAL12SRB	CDF ASSY L12 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAL21SRB	CDF ASSY L21 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAL22SRB	CDF ASSY L22 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAL31SRB	CDF ASSY L31 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAL32SRB	CDF ASSY L32 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAL41SRB	CDF ASSY L41 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAL42SRB	CDF ASSY L42 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAL51SRB	CDF ASSY L51 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAL52SRB	CDF ASSY L52 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAL61SRB	CDF ASSY L61 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAL62SRB	CDF ASSY L62 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAL71SRB	CDF ASSY L71 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAL72SRB	CDF ASSY L72 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAL81SRB	CDF ASSY L81 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAL82SRB	CDF ASSY L82 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAR11SRB	CDF ASSY R11 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAR12SRB	CDF ASSY R12 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAR21SRB	CDF ASS R21 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAR22SRB	CDF ASS R22 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAR31SRB	CDF ASS R31 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAR32SRB	CDF ASS R32 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAR41SRB	CDF ASS R41 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAR42SRB	CDF ASS R42 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAR51SRB	CDF ASS R51 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAR52SRB	CDF ASS R52 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAR61SRB	CDF ASS R61 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAR62SRB	CDF ASS R62 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAR71SRB	CDF ASS R71 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAR72SRB	CDF ASS R72 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAR81SRB	CDF AR81 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDAR82SRB	CDF AR82 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIL11SRB	CDF INIT L11 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIL12SRB	CDF INIT L12 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIL21SRB	CDF INIT L21 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIL22SRB	CDF INIT L22 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIL31SRB	CDF INIT L31 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
ACRCDFDIL32SRB	CDF INIT L32 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIL41SRB	CDF INIT L41 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIL42SRB	CDF INIT L42 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIL51SRB	CDF INIT L51 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIL52SRB	CDF INIT L52 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIL61SRB	CDF INIT L61 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIL62SRB	CDF INIT L62 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIL71SRB	CDF INIT L71 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIL72SRB	CDF INIT L72 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIL81SRB	CDF INIT L81 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIL82SRB	CDF INIT L82 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIR11SRB	CDF INIT R11 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIR12SRB	CDF INIT R12 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIR21SRB	CDF INIT R21 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIR22SRB	CDF INIT R22 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIR31SRB	CDF INIT R31 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIR32SRB	CDF INIT R32 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIR41SRB	CDF INIT R41 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIR42SRB	CDF INIT R42 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIR51SRB	CDF INIT R51 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIR52SRB	CDF INIT R52 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIR61SRB	CDF INIT R61 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIR62SRB	CDF INIT R62 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIR71SRB	CDF INIT R71 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIR72SRB	CDF INIT R72 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIR81SRB	CDF IR81 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDIR82SRB	CDF IR82 FAILS TO DETONATE OR PROPAGATE	USBI			1.00E-05
ACRCDFDLFMNSRB	CDF L FWD MAN FAILS TO DETONATE OR PROPAGATE	USBI	15	Lognormal	1.00E-05
ACRCDFDRAMNSRD	CDF R AFT MAN FAILS TO DETONATE OR PROPAGATE	USBI	15	Lognormal	1.00E-05
ACRCDFDRFMNSRD	CDF R FWD MAN FAILS TO DETONATE OR PROPAGATE	USBI	15	Lognormal	1.00E-05
ACRDCPWASTS	DC PWR FAILURE BUS A	PRA ANALYSIS			3.33E-07
ACRDCPWBSTS	DC PWR FAILURE BUS B	PRA ANALYSIS			3.33E-07
ACREXFDL2ASRB	EXPLOSIVE DEVICE FAILS TO DETONATE L AFT NSD A	USBI			1.00E-05
ACREXFDL2BSRB	EXPLOSIVE DEVICE FAILS TO DETONATE L AFT NSD B	USBI			1.00E-05
ACREXFDLAMSRB	CDF L AFT MAN FAILS TO DETONATE OR PROPAGATE	USBI	15	Lognormal	1.00E-05
ACRFNFFHDN1SRB	FRANGIBLE NUT HDN1 FAILS TO FRAGMENT	HYPOTHESIS-1	15	Lognormal	1.00E-05
ACRFNFFHDN2SRB	FRANGIBLE NUT HDN2 FAILS TO FRAGMENT	HYPOTHESIS-1	15	Lognormal	1.00E-05
ACRFNFFHDN3SRB	FRANGIBLE NUT HDN3 FAILS TO FRAGMENT	HYPOTHESIS-1	15	Lognormal	1.00E-05
ACRFNFFHDN4SRB	FRANGIBLE NUT HDN4 FAILS TO FRAGMENT	HYPOTHESIS-1	15	Lognormal	1.00E-05
ACRFNFFHDN5SRB	FRANGIBLE NUT HDN5 FAILS TO FRAGMENT	HYPOTHESIS-1	15	Lognormal	1.00E-05
ACRFNFFHDN6SRB	FRANGIBLE NUT HDN6 FAILS TO FRAGMENT	HYPOTHESIS-1	15	Lognormal	1.00E-05
ACRFNFFHDN7SRB	FRANGIBLE NUT HDN7 FAILS TO FRAGMENT	HYPOTHESIS-1	15	Lognormal	1.00E-05

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
ACRFNFFHDN8SRB	FRANGIBLE NUT HDN8 FAILS TO FRAGMENT	HYPOTHESIS-1	15	Lognormal	1.00E-05
ACRHDDBOVETSRB	HOLD DOWN FRAGMENTS DAMAGE OV OR ET LEADING TO LOV	USBI ANALYSIS	15	Lognormal	1.00E-06
ACRHDHRHDN1SRB	HOLD DOWN STUD HDN1 HANGS UP	PRACA	15	Lognormal	3.85E-03
ACRHDHRHDN2SRB	HOLD DOWN STUD HDN2 HANGS UP	PRACA	15	Lognormal	3.85E-03
ACRHDHRHDN3SRB	HOLD DOWN STUD HDN3 HANGS UP	PRACA	15	Lognormal	3.85E-03
ACRHDHRHDN4SRB	HOLD DOWN STUD HDN4 HANGS UP	PRACA	15	Lognormal	3.85E-03
ACRHDHRHDN5SRB	HOLD DOWN STUD HDN5 HANGS UP	PRACA	15	Lognormal	3.85E-03
ACRHDHRHDN6RSB	HOLD DOWN STUD HDN6 HANGS UP	PRACA	15	Lognormal	3.85E-03
ACRHDHRHDN7SRB	HOLD DOWN STUD HDN7 HANGS UP	PRACA	15	Lognormal	3.85E-03
ACRHDHRHDN8SRB	HOLD DOWN STUD HDN8 HANGS UP	PRACA	15	Lognormal	3.85E-03
ACRHDPREREL	SRB HOLDDOWN: PREMATURE RELEASE	HYPOTHESIS-5			1.60E-06
ACRIGFDLEFTSRM	IGNITER LEFT RSRM FAILS TO DETONATE	USBI	15	Lognormal	1.00E-05
ACRIGFDRGHTSRM	IGNITER RIGHT RSRM FAILS TO DETONATE	USBI	15	Lognormal	1.00E-05
ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	USBI EXPERT OPI			1.00E-05
ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	USBI EXPERT OPI			1.00E-05
ACRNDFDLFWASRB	NSD L FWD A FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNDFDLFWBSRB	NSD L FWD B FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNDFDRAFASRB	NSD R AFT A FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNDFDRAFBSRB	NSD R AFT B FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNDFDRFWASRB	NSD R FWD A FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNDFDRFWBSRB	NSD R FWD B FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNIFDLIGASRM	NSI LEFT IGNITER A FAILS TO DETONATE	HYPOTHESIS-2			2.00E-05
ACRNIFDLIGBSRM	NSI LEFT IGNITER B FAILS TO DETONATE	HYPOTHESIS-2			2.00E-05
ACRNIFDRIGASRM	NSI RIGHT IGNITER A FAILS TO DETONATE	HYPOTHESIS-2			2.00E-05
ACRNIFDRIGBSRM	NSI RIGHT IGNITER B FAILS TO DETONATE	HYPOTHESIS-2			2.00E-05
ACRNPFDHD1ASRB	NSI PRESSURE / BOOST CRTRG HD1A FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDHD1BSRB	NSI PRESSURE / BOOST CRTRG HD1B FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDHD2ASRB	NSI PRESSURE / BOOST CRTRG HD2A FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDHD2BSRB	NSI PRESSURE / BOOST CRTRG HD2B FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDHD3ASRB	NSI PRESSURE / BOOST CRTRG HD3A FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDHD3BSRB	NSI PRESSURE / BOOST CRTRG HD3B FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDHD4ASRB	NSI PRESSURE / BOOST CRTRG HD4A FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDHD4BSRB	NSI PRESSURE / BOOST CRTRG HD4B FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDHD5ASRB	NSI PRESSURE / BOOST CRTRG HD5A FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDHD5BSRB	NSI PRESSURE / BOOST CRTRG HD5B FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDHD6ASRB	NSI PRESSURE / BOOST CRTRG HD6A FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDHD6BSRB	NSI PRESSURE / BOOST CRTRG HD6B FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDHD7ASRB	NSI PRESSURE / BOOST CRTRG HD7A FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDHD7BSRB	NSI PRESSURE / BOOST CRTRG HD7B FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDHD8ASRB	NSI PRESSURE / BOOST CRTRG HD8A FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDHD8BSRB	NSI PRESSURE / BOOST CRTRG HD8B FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDLS1ASRB	NSI PRESSURE CARTRIDGE LS1A FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
ACRNPFDLS1BSRB	NSI PRESSURE CARTRIDGE LS1B FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDLS2ASRB	NSI PRESSURE CARTRIDGE LS2A FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDLS2BSRB	NSI PRESSURE CARTRIDGE LS2B FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDLS3ASRB	NSI PRESSURE CARTRIDGE LS3A FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDLS3BSRB	NSI PRESSURE CARTRIDGE LS3B FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDLSFASRB	NSI PRESSURE CARTRIDGE LSFA FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDLSFBSRB	NSI PRESSURE CARTRIDGE LSFB FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDRS1ASRB	NSI PRESSURE CARTRIDGE RS1A FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDRS1BSRB	NSI PRESSURE CARTRIDGE RS1B FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDRS2ASRB	NSI PRESSURE CARTRIDGE RS2A FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDRS2BSRB	NSI PRESSURE CARTRIDGE RS2B FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDRS3ASRB	NSI PRESSURE CARTRIDGE RS3A FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDRS3BSRB	NSI PRESSURE CARTRIDGE RS3B FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDRSFASRB	NSI PRESSURE CARTRIDGE RSFA FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRNPFDRSFBSRB	NSI PRESSURE CARTRIDGE RSFB FAILS TO DETONATE	HYPOTHESIS-2			3.00E-05
ACRPCFALABASRB	PIC L AFT BSM A FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFALABBSRB	PIC L AFT BSM B FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFALFBASRB	PIC L FWD BSM A FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFALFBBSRB	PIC L FWD BSM B FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFALIGASRM	PIC LEFT IGNITER A FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFALIGBSRM	PIC LEFT IGNITER B FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFALS1ASRB	PIC L SEP BOLT 1A FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFALS1BSRB	PIC L SEP BOLT 1B FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFALS2ASRB	PIC L SEP BOLT 2A FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFALS2BSRB	PIC L SEP BOLT 2B FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFALS3ASRB	PIC L SEP BOLT 3A FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFALS3BSRB	PIC L SEP BOLT 3B FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFALSFASRB	PIC L SEP BOLT FWD A FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFALSFBSRB	PIC L SEP BOLT FWD B FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFARABASRB	PIC R AFT BSM A FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFARABBSRB	PIC R AFT BSM B FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFARFBASRB	PIC R FWD BSM A FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFARFBBSRB	PIC R FWD BSM B FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFARIGASRM	PIC RIGHT IGNITER A FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFARIGBSRM	PIC RIGHT IGNITER B FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFARS1ASRB	PIC R SEP BOLT 1A FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFARS1BSRB	PIC R SEP BOLT 1B FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFARS2ASRB	PIC R SEP BOLT 2A FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFARS2BSRB	PIC R SEP BOLT 2B FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFARS3ASRB	PIC R SEP BOLT 3A FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFARS3BSRB	PIC R SEP BOLT 3B FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFARSFASRB	PIC R SEP BOLT FWD A FAILS TO ARM	HYPOTHESIS-3			1.00E-05

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
ACRPCFARSFBSRB	PIC R SEP BOLT FWD B FAILS TO ARM	HYPOTHESIS-3			1.00E-05
ACRPCFFHD1ASRB	PIC HD1A FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFHD1BSRB	PIC HD1B FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFHD2ASRB	PIC HD2A FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFHD2BSRB	PIC HD2B FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFHD3ASRB	PIC HD3A FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFHD3BSRB	PIC HD3B FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFHD4ASRB	PIC HD4A FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFHD4BSRB	PIC HD4B FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFHD5ASRB	PIC HD5A FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFHD5BSRB	PIC HD5B FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFHD6ASRB	PIC HD6A FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFHD6BSRB	PIC HD6B FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFHD7ASRB	PIC HD7A FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFHD7BSRB	PIC HD7B FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFHD8ASRB	PIC HD8A FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFHD8BSRB	PIC HD8B FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFLABASRB	PIC L AFT BSM A FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFLABBSRB	PIC L AFT BSM B FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFLFBASRB	PIC L FWD BSM A FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFLFBBSRB	PIC L FWD BSM B FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFLIGASRM	PIC LEFT IGNITER A FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFLIGBSRM	PIC LEFT IGNITER B FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFLS1ASRB	PIC L SEP BOLT 1A FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFLS1BSRB	PIC L SEP BOLT 1B FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFLS2ASRB	PIC L SEP BOLT 2A FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFLS2BSRB	PIC L SEP BOLT 2B FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFLS3ASRB	PIC L SEP BOLT 3A FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFLS3BSRB	PIC L SEP BOLT 3B FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFLSFASRB	PIC L SEP BOLT FWD A FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFLSFBSRB	PIC L SEP BOLT FWD B FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFRABASRB	PIC R AFT BSM A FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFRABBSRB	PIC R AFT BSM B FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFRFBASRB	PIC R FWD BSM A FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFRFBBSRB	PIC R FWD BSM B FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFRIGASRM	PIC RIGHT IGNITER A FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFRIGBSRM	PIC RIGHT IGNITER B FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFRS1ASRB	PIC R SEP BOLT 1A FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFRS1BSRB	PIC R SEP BOLT 1B FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFRS2ASRB	PIC R SEP BOLT 2A FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFRS2BSRB	PIC R SEP BOLT 2B FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFRS3ASRB	PIC R SEP BOLT 3A FAILS TO FIRE	HYPOTHESIS-3			1.00E-05

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
ACRPCFFRS3BSRB	PIC R SEP BOLT 3B FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFRSFASRB	PIC R SEP BOLT FWD A FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPCFFRSFBSRB	PIC R SEP BOLT FWD B FAILS TO FIRE	HYPOTHESIS-3			1.00E-05
ACRPRFDLEFTSRM	LEFT RSRM PROPELLENT FAILS TO IGNITE	HYPOTHESIS-4	15	Lognormal	1.00E-04
ACRPRFDRGHTSRM	RGHT RSRM PROPELLENT FAILS TO IGNITE	HYPOTHESIS-4	15	Lognormal	1.00E-04
ACRREPRLCHU1	SPURIOUS ACTUATION OF L SRB PARACHUTE 1	HYPOTHESIS-5	15	Lognormal	1.00E-06
ACRREPRLCHU2	SPURIOUS ACTUATION OF L SRB PARACHUTE 2	HYPOTHESIS-5	15	Lognormal	1.00E-06
ACRREPRLEXTC	SPURIOUS ACTUATION OF THE L SRB EXTERNAL CONE SEPARATION	HYPOTHESIS-5	15	Lognormal	1.00E-06
ACRREPRLFWDF	SPURIOUS ACTUATION OF THE L SRB FOWARD FULSTRUM SEPARATION	HYPOTHESIS-5	15	Lognormal	1.00E-06
ACRREPRRCHU1	SPURIOUS ACTUATION OF R SRB PARACHUTE 1	HYPOTHESIS-5	15	Lognormal	1.00E-06
ACRREPRRCHU2	SPURIOUS ACTUATION OF R SRB PARACHUTE 2	HYPOTHESIS-5	15	Lognormal	1.00E-06
ACRREPRREXTC	SPURIOUS ACTUATION OF THE R SRB EXTERNAL CONE SEPARATION	HYPOTHESIS-5	15	Lognormal	1.00E-06
ACRREPRRFWDF	SPURIOUS ACTUATION OF THE R SRB FOWARD FULSTRUM SEPARATION	HYPOTHESIS-5	15	Lognormal	1.00E-06
ACRRMBRLBS1SRB	ROCKET MOTOR L BSM 1 BURN THRU OR RUPTURE	HYPOTHESIS-6			1.00E-04
ACRRMBRLBS2SRB	ROCKET MOTOR L BSM 2 BURN THRU OR RUPTURE	HYPOTHESIS-6			1.00E-04
ACRRMBRLBS3SRB	ROCKET MOTOR L BSM 3 BURN THRU OR RUPTURE	HYPOTHESIS-6			1.00E-04
ACRRMBRLBS4SRB	ROCKET MOTOR L BSM 4 BURN THRU OR RUPTURE	HYPOTHESIS-6			1.00E-04
ACRRMBRLBS5SRB	ROCKET MOTOR L BSM 5 BURN THRU OR RUPTURE	HYPOTHESIS-6			1.00E-04
ACRRMBRLBS6SRB	ROCKET MOTOR L BSM 6 BURN THRU OR RUPTURE	HYPOTHESIS-6			1.00E-04
ACRRMBRLBS7SRB	ROCKET MOTOR L BSM 7 BURN THRU OR RUPTURE	HYPOTHESIS-6			1.00E-04
ACRRMBRLBS8SRB	ROCKET MOTOR L BSM 8 BURN THRU OR RUPTURE	HYPOTHESIS-6			1.00E-04
ACRRMBRRBS1SRB	ROCKET MOTOR R BSM 1 BURN THRU OR RUPTURE	HYPOTHESIS-6			1.00E-04
ACRRMBRRBS2SRB	ROCKET MOTOR RBS2 BURN THRU OR RUPTURE	HYPOTHESIS-6			1.00E-04
ACRRMBRRBS3SRB	ROCKET MOTOR RBS3 BURN THRU OR RUPTURE	HYPOTHESIS-6			1.00E-04
ACRRMBRRBS4SRB	ROCKET MOTOR RBS4 BURN THRU OR RUPTURE	HYPOTHESIS-6			1.00E-04
ACRRMBRRBS5SRB	ROCKET MOTOR RBS5 BURN THRU OR RUPTURE	HYPOTHESIS-6			1.00E-04
ACRRMBRRBS6SRB	ROCKET MOTOR RBS6 BURN THRU OR RUPTURE	HYPOTHESIS-6			1.00E-04
ACRRMBRRBS7SRB	ROCKET MOTOR RBS7 BURN THRU OR RUPTURE	HYPOTHESIS-6			1.00E-04
ACRRMBRRBS8SRB	ROCKET MOTOR RBS8 BURN THRU OR RUPTURE	HYPOTHESIS-6			1.00E-04
ACRRMPILBS1SRB	ROCKET MOTOR L BSM 1 FAILS TO IGNITE (PYROTECHNIC)	HYPOTHESIS-6			1.00E-04
ACRRMPILBS2SRB	ROCKET MOTOR L BSM 2 FAILS TO IGNITE (PYROTECHNIC)	HYPOTHESIS-6			1.00E-04
ACRRMPILBS3SRB	ROCKET MOTOR L BSM 3 FAILS TO IGNITE (PYROTECHNIC)	HYPOTHESIS-6			1.00E-04
ACRRMPILBS4SRB	ROCKET MOTOR L BSM 4 FAILS TO IGNITE (PYROTECHNIC)	HYPOTHESIS-6			1.00E-04
ACRRMPILBS5SRB	ROCKET MOTOR L BSM 5 FAILS TO IGNITE (PYROTECHNIC)	HYPOTHESIS-6			1.00E-04
ACRRMPILBS6SRB	ROCKET MOTOR L BSM 6 FAILS TO IGNITE (PYROTECHNIC)	HYPOTHESIS-6			1.00E-04
ACRRMPILBS7SRB	ROCKET MOTOR L BSM 7 FAILS TO IGNITE (PYROTECHNIC)	HYPOTHESIS-6			1.00E-04
ACRRMPILBS8SRB	ROCKET MOTOR L BSM 8 FAILS TO IGNITE (PYROTECHNIC)	HYPOTHESIS-6			1.00E-04
ACRRMPIRBS1SRB	ROCKET MOTOR R BSM 1 FAILS TO IGNITE (PYROTECHNIC)	HYPOTHESIS-6			1.00E-04
ACRRMPIRBS2SRB	ROCKET MOTOR RBS2 FAILS TO IGNITE (PYROTECHNIC)	HYPOTHESIS-6			1.00E-04
ACRRMPIRBS3SRB	ROCKET MOTOR RBS3 FAILS TO IGNITE (PYROTECHNIC)	HYPOTHESIS-6			1.00E-04
ACRRMPIRBS4SRB	ROCKET MOTOR RBS4 FAILS TO IGNITE (PYROTECHNIC)	HYPOTHESIS-6			1.00E-04
ACRRMPIRBS5SRB	ROCKET MOTOR RBS5 FAILS TO IGNITE (PYROTECHNIC)	HYPOTHESIS-6			1.00E-04

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
ACRRMPIRBS6SRB	ROCKET MOTOR RBS6 FAILS TO IGNITE (PYROTECHNIC)	HYPOTHESIS-6			1.00E-04
ACRRMPIRBS7SRB	ROCKET MOTOR RBS7 FAILS TO IGNITE (PYROTECHNIC)	HYPOTHESIS-6			1.00E-04
ACRRMPIRBS8SRB	ROCKET MOTOR RBS8 FAILS TO IGNITE (PYROTECHNIC)	HYPOTHESIS-6			1.00E-04
ACRSATSLEFTSRM	LEFT SAFE AND ARM DEVICE TRANSFERS SAFE	HYPOTHESIS-1	15	Lognormal	1.00E-06
ACRSATSRGHTSRM	RIGHT SAFE AND ARM DEVICE TRANSFERS SAFE	HYPOTHESIS-1	15	Lognormal	1.00E-06
ACRSBFFLAS1SRB	SEPARATION BOLT LAS1 FAILS TO FRACTURE	HYPOTHESIS-1	15	Lognormal	1.00E-05
ACRSBFFLAS2SRB	SEPARATION BOLT LAS2 FAILS TO FRACTURE	HYPOTHESIS-1	15	Lognormal	1.00E-05
ACRSBFFLAS3SRB	SEPARATION BOLT LAS3 FAILS TO FRACTURE	HYPOTHESIS-1	15	Lognormal	1.00E-05
ACRSBFFLFWSSRB	SEPARATION BOLT LFWS FAILS TO FRACTURE	HYPOTHESIS-1	15	Lognormal	1.00E-05
ACRSBFFRAS1SRB	SEPARATION BOLT RAS1 FAILS TO FRACTURE	HYPOTHESIS-1	15	Lognormal	1.00E-05
ACRSBFFRAS2SRB	SEPARATION BOLT RAS2 FAILS TO FRACTURE	HYPOTHESIS-1	15	Lognormal	1.00E-05
ACRSBFFRAS3SRB	SEPARATION BOLT RAS3 FAILS TO FRACTURE	HYPOTHESIS-1	15	Lognormal	1.00E-05
ACRSBFFRFWSSRB	SEPARATION BOLT RFWS FAILS TO FRACTURE	HYPOTHESIS-1	15	Lognormal	1.00E-05
ACRSKRTFRCT	SRB AFT SKIRT FRACTURE DURING TWANG	SF-FRE	15	Lognormal	1.00E-06
ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB A FIRE 1	NPRD91			1.00E-05
ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB A FIRE 2	NPRD91			1.00E-05
ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP A ARM	NPRD91			1.00E-05
ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB B FIRE 1	NPRD91			1.00E-05
ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB B FIRE 2	NPRD91			1.00E-05
ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP B ARM	NPRD91			1.00E-05
ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB A FIRE 1	NPRD91			1.00E-05
ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB A FIRE 2	NPRD91			1.00E-05
ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB A ARM	NPRD91			1.00E-05
ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB B FIRE 1	NPRD91			1.00E-05
ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB B FIRE 2	NPRD91			1.00E-05
ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB B ARM	NPRD91			1.00E-05
ANMABLOPRPMHPFAB	HPFTP LOSS OF AXIAL BALANCING CAPABILITY	SF-FRE			4.20E-08
ANMBBLPPRPMHPOBB	HPOTP LOSS OF BEARING RETAINING BOLT PRELOAD	SF-FRE			4.20E-08
ANMBBSFPRPMHPFTB	THRUST BALL FAILURE	PRACA-F	10	Lognormal	5.02E-05
ANMBESFPRPMMIBE	BAFFLE ELEMENT INNER COPPER JACKET BURNTHROUGH	PRACA-F	10	Lognormal	5.02E-05
ANMBNLPPRPMHPOBN	HPOTP LOSS OF BEARING RETAINER NUT PRELOAD	SF-FRE			4.20E-08
ANMCCCRPRPMMCCCC	FAILURE OF MCC COOLANT CHANNEL DUE TO UNSTABLE CRACK GROWTH	SAIC MCC PRA	10	Lognormal	1.12E-05
ANMCPSFPPMLPFTP	STRUCTURAL FAILURE OF LPFTP	PRACA-F			4.20E-08
ANMCPSFPRPMLPOTP	STRUCTURAL FAILURE OF LPOTP	PRACA-F	10	Lognormal	1.51E-04
ANMCVFOMPCRLI2	CHECK VALVE ENGINE 2 FAILS TO OPEN	LOCKHEED PRA			1.00E-06
ANMCVFOMPCRLI3	CHECK VALVE ENGINE 3 FAILS TO OPEN	LOCKHEED PRA			1.00E-06
ANMDSECPRPMHPODS	HPOTP EXCESSIVE PBP DAMPING SEAL CLEARANCE	SF-FRE			4.20E-08
ANMDVFCPRPMPMSDV	17 INCH DISCONNECT FAILS TO REMAIN OPEN DURING SSME OPERATION	MPS R.F.D.	15	Lognormal	1.31E-06
ANMEDDBPRPMEDNCO	FAILURE IN EDNI LINER CLOSEOUT STRUCTURE	SAIC MCC PRA	10	Lognormal	1.76E-04
ANMFAERPRPMFPASI	EXTERNAL RUPTURE OF FPB ASI LOX LINE	PRACA-F	10	Lognormal	5.02E-05
ANMFPSFPRPMFPBFP	FPB FACEPLATE FAILURE DUE TO EROSION	PRACA-F	10	Lognormal	1.51E-04
ANMFRBTPRPMFRI	FAILURE OF FLOW RECIRCULATION INHIBITOR	SAIC MCC PRA	10	Lognormal	4.61E-05

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
ANMHMWFPRPMHGMWF	HGM TRANSFER TUBE WELD FAILURE	SAIC WELD STUDY	10	Lognormal	3.00E-05
ANMHOCDPRPMHPOCD	HPOTP FAILURE DUE TO CAVITATION DAMAGE	PRACA-F	10	Lognormal	2.01E-04
ANMHOEVPRPMHPOEV	HPOTP EXCESSIVE VIBRATION	PRACA-F	10	Lognormal	5.02E-05
ANMHUHSMPCROSS	HUMAN ERROR TO OPEN THE CROSS LINES VALVES	LOCKHEED PRA			5.00E-02
ANMHUHSMPISO	HUMAN ERROR TO ISOLATE THE LEAKAGE	LOCKHEED PRA			5.00E-02
ANMHWCRPRPMMCCHW	MCC HOT GAS WALL FAILURE DUE TO UNSTABLE CRACK GROWTH	SAIC MCC PRA	10	Lognormal	5.29E-05
ANMHXSFPRPMHEXSF	STRUCTURAL FAILURE OF HEX	SF-FRE			4.20E-08
ANMIPSFPRPMFPBIP	FPB INTERPROPELLANT PLATE OR BRAZE JOINT FAILURE	SF-FRE			4.20E-08
ANMIPSFPRPMMIIPF	MI INTERPROPELLANT PLATE CRACK	SF-FRE			4.20E-08
ANMIPSFPRPMOPBIP	OPB INTERPROPELLANT PLATE OR BRAZE JOINT FAILURE	SF-FRE			4.20E-08
ANMLPSFPRPMFPBLP	FPB LOX POST CRACK	SF-FRE			4.20E-08
ANMLPSFPRPMMI	MI LOX POST STRUCTURAL FAILURE	PRACA-F	10	Lognormal	1.51E-04
ANMLPSFPRPMOPBLP	OPB LOX POST CRACK	SF-FRE			4.20E-08
ANMMAERPRPMMIASI	EXTERNAL RUPTURE OF MI LOX OR FUEL ASI LINE	SF-FRE			4.20E-08
ANMMBSFPRPMMCCBP	MCC MULTIPLE BOLT FAILURE DUE TO INADEQUATE PRELOAD	SAIC MCC PRA	10	Lognormal	1.06E-04
ANMMWSFPRPMMCCMW	MCC MANIFOLD WELD FAILURE	SAIC MCC PRA	10	Lognormal	2.53E-04
ANMNZSFPRPMHPONZ	HPOTP TURBINE NOZZLE STRUCTURAL FAILURE	PRACA-F	10	Lognormal	5.02E-05
ANMNZSFPRPMNOZSF	STRUCTURAL FAILURE OF NOZZLE	SF-FRE			4.20E-08
ANMOAERPRPMOPASI	EXTERNAL RUPTURE OF OPB ASI LINE	SF-FRE			4.20E-08
ANMOBSFPRPMHPOBR	HPOTP BEARING FAILURE DUE TO SPALLING; PITTING; WEAR OR CORR	PRACA-F	10	Lognormal	4.52E-04
ANMOOBLPRPMMIOBL	MI BLOCKAGE OF AN OXIDIZER ORIFICE	SF-FRE			4.20E-08
ANMOTLCPRPMHPOTB	LOSS OF COOLANT TO HPOTP BEARINGS	PRACA-F	10	Lognormal	1.00E-04
ANMOTSFPRPMHPOTB	HPOTP TURBINE BLADE FAILURE	PRACA-F	10	Lognormal	1.51E-04
ANMPCFPMPDETEC	FAILURE OF THE HELIUM LEAKAGE DETECTION SYSTEM	HYPOTHESIS			1.00E-07
ANMPPLRMPCRLI2	CROSS-TIE LINE ENGINE 2 DEPRESSURIZES	LOCKHEED			2.19E-05
ANMPPLRMPCRLI3	CROSS-TIE LINE ENGINE 3 DEPRESSURIZES	LOCKHEED			2.19E-05
ANMPSSFPRPMHPFSF	IMPELLER/DIFFUSER FAILURE	PRACA-F	10	Lognormal	2.01E-04
ANMPVFCPRPMPMSPV	PREVALVE FAILS TO REMAIN OPEN DURING SSME OPERATION (1 OF 6)	NPRD-91	10	Lognormal	1.76E-05
ANMRRSFPRPMHPORR	HPOTP RETAINER RING FAILURE DUE TO LOSS OF BOLT PRELOAD	PRACA-F	10	Lognormal	1.25E-04
ANMSMSFPRPMHPFSM	SHEET METAL FAILURE	SF-FRE			4.20E-08
ANMSVCOMPENG23	COMMON CAUSE FAILURE TO OPEN THE CROSS LINE SOLENOID VALVE (ENGINES 2 AND 3)	LOCKHEED/B=0.1			2.93E-07
ANMSVFCMPENG1	ISOLATION VALVE FAILS TO CLOSE	LOCKHEED PRA			2.93E-06
ANMSVFOMPCRLI2	SOLENOID VALVE ENGINE 2 FAILS TO OPEN	LOCKHEED			2.93E-06
ANMSVFOMPCRLI3	SOLENOID VALVE ENGINE 3 FAILS TO OPEN	LOCKHEED			2.93E-06
ANMTBLCPRPMHPOTB	LOSS OF COOLANT TO FIRST AND SECOND STAGE TURBINES	SF-FRE			4.20E-08
ANMTBSFPRPMHPFTB	HPFTP TURBINE BLADE FAILURE	PRACA-F	10	Lognormal	2.51E-04
ANMTDDBPRPMHPFTD	TURNAROUND DUCT DISTORTION/BUCKLING	SF-FRE			4.20E-08
ANMTDLCPRPMHPFTD	HPFTP LOSS OF COOLANT TO BEARINGS OR TURBINE DISCS	SF-FRE			4.20E-08
ANMTSSFPRPMHPFTS	HPFTP SHAFT FAILURE	SF-FRE			4.20E-08
ANMTSSFPRPMHPOTS	HPOTP TURBINE SHAFT FAILURE	SF-FRE			4.20E-08
ANOAALKA1CLLK16	COMMON CAUSE LEAK; APU/HYD HYDRAZINE	MD APU STUDY	10	Lognormal	1.70E-06
ANOAALKA1CLLK17	COMMON CAUSE LEAK; APU/HYD HYDRAZINE	MD APU STUDY	10	Lognormal	1.70E-06

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ANOAALKA1CLLK20	COMMON CAUSE LEAK; APU/HYD HYDRAZINE	MD APU STUDY			1.70E-06
ANOAALKA1LALK16	LEAKS DETECTED/CONFIRMED; APU/HYD	MD APU STUDY			0.00E+00
ANOAALKA1LDLK06	LEAK DETECTED/CONFIRMED; APU/HYD	MD APU STUDY			0.00E+00
ANOAALKA1LKLK06	APU/HYD UNIT 1 LEAK; APU/HYD HYDRAZINE	MD APU STUDY			1.70E-04
ANOAALKA1LKLK07	APU/HYD UNIT 1 LEAK; APU/HYD HYDRAZINE	MD APU STUDY	10	Lognormal	1.70E-04
ANOAALKA1LKLK12	APU/HYD UNIT 1 LEAK; APU/HYD HYDRAZINE	MD APU STUDY			1.70E-04
ANOAALKA1LKLK16	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	MD APU STUDY			5.67E-05
ANOAALKA1LKLK17	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	MD APU STUDY			5.67E-05
ANOAALKA1LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	MD APU STUDY			5.67E-05
ANOAALKA1LULK07	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	MD APU STUDY			1.00E+00
ANOAALKA1LULK12	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	MD APU STUDY			1.00E+00
ANOAALKA1LZLK17	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	MD APU STUDY	10	Lognormal	1.00E+00
ANOAALKA1LZLK20	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	MD APU STUDY			1.00E+00
ANOAALKA2LKLK16	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	MD APU STUDY			5.67E-05
ANOAALKA2LKLK17	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	MD APU STUDY			5.67E-05
ANOAALKA2LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	MD APU STUDY			5.67E-05
ANOAALKA3LKLK16	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	MD APU STUDY			5.67E-05
ANOAALKA3LKLK17	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	MD APU STUDY			5.67E-05
ANOAALKA3LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	MD APU STUDY			5.67E-05
ANOTPSBT10ID2131	CATASTROPHIC FAILURE OF CENTER OF BODY FLAP TPS; 208 TILES	TPS STUDY	10	Lognormal	2.60E-05
ANOTPSBT11ID2311	CATASTROPHIC FAILURE OF LEFT WING TPS; CENTER MID; 468 TILES	TPS STUDY	10	Lognormal	5.60E-05
ANOTPSBT12ID2311	CATASTROPHIC FAILURE OF RIGHT SIDE TPS; MID EDGE; 1664 TILES	TPS STUDY	10	Lognormal	4.30E-05
ANOTPSBT13ID2312	CATASTROPHIC FAILURE OF LEFT SIDE TPS; MID EDGE; 1196 TILES	TPS STUDY	10	Lognormal	2.90E-05
ANOTPSBT14ID2321	CATASTROPHIC FAILURE OF LEFT SIDE TPS; FWD MID EDGE; 572 TILES	TPS STUDY	10	Lognormal	1.40E-05
ANOTPSBT15ID2321	CATASTROPHIC FAILURE OF RIGHT SIDE TPS; NOSE; 277 TILES	TPS STUDY	10	Lognormal	3.00E-06
ANOTPSBT16ID2321	CATASTROPHIC FAILURE OF LEFT WING TPS; CENTER OUTBOARD; 832 TILES	TPS STUDY	10	Lognormal	7.00E-06
ANOTPSBT17ID2321	CATASTROPHIC FAILURE OF RIGHT SIDE TPS; BODY FLAP; 104 TILES	TPS STUDY	10	Lognormal	1.00E-06
ANOTPSBT18ID2321	CATASTROPHIC FAILURE OF LEFT SIDE TPS; BODY FLAP; 104 TILES	TPS STUDY	10	Lognormal	1.00E-06
ANOTPSBT19ID2321	CATASTROPHIC FAILURE OF RIGHT WING TPS; FWD; 2132 TILES	TPS STUDY	10	Lognormal	3.40E-05
ANOTPSBT1ID1111	CATASTROPHIC FAILURE OF RIGHT SIDE TPS; UNDER CREW; 156 TILES	TPS STUDY	10	Lognormal	1.23E-04
ANOTPSBT20ID2321	CATASTROPHIC FAILURE OF LEFT SIDE NOSE TPS; 312 TILES	TPS STUDY	10	Lognormal	2.00E-06
ANOTPSBT21ID2321	CATASTROPHIC FAILURE OF LEFT WING TPS; FWD; 1768 TILES	TPS STUDY	10	Lognormal	1.30E-05
ANOTPSBT22ID2332	CATASTROPHIC FAILURE OF RIGHT ELEVON TPS; OUTBOARD; 312 TILES	TPS STUDY	10	Lognormal	2.00E-06
ANOTPSBT23ID3112	CATASTROPHIC FAILURE OF RIGHT WING TPS; CENTER INBOARD; 364 TILES	TPS STUDY	10	Lognormal	2.00E-06
ANOTPSBT24ID3122	CATASTROPHIC FAILURE OF LEFT WING TPS; CENTER INBOARD; 468 TILES	TPS STUDY	10	Lognormal	1.00E-06
ANOTPSBT25ID3122	CATASTROPHIC FAILURE OF PAYLOAD BAY TPS; FWD; 1664 TILES	TPS STUDY	10	Lognormal	2.00E-06
ANOTPSBT26ID3132	CATASTROPHIC FAILURE OF PAYLOAD BAY TPS; AFT; 1976 TILES	TPS STUDY	10	Lognormal	2.00E-06
ANOTPSBT27ID3132	CATASTROPHIC FAILURE OF RIGHT WING TPS; CENTER MID; 468 TILES	TPS STUDY	10	Lognormal	1.00E-06
ANOTPSBT28ID3222	CATASTROPHIC FAILURE OF PAYLOAD BAY TPS; MID; 520 TILES	TPS STUDY			0.00E+00
ANOTPSBT29ID3312	CATASTROPHIC FAILURE OF RIGHT ELEVON TPS; IN BOARD; 312 TILES	TPS STUDY			0.00E+00
ANOTPSBT2ID1111	CATASTROPHIC FAILURE OF RIGHT SIDE NEAR MAIN LDG GEAR (AFT) TPS; 156 TILES	TPS STUDY	10	Lognormal	1.23E-04
ANOTPSBT30ID3312	CATASTROPHIC FAILURE OF RIGHT WING TPS; CENTER OUTBOARD; 416 TILES	TPS STUDY			0.00E+00

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ANOTPSBT31ID3322	CATASTROPHIC FAILURE OF LEFT ELEVON IN/ CENTER BODY FLAP TPS; 728 TILES	TPS STUDY			0.00E+00
ANOTPSBT32ID3332	CATASTROPHIC FAILURE OF LEFT ELEVON TPS; OUTBOARD; 572 TILES	TPS STUDY			0.00E+00
ANOTPSBT33ID3332	CATASTROPHIC FAILURE OF CENTER TPS; AFT; 1040 TILES	TPS STUDY			0.00E+00
ANOTPSBT3ID1121	CATASTROPHIC FAILURE OF RIGHT SIDE NEAR MAIN LDG GEAR (FWD) TPS; 676 TILES	TPS STUDY	10	Lognormal	1.75E-04
ANOTPSBT4ID1131	CATASTROPHIC FAILURE OF LEFT SIDE NEAR MAIN LDG GEAR TPS; 780 TILES	TPS STUDY	10	Lognormal	1.87E-04
ANOTPSBT5ID1211	CATASTROPHIC FAILURE OF CERNTERLINE UNDER CREW TPS; 364 TILES	TPS STUDY	10	Lognormal	7.30E-05
ANOTPSBT6ID1311	CATASTROPHIC FAILURE OF LEFT SIDE TPS; UNDER CREW; 312 TILES	TPS STUDY	10	Lognormal	1.50E-05
ANOTPSBT7ID1331	CATASTROPHIC FAILURE OF CENTER OF RIGHT ELEVON TPS; 104 TILES	TPS STUDY	10	Lognormal	5.00E-06
ANOTPSBT8ID2112	CATASTROPHIC FAILURE OF CENTER OF LEFT ELEVON TPS; 401 TILES	TPS STUDY			0.00E+00
ANOTPSBT9ID2121	CATASTROPHIC FAILURE OF RIGHT SIDE TPS; FWD MID EDGE; 624 TILES	TPS STUDY	10	Lognormal	2.48E-04
ANRCPSFLK0LASRM	FIELD JOINT LEAK CHECK PORT PLUG SEAL FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLK0LFSRM	FIELD JOINT LEAK CHECK PORT PLUG SEAL FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLK0LMSRM	FIELD JOINT LEAK CHECK PORT PLUG SEAL FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLK0RASRM	FIELD JOINT LEAK CHECK PORT PLUG SEAL FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLK0RFSRM	FIELD JOINT LEAK CHECK PORT PLUG SEAL FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLK0RMSRM	FIELD JOINT LEAK CHECK PORT PLUG SEAL FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLK0SRM	FIELD JOINT LEAK CHECK PORT PLUG SEAL FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKAEC	NOZZLE JOINT 1 LEAK CHECK PORT PLUG FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKFBIR	NOZZLE JOINT 2 LEAK CHECK PORT PLUG FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKFHFB	NOZZLE JOINT 5 LEAK CHECK PORT PLUG FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKICJ	IGNITER TO CASE JOINT LEAK CHECK PLUG SEAL FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKIJRTR	IGNITER JOINT LEAK CHECK PORT PLUG SEAL FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKIJSA	IGNITER JOINT S&A LEAK CHECK PORT PLUG SEAL FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKIJSII	IGNITER JOINT SII LEAK CHECK PORT PLUG SEAL FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKLAEC	NOZZLE JOINT 1 LEAK CHECK PORT PLUG FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKLFBIR	NOZZLE JOINT 2 LEAK CHECK PORT PLUG FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKLFHFB	NOZZLE JOINT 5 LEAK CHECK PORT PLUG FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKLICJ	IGNITER TO CASE JOINT LEAK CHECK PLUG SEAL FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKLIJRTR	IGNITER JOINT LEAK CHECK PORT PLUG SEAL FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKLIJSA	IGNITER JOINT S&A LEAK CHECK PORT PLUG SEAL FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKLIJSII	IGNITER JOINT SII LEAK CHECK PORT PLUG SEAL FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKLNC	CASE TO NOZZLE JOINT LEAK CHECK PORT PLUG SEAL FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKLTE	NOZZLE JOINT 4 LEAK CHECK PORT PLUG FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKLTI	NOZZLE JOINT 3 LEAK CHECK PORT PLUG FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKNC	CASE TO NOZZLE JOINT LEAK CHECK PORT PLUG SEAL FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKRAEC	NOZZLE JOINT 1 LEAK CHECK PORT PLUG FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKRFBIR	NOZZLE JOINT 2 LEAK CHECK PORT PLUG FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKRFHFB	NOZZLE JOINT 5 LEAK CHECK PORT PLUG FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKRICJ	IGNITER TO CASE JOINT LEAK CHECK PLUG SEAL FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKRIJRTR	IGNITER JOINT LEAK CHECK PORT PLUG SEAL FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKRIJSA	IGNITER JOINT S&A LEAK CHECK PORT PLUG SEAL FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKRIJSII	IGNITER JOINT SII LEAK CHECK PORT PLUG SEAL FAILURE	THIOKOL	15	Lognormal	6.10E-04

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
ANRCPSFLKRNC	CASE TO NOZZLE JOINT LEAK CHECK PORT PLUG SEAL FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKRTE	NOZZLE JOINT 4 LEAK CHECK PORT PLUG FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKRTI	NOZZLE JOINT 3 LEAK CHECK PORT PLUG FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKTE	NOZZLE JOINT 4 LEAK CHECK PORT PLUG FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCPSFLKTI	NOZZLE JOINT 3 LEAK CHECK PORT PLUG FAILURE	THIOKOL	15	Lognormal	6.10E-04
ANRCRSFLK0LASRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	THIOKOL	15	Lognormal	2.07E-03
ANRCRSFLK0LFSRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	THIOKOL	15	Lognormal	2.07E-03
ANRCRSFLK0LMSRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	THIOKOL	15	Lognormal	2.07E-03
ANRCRSFLK0RASRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	THIOKOL	15	Lognormal	2.07E-03
ANRCRSFLK0RFSRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	THIOKOL	15	Lognormal	2.07E-03
ANRCRSFLK0RMSRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	THIOKOL	15	Lognormal	2.07E-03
ANRCRSFLK0SRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	THIOKOL	15	Lognormal	2.07E-03
ANRCVSFLK0LASRM	FIELD JOINT CLOSURE VPP SEAL FAILURE	THIOKOL	15	Lognormal	1.53E-03
ANRCVSFLK0LFSRM	FIELD JOINT CLOSURE VPP SEAL FAILURE	THIOKOL	15	Lognormal	1.53E-03
ANRCVSFLK0LMSRM	FIELD JOINT CLOSURE VPP SEAL FAILURE	THIOKOL	15	Lognormal	1.53E-03
ANRCVSFLK0RASRM	FIELD JOINT CLOSURE VPP SEAL FAILURE	THIOKOL	15	Lognormal	1.53E-03
ANRCVSFLK0RFSRM	FIELD JOINT CLOSURE VPP SEAL FAILURE	THIOKOL	15	Lognormal	1.53E-03
ANRCVSFLK0RMSRM	FIELD JOINT CLOSURE VPP SEAL FAILURE	THIOKOL	15	Lognormal	1.53E-03
ANRCVSFLK0SRM	FIELD JOINT CLOSURE VPP SEAL FAILURE	THIOKOL	15	Lognormal	1.53E-03
ANRCVSFLKLNC	CASE TO NOZZLE JOINT CLOSURE VPP SEAL FAILURE	THIOKOL	15	Lognormal	1.53E-03
ANRCVSFLKNC	CASE TO NOZZLE JOINT CLOSURE VPP SEAL FAILURE	THIOKOL	15	Lognormal	1.53E-03
ANRCVSFLKRNC	CASE TO NOZZLE JOINT CLOSURE VPP SEAL FAILURE	THIOKOL	15	Lognormal	1.53E-03
ANRFAJTLK0SRM	HOT GAS LEAK AT FACTORY JOINT (1 OF 8)	E. T.			2.56E-07
ANRGSCCLKICJ	IGNITER TO CASE JOINT CCF OF OUTER GASKET AND INNER/OUTER SEAL	THIOKOL:B=.1	15	Lognormal	1.81E-04
ANRGSCCLKIJSA	IGNITER JOINT CCF OF S&A PRIMARY AND SECONDARY GASKET SEALS	THIOKOL:B=.1	15	Lognormal	1.05E-04
ANRGSCCLKLICJ	IGNITER TO CASE JOINT CCF OF OUTER GASKET AND INNER/OUTER SEAL	THIOKOL:B=.1	15	Lognormal	1.81E-04
ANRGSCCLKLIJSA	IGNITER JOINT CCF OF S&A PRIMARY AND SECONDARY GASKET SEALS	THIOKOL:B=.1	15	Lognormal	1.05E-04
ANRGSCCLKRICJ	IGNITER TO CASE JOINT CCF OF OUTER GASKET AND INNER/OUTER SEAL	THIOKOL:B=.1	15	Lognormal	1.81E-04
ANRGSCCLKRIJSA	IGNITER JOINT CCF OF S&A PRIMARY AND SECONDARY GASKET SEALS	THIOKOL:B=.1	15	Lognormal	1.05E-04
ANRIGISFLKICJ	IGNITER TO CASE JOINT INNER GASKET/INNER SEAL FAILURE	THIOKOL	15	Lognormal	3.81E-03
ANRIGISFLKLICJ	IGNITER TO CASE JOINT INNER GASKET/INNER SEAL FAILURE	THIOKOL	15	Lognormal	3.81E-03
ANRIGISFLKRICJ	IGNITER TO CASE JOINT INNER GASKET/INNER SEAL FAILURE	THIOKOL	15	Lognormal	3.81E-03
ANRIGOSFLKICJ	IGNITER TO CASE JOINT INNER GASKET/OUTER SEAL FAILURE	THIOKOL	15	Lognormal	1.47E-03
ANRIGOSFLKLICJ	IGNITER TO CASE JOINT INNER GASKET/OUTER SEAL FAILURE	THIOKOL	15	Lognormal	1.47E-03
ANRIGOSFLKRICJ	IGNITER TO CASE JOINT INNER GASKET/OUTER SEAL FAILURE	THIOKOL	15	Lognormal	1.47E-03
ANRIJSFLKICJ	IGNITER TO CASE JOINT INNER J-LEG SEAL FAILURE	THIOKOL	15	Lognormal	2.56E-02
ANRIJSFLKLICJ	IGNITER TO CASE JOINT INNER J-LEG SEAL FAILURE	THIOKOL	15	Lognormal	2.56E-02
ANRIJSFLKRICJ	IGNITER TO CASE JOINT INNER J-LEG SEAL FAILURE	THIOKOL	15	Lognormal	2.56E-02
ANRJSSFLK0LASRM	FIELD JOINT J-SEAL FAILURE	THIOKOL	15	Lognormal	1.31E-03
ANRJSSFLK0LFSRM	FIELD JOINT J-SEAL FAILURE	THIOKOL	15	Lognormal	1.31E-03
ANRJSSFLK0LMSRM	FIELD JOINT J-SEAL FAILURE	THIOKOL	15	Lognormal	1.31E-03
ANRJSSFLK0RASRM	FIELD JOINT J-SEAL FAILURE	THIOKOL	15	Lognormal	1.31E-03

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
ANRJSSFLK0RFSRM	FIELD JOINT J-SEAL FAILURE	THIOKOL	15	Lognormal	1.31E-03
ANRJSSFLK0RMSRM	FIELD JOINT J-SEAL FAILURE	THIOKOL	15	Lognormal	1.31E-03
ANRJSSFLK0SRM	FIELD JOINT J-SEAL FAILURE	THIOKOL	15	Lognormal	1.31E-03
ANRNZLR000SRM	RSRM NOZZLE STRUCTURAL FAILURE CAUSING LOV	THIOKOL	15	Lognormal	4.20E-08
ANRNZTP000SRM	RSRM NOZZLE THERMAL FAILURE LEADING TO LOV	THIOKOL	15	Lognormal	8.90E-05
ANROGISFLKICJ	IGNITER TO CASE JOINT OUTER GASKET/INNER SEAL PATH	THIOKOL	15	Lognormal	1.81E-03
ANROGISFLKLICJ	IGNITER TO CASE JOINT OUTER GASKET/INNER SEAL PATH	THIOKOL	15	Lognormal	1.81E-03
ANROGISFLKRICJ	IGNITER TO CASE JOINT OUTER GASKET/INNER SEAL PATH	THIOKOL	15	Lognormal	1.81E-03
ANROGOSFLKICJ	IGNITER TO CASE JOINT OUTER GASKET/OUTER SEAL FAILURE	THIOKOL	15	Lognormal	1.06E-06
ANROGOSFLKLICJ	IGNITER TO CASE JOINT OUTER GASKET/OUTER SEAL FAILURE	THIOKOL	15	Lognormal	1.06E-06
ANROGOSFLKRICJ	IGNITER TO CASE JOINT OUTER GASKET/OUTER SEAL FAILURE	THIOKOL	15	Lognormal	1.06E-06
ANROJSFLKICJ	IGNITER TO CASE JOINT OUTER J-LEG SEAL FAILURE	THIOKOL	15	Lognormal	2.56E-02
ANROJSFLKLICJ	IGNITER TO CASE JOINT OUTER J-LEG SEAL FAILURE	THIOKOL	15	Lognormal	2.56E-02
ANROJSFLKRICJ	IGNITER TO CASE JOINT OUTER J-LEG SEAL FAILURE	THIOKOL	15	Lognormal	2.56E-02
ANRORCCLK0LASRM	FIELD JOINT CCF OF PRIMARY AND SECONARY O-RINGS	THIOKOL:B=.1	15	Lognormal	1.37E-04
ANRORCCLK0LFSRM	FIELD JOINT CCF OF PRIMARY AND SECONARY O-RINGS	THIOKOL:B=.1	15	Lognormal	1.37E-04
ANRORCCLK0LMSRM	FIELD JOINT CCF OF PRIMARY AND SECONARY O-RINGS	THIOKOL:B=.1	15	Lognormal	1.37E-04
ANRORCCLK0RASRM	FIELD JOINT CCF OF PRIMARY AND SECONARY O-RINGS	THIOKOL:B=.1	15	Lognormal	1.37E-04
ANRORCCLK0RFSRM	FIELD JOINT CCF OF PRIMARY AND SECONARY O-RINGS	THIOKOL:B=.1	15	Lognormal	1.37E-04
ANRORCCLK0RMSRM	FIELD JOINT CCF OF PRIMARY AND SECONARY O-RINGS	THIOKOL:B=.1	15	Lognormal	1.37E-04
ANRORCCLK0SRM	FIELD JOINT CCF OF PRIMARY AND SECONARY O-RINGS	THIOKOL:B=.1	15	Lognormal	1.37E-04
ANRORCCLKAEC	CCF OF NOZZLE JOINT 1 PRIMARY AND SECONDARY O-RINGS	THIOKOL:B=.1	15	Lognormal	1.02E-04
ANRORCCLKFBIR	CCF OF NOZZLE JOINT 2 PRIMARY AND SECONDARY O-RINGS	THIOKOL:B=.01	15	Lognormal	1.02E-05
ANRORCCLKFHFB	CCF OF NOZZLE JOINT 5 PRIMARY AND SECONDARY O-RINGS	THIOKOL:B=.01	15	Lognormal	1.02E-05
ANRORCCLKIJOPT	IGNITER JOINT OPT CCF OF PRIMARY AND SECONDARY O-RINGS	THIOKOL	15	Lognormal	1.56E-05
ANRORCCLKIJRTR	IGNITER JOINT ROTOR CCF OF PRIMARY AND SECONDARY O-RINGS	THIOKOL	15	Lognormal	1.05E-05
ANRORCCLKIJSII	IGNITER JOINT SII CCF OF PRIMARY AND SECONDARY O-RINGS	THIOKOL:B=.01	15	Lognormal	1.05E-05
ANRORCCLKLAEC	CCF OF NOZZLE JOINT 1 PRIMARY AND SECONDARY O-RINGS	THIOKOL:B=.1	15	Lognormal	1.02E-04
ANRORCCLKLFBIR	CCF OF NOZZLE JOINT 2 PRIMARY AND SECONDARY O-RINGS	THIOKOL:B=.01	15	Lognormal	1.02E-05
ANRORCCLKLFHFB	CCF OF NOZZLE JOINT 5 PRIMARY AND SECONDARY O-RINGS	THIOKOL:B=.01	15	Lognormal	1.02E-05
ANRORCCLKLIJOPT	IGNITER JOINT OPT CCF OF PRIMARY AND SECONDARY O-RINGS	THIOKOL	15	Lognormal	1.56E-05
ANRORCCLKLIJRTR	IGNITER JOINT ROTOR CCF OF PRIMARY AND SECONDARY O-RINGS	THIOKOL	15	Lognormal	1.05E-05
ANRORCCLKLIJSII	IGNITER JOINT SII CCF OF PRIMARY AND SECONDARY O-RINGS	THIOKOL:B=.01	15	Lognormal	1.05E-05
ANRORCCLKLNC	CASE TO NOZZLE JOINT CCF OF PRIMARY AND SECONDARY O-RING	THIOKOL	15	Lognormal	5.70E-05
ANRORCCLKLTE	CCF OF NOZZLE JOINT 4 PRIMARY AND SECONDARY O-RINGS	THIOKOL:B=.1	15	Lognormal	1.02E-04
ANRORCCLKLTI	CCF OF NOZZLE JOINT 3 PRIMARY AND SECONDARY O-RINGS	THIOKOL:B=.1	15	Lognormal	1.02E-04
ANRORCCLKNC	CASE TO NOZZLE JOINT CCF OF PRIMARY AND SECONDARY O-RING	THIOKOL	15	Lognormal	5.70E-05
ANRORCCLKRAEC	CCF OF NOZZLE JOINT 1 PRIMARY AND SECONDARY O-RINGS	THIOKOL:B=.1	15	Lognormal	1.02E-04
ANRORCCLKRFBIR	CCF OF NOZZLE JOINT 2 PRIMARY AND SECONDARY O-RINGS	THIOKOL:B=.01	15	Lognormal	1.02E-05
ANRORCCLKRFHFB	CCF OF NOZZLE JOINT 5 PRIMARY AND SECONDARY O-RINGS	THIOKOL:B=.01	15	Lognormal	1.02E-05
ANRORCCLKRIJOPT	IGNITER JOINT OPT CCF OF PRIMARY AND SECONDARY O-RINGS	THIOKOL	15	Lognormal	1.56E-05
ANRORCCLKRIJRTR	IGNITER JOINT ROTOR CCF OF PRIMARY AND SECONDARY O-RINGS	THIOKOL	15	Lognormal	1.05E-05

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
ANRORCCLKRIJSII	IGNITER JOINT SII CCF OF PRIMARY AND SECONDARY O-RINGS	THIOKOL:B=.01	15	Lognormal	1.05E-05
ANRORCCLKRNC	CASE TO NOZZLE JOINT CCF OF PRIMARY AND SECONDARY O-RING	THIOKOL	15	Lognormal	5.70E-05
ANRORCCLKRTE	CCF OF NOZZLE JOINT 4 PRIMARY AND SECONDARY O-RINGS	THIOKOL:B=.1	15	Lognormal	1.02E-04
ANRORCCLKRTI	CCF OF NOZZLE JOINT 3 PRIMARY AND SECONDARY O-RINGS	THIOKOL:B=.1	15	Lognormal	1.02E-04
ANRORCCLKTE	CCF OF NOZZLE JOINT 4 PRIMARY AND SECONDARY O-RINGS	THIOKOL:B=.1	15	Lognormal	1.02E-04
ANRORCCLKTI	CCF OF NOZZLE JOINT 3 PRIMARY AND SECONDARY O-RINGS	THIOKOL:B=.1	15	Lognormal	1.02E-04
ANRPGSFLKIJSA	IGNITER JOINT S&A PRIMARY GASKET SEAL FAILURE	THIOKOL	15	Lognormal	1.05E-03
ANRPGSFLKLIJSA	IGNITER JOINT S&A PRIMARY GASKET SEAL FAILURE	THIOKOL	15	Lognormal	1.05E-03
ANRPGSFLKRIJSA	IGNITER JOINT S&A PRIMARY GASKET SEAL FAILURE	THIOKOL	15	Lognormal	1.05E-03
ANRPRSFLK0LASRM	FIELD JOINT PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.34E-03
ANRPRSFLK0LFSRM	FIELD JOINT PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.34E-03
ANRPRSFLK0LMSRM	FIELD JOINT PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.34E-03
ANRPRSFLK0RASRM	FIELD JOINT PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.34E-03
ANRPRSFLK0RFSRM	FIELD JOINT PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.34E-03
ANRPRSFLK0RMSRM	FIELD JOINT PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.34E-03
ANRPRSFLK0SRM	FIELD JOINT PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.34E-03
ANRPRSFLKAEC	NOZZLE JOINT 1 PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03
ANRPRSFLKFBIR	NOZZLE JOINT 2 PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03
ANRPRSFLKFHFB	NOZZLE JOINT 5 PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03
ANRPRSFLKIJOPT	IGNITER JOINT OPT PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.56E-04
ANRPRSFLKIJRTR	IGNITER JOINT ROTOR PRIMARY O-RING SEAL LEAKAGE	THIOKOL	15	Lognormal	1.05E-03
ANRPRSFLKIJSII	IGNITER JOINT SII PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.05E-03
ANRPRSFLKLAEC	NOZZLE JOINT 1 PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03
ANRPRSFLKLFBIR	NOZZLE JOINT 2 PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03
ANRPRSFLKLFHFB	NOZZLE JOINT 5 PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03
ANRPRSFLKLIJOPT	IGNITER JOINT OPT PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.56E-04
ANRPRSFLKLIJRTR	IGNITER JOINT ROTOR PRIMARY O-RING SEAL LEAKAGE	THIOKOL	15	Lognormal	1.05E-03
ANRPRSFLKLIJSII	IGNITER JOINT SII PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.05E-03
ANRPRSFLKLNC	CASE TO NOZZLE JOINT PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	5.70E-03
ANRPRSFLKLTE	NOZZLE JOINT 4 PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03
ANRPRSFLKLTI	NOZZLE JOINT 3 PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03
ANRPRSFLKNC	CASE TO NOZZLE JOINT PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	5.70E-03
ANRPRSFLKRAEC	NOZZLE JOINT 1 PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03
ANRPRSFLKRFBIR	NOZZLE JOINT 2 PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03
ANRPRSFLKRFHFB	NOZZLE JOINT 5 PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03
ANRPRSFLKRIJOPT	IGNITER JOINT OPT PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.56E-04
ANRPRSFLKRIJRTR	IGNITER JOINT ROTOR PRIMARY O-RING SEAL LEAKAGE	THIOKOL	15	Lognormal	1.05E-03
ANRPRSFLKRIJSII	IGNITER JOINT SII PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.05E-03
ANRPRSFLKRNC	CASE TO NOZZLE JOINT PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	5.70E-03
ANRPRSFLKRTE	NOZZLE JOINT 4 PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03
ANRPRSFLKRTI	NOZZLE JOINT 3 PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03
ANRPRSFLKTE	NOZZLE JOINT 4 PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
ANRPRSFLKTI	NOZZLE JOINT 3 PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03
ANRPSGLLKLNC	CASE TO NOZZLE JOINT POLYSULFIDE LEAK THROUGH	THIOKOL	15	Lognormal	6.90E-02
ANRPSGLLKNC	CASE TO NOZZLE JOINT POLYSULFIDE LEAK THROUGH	THIOKOL	15	Lognormal	6.90E-02
ANRPSGLLKRNC	CASE TO NOZZLE JOINT POLYSULFIDE LEAK THROUGH	THIOKOL	15	Lognormal	6.90E-02
ANRPVLR000SRM	RSRM PRESSURE VESSEL STRUCTURAL FAILURE CAUSING LOV	THIOKOL	15	Lognormal	7.56E-06
ANRPVSFLK0LASRM	FIELD JOINT VPP PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	6.40E-03
ANRPVSFLK0LFSRM	FIELD JOINT VPP PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	6.40E-03
ANRPVSFLK0LMSRM	FIELD JOINT VPP PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	6.40E-03
ANRPVSFLK0RASRM	FIELD JOINT VPP PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	6.40E-03
ANRPVSFLK0RFSRM	FIELD JOINT VPP PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	6.40E-03
ANRPVSFLK0RMSRM	FIELD JOINT VPP PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	6.40E-03
ANRPVSFLK0SRM	FIELD JOINT VPP PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	6.40E-03
ANRPVSFLKLNC	CASE TO NOZZLE JOINT VPP PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	6.40E-03
ANRPVSFLKNC	CASE TO NOZZLE JOINT VPP PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	6.40E-03
ANRPVSFLKRNC	CASE TO NOZZLE JOINT VPP PRIMARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	6.40E-03
ANRPVTP000SRM	RSRM PRESSURE VESSEL THERMAL / PRESSURE FAILURES CAUSING LOV	THIOKOL	15	Lognormal	6.46E-05
ANRRBBFLKAEC	NOZZLE JOINT 1 RTV BACKFILL FAILURE	THIOKOL	15	Lognormal	5.55E-02
ANRRBBFLKFBIR	NOZZLE JOINT 2 RTV BACKFILL FAILURE	THIOKOL	15	Lognormal	3.89E-01
ANRRBBFLKFHFB	NOZZLE JOINT 5 RTV BACKFILL FAILURE	THIOKOL	15	Lognormal	6.80E-02
ANRRBBFLKLAEC	NOZZLE JOINT 1 RTV BACKFILL FAILURE	THIOKOL	15	Lognormal	5.55E-02
ANRRBBFLKLFBIR	NOZZLE JOINT 2 RTV BACKFILL FAILURE	THIOKOL	15	Lognormal	3.89E-01
ANRRBBFLKLFHFB	NOZZLE JOINT 5 RTV BACKFILL FAILURE	THIOKOL	15	Lognormal	6.80E-02
ANRRBBFLKLTE	NOZZLE JOINT 4 RTV BACKFILL FAILURE	THIOKOL	15	Lognormal	1.41E-01
ANRRBBFLKLTI	NOZZLE JOINT 3 RTV BACKFILL FAILURE	THIOKOL	15	Lognormal	1.41E-01
ANRRBBFLKRAEC	NOZZLE JOINT 1 RTV BACKFILL FAILURE	THIOKOL	15	Lognormal	5.55E-02
ANRRBBFLKRFBIR	NOZZLE JOINT 2 RTV BACKFILL FAILURE	THIOKOL	15	Lognormal	3.89E-01
ANRRBBFLKRFHFB	NOZZLE JOINT 5 RTV BACKFILL FAILURE	THIOKOL	15	Lognormal	6.80E-02
ANRRBBFLKRTE	NOZZLE JOINT 4 RTV BACKFILL FAILURE	THIOKOL	15	Lognormal	1.41E-01
ANRRBBFLKRTI	NOZZLE JOINT 3 RTV BACKFILL FAILURE	THIOKOL	15	Lognormal	1.41E-01
ANRRBBFLKTE	NOZZLE JOINT 4 RTV BACKFILL FAILURE	THIOKOL	15	Lognormal	1.41E-01
ANRRBBFLKTI	NOZZLE JOINT 3 RTV BACKFILL FAILURE	THIOKOL	15	Lognormal	1.41E-01
ANRSBRSFLKICJ	IGNITER TO CASE JOINT SPECIAL BOLT O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.04E-03
ANRSBRSFLKLICJ	IGNITER TO CASE JOINT SPECIAL BOLT O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.04E-03
ANRSBRSFLKRICJ	IGNITER TO CASE JOINT SPECIAL BOLT O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.04E-03
ANRSGSFLKIJSA	IGNITER JOINT S&A SECONDARY GASKET SEAL FAILURE	THIOKOL	15	Lognormal	2.64E-03
ANRSGSFLKLIJSA	IGNITER JOINT S&A SECONDARY GASKET SEAL FAILURE	THIOKOL	15	Lognormal	2.64E-03
ANRSGSFLKRIJSA	IGNITER JOINT S&A SECONDARY GASKET SEAL FAILURE	THIOKOL	15	Lognormal	2.64E-03
ANRSRSFLK0LASRM	FIELD JOINT SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.39E-03
ANRSRSFLK0LFSRM	FIELD JOINT SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.39E-03
ANRSRSFLK0LMSRM	FIELD JOINT SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.39E-03
ANRSRSFLK0RASRM	FIELD JOINT SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.39E-03
ANRSRSFLK0RFSRM	FIELD JOINT SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.39E-03

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
ANRSRSFLK0RMSRM	FIELD JOINT SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.39E-03
ANRSRSFLK0SRM	FIELD JOINT SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.39E-03
ANRSRSFLKAEC	NOZZLE JOINT 1 SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	4.20E-04
ANRSRSFLKFBIR	NOZZLE JOINT 2 SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	4.20E-04
ANRSRSFLKFHFB	NOZZLE JOINT 5 SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	4.20E-04
ANRSRSFLKIJOPT	IGNITER JOINT OPT SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	5.45E-03
ANRSRSFLKIJRTR	IGNITER JOINT ROTOR SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	2.57E-03
ANRSRSFLKIJSII	IGNITER JOINT SII SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	2.60E-03
ANRSRSFLKLAEC	NOZZLE JOINT 1 SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	4.20E-04
ANRSRSFLKLFBIR	NOZZLE JOINT 2 SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	4.20E-04
ANRSRSFLKLFHFB	NOZZLE JOINT 5 SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	4.20E-04
ANRSRSFLKLIJOPT	IGNITER JOINT OPT SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	5.45E-03
ANRSRSFLKLIJRTR	IGNITER JOINT ROTOR SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	2.57E-03
ANRSRSFLKLIJSII	IGNITER JOINT SII SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	2.60E-03
ANRSRSFLKLNC	CASE TO NOZZLE JOINT SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	4.04E-03
ANRSRSFLKLTE	NOZZLE JOINT 4 SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	4.20E-04
ANRSRSFLKLTI	NOZZLE JOINT 3 SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	4.20E-04
ANRSRSFLKNC	CASE TO NOZZLE JOINT SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	4.04E-03
ANRSRSFLKRAEC	NOZZLE JOINT 1 SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	4.20E-04
ANRSRSFLKRFBIR	NOZZLE JOINT 2 SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	4.20E-04
ANRSRSFLKRFHFB	NOZZLE JOINT 5 SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	4.20E-04
ANRSRSFLKRIJOPT	IGNITER JOINT OPT SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	5.45E-03
ANRSRSFLKRIJRTR	IGNITER JOINT ROTOR SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	2.57E-03
ANRSRSFLKRIJSII	IGNITER JOINT SII SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	2.60E-03
ANRSRSFLKRNC	CASE TO NOZZLE JOINT SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	4.04E-03
ANRSRSFLKRTE	NOZZLE JOINT 4 SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	4.20E-04
ANRSRSFLKRTI	NOZZLE JOINT 3 SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	4.20E-04
ANRSRSFLKTE	NOZZLE JOINT 4 SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	4.20E-04
ANRSRSFLKTI	NOZZLE JOINT 3 SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	4.20E-04
ANRSSSFLKFHFB	NOZZLE JOINT 5 STAT-O-SEAL FAILURE (1 OF 77)	THIOKOL	15	Lognormal	1.35E-03
ANRSSSFLKICJ	IGNITER TO CASE JOINT STAT-O-SEAL FAILURE (1 OF 36)	THIOKOL	15	Lognormal	6.30E-04
ANRSSSFLKLFHFB	NOZZLE JOINT 5 STAT-O-SEAL FAILURE (1 OF 77)	THIOKOL	15	Lognormal	1.35E-03
ANRSSSFLKLICJ	IGNITER TO CASE JOINT STAT-O-SEAL FAILURE (1 OF 36)	THIOKOL	15	Lognormal	6.30E-04
ANRSSSFLKLNC	CASE TO NOZZLE JOINT STAT-O-SEAL FAILURE (1 OF 100)	THIOKOL	15	Lognormal	1.75E-03
ANRSSSFLKNC	CASE TO NOZZLE JOINT STAT-O-SEAL FAILURE (1 OF 100)	THIOKOL	15	Lognormal	1.75E-03
ANRSSSFLKRFHFB	NOZZLE JOINT 5 STAT-O-SEAL FAILURE (1 OF 77)	THIOKOL	15	Lognormal	1.35E-03
ANRSSSFLKRICJ	IGNITER TO CASE JOINT STAT-O-SEAL FAILURE (1 OF 36)	THIOKOL	15	Lognormal	6.30E-04
ANRSSSFLKRNC	CASE TO NOZZLE JOINT STAT-O-SEAL FAILURE (1 OF 100)	THIOKOL	15	Lognormal	1.75E-03
ANRSVSFLK0LASRM	FIELD JOINT VPP SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03
ANRSVSFLK0LFSRM	FIELD JOINT VPP SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03
ANRSVSFLK0LMSRM	FIELD JOINT VPP SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03
ANRSVSFLK0RASRM	FIELD JOINT VPP SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
ANRSVSFLK0RFSRM	FIELD JOINT VPP SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03
ANRSVSFLK0RMSRM	FIELD JOINT VPP SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03
ANRSVSFLK0SRM	FIELD JOINT VPP SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03
ANRSVSFLKLNC	CASE TO NOZZLE JOINT VPP SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03
ANRSVSFLKNC	CASE TO NOZZLE JOINT VPP SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03
ANRSVSFLKRNC	CASE TO NOZZLE JOINT VPP SECONDARY O-RING SEAL FAILURE	THIOKOL	15	Lognormal	1.02E-03
ANRWRSFLKLNC	CASE TO NOZZLE JOINT WIPER O-RING SEAL FAILURE	THIOKOL	15	Lognormal	4.00E-02
ANRWRSFLKNC	CASE TO NOZZLE JOINT WIPER O-RING SEAL FAILURE	THIOKOL	15	Lognormal	4.00E-02
ANRWRSFLKRNC	CASE TO NOZZLE JOINT WIPER O-RING SEAL FAILURE	THIOKOL			4.00E-02
AOK	ASCENT WITH OK START	MD APU STUDY			1.00E+00
AOK2APUCCF	TWO APUS FAIL DUE TO COMMON CAUSE	APU PRA			2.00E-04
APMAVFPPRPMBYPAS	BY-PASS VALVE FAILS TO CHANGE ITS POSITION	NPRD-3			2.32E-06
APMCAOCPRPMCLCHA	HPFTP CL HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNEL A	NPRD-91			1.43E-09
APMCAOCPRPMCLCHB	HPFTP CL HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNEL B	NPRD-91			1.43E-09
APMCAOCPRPMFDTCA	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNEL A	NPRD-91			1.43E-09
APMCAOCPRPMFDTCB	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNEL B	NPRD-91			1.43E-09
APMCAOCPRPMODTCA	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNEL A	NPRD-91			1.43E-09
APMCAOCPRPMODTCB	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNEL B	NPRD-91			1.43E-09
APMCAOCPRPMPCCHA	Pc PRESSURE SENSOR HARNESS FAILURE (FAILS OPEN OR SHORTED) CHANNEL A	NPRD-91			1.43E-09
APMCAOCPRPMPCCHB	Pc PRESSURE SENSOR HARNESS FAILURE (FAILS OPEN OR SHORTED) CHANNEL B	NPRD-91			1.43E-09
APMCOMCPRPMCLCHA	CONTROLLER SENSOR HPFTP CL INTERFACE FAILURE. CHANNEL A	NPRD-91			1.43E-07
APMCOMCPRPMCLCHB	CONTROLLER SENSOR HPFTP CL INTERFACE FAILURE. CHANNEL B	NPRD-91			1.43E-07
APMCOMCPRPMFDTCA	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL A	NPRD-91			1.43E-07
APMCOMCPRPMFDTCB	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL B	NPRD-91			1.43E-07
APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNEL A	NPRD-91			1.43E-07
APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNEL B	NPRD-91			1.43E-07
APMCOMCPRPMPCCHA	CONTROLLER INTERFACE FAILURE. CHANNEL A	NPRD-91			1.43E-07
APMCOMCPRPMPCCHB	CONTROLLER INTERFACE FAILURE. CHANNEL B	NPRD-91			1.43E-07
APMHVFCPRPMOPO1	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 1)	ROCKETDYNE			8.10E-07
APMHVFCPRPMOPO2	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 2)	ROCKETDYNE			8.10E-07
APMHVFCPRPMOPO3	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 3)	ROCKETDYNE			8.10E-07
APMHVFOPRPMFPO1	FPOV VALVE FAILS TO OPEN (ENGINE 1)	HYPOTHESIS			1.00E-04
APMHVFOPRPMOPO1	OPOV VALVE FAILS TO OPEN (ENGINE 1)	HYPOTHESIS			1.00E-04
APMLOGICSWB	FAILURE OF THE LOGIC TO DE-ENERGIZE SERVO-SWITCH B	HYPOTHESIS			1.00E-07
APMMECCPRPMSEINT	SECOND SSME/MPS INITIATED SHUTDOWN BEFORE REDLINE INHIBITS ACTIVAT	PRA S/D RESULTS	5	Lognormal	2.30E-04
APMMESDPRPMSEINT	FIRST MPS/SSME INITIATED SSME SHUTDOWN	PRA S/D RESULTS	5	Lognormal	4.00E-02
APMPSCCPRPMCLCAB	CCF OF CH A AND CH B HPFTP COOLANT LINER PRESSURE SENSORS	RCKTDYNE:B=.005			5.00E-05
APMPSCCPRPMPCCAB	CCF OF CHANNEL A AND CHANNEL B PRESSURE DROP SENSORS	RCKTDYNE:B=.005			5.00E-05
APMPSFPPRPMCLCHA	HPFTP CL SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	ROCKETDYNE			1.00E-02
APMPSFPPRPMCLCHB	HPFTP CL SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	ROCKETDYNE			1.00E-02
APMPSFPPRPMPCCHA	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL A	ROCKETDYNE			1.00E-02
APMPSFPPRPMPCCHB	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL B	ROCKETDYNE			1.00E-02

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
APMSDCCPRPMVDHLI	SECOND SSME IN HYDRAULIC LOCK-UP SHUTS DOWN BEFORE REDLINE INHIBIT ACTIVATED	EXPERT OPINION			2.00E-02
APMSDVDPRPMVDHLI	FIRST SSME IN HYDRAULIC LOCK-UP SHUTS DOWN DUE TO VALVE DRIFT	EXPERT OPINION			2.00E-01
APMSVFPPRPMSWB	SERVO-SWITCH B FAILS TO CHANGE ITS POSITION (HARDWARE FAILURES)	NPRD-3			2.00E-06
APMTSCCPRPMFDTAB	CCF OF CHANNEL A AND CHANNEL B HPFTP DT SENSORS	RCKTDYNE:B=.005			5.00E-05
APMTSCCPRPMODTAB	CCF OF CHANNEL A CHANNEL B HPOTP DT SENSORS	RCKTDYNE:B=.005			5.00E-05
APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL CHANNEL A	ROCKETDYNE			1.00E-02
APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL CHANNEL B	ROCKETDYNE			1.00E-02
APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL CHANNEL A	ROCKETDYNE			1.00E-02
APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL CHANNEL B	ROCKETDYNE			1.00E-02
APSLAG	SLAG ACCUMULATION LEADS TO THRUST TRANSIENTS	THIOKOL			3.00E-02
APU1FAIL	FAILURE OF APU 1	PRA ANALYSIS	2.17	Lognormal	4.00E-03
APU2FAIL	FAILURE OF APU 2	PRA ANALYSIS	2.17	Lognormal	4.00E-03
APU3FAIL	FAILURE OF APU 3	PRA ANALYSIS	2.17	Lognormal	4.00E-03
ASMAVFOMPHBLE1	SSME-1 FUEL BLEED VALVE FAILS TO OPEN	GALILEO RTG PRA			8.45E-05
ASMAVFOMPHBLE2	SSME-2 FUEL BLEED VALVE FAILS TO OPEN	GALILEO RTG PRA			8.45E-05
ASMAVFOMPHBLE3	SSME-3 FUEL BLEED VALVE FAILS TO OPEN	GALILEO RTG PRA			8.45E-05
ASMAVFOMPHIFD1	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 1)	MPS R.F.D.			3.31E-05
ASMAVFOMPHIFD2	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 2)	MPS R.F.D.			3.31E-05
ASMAVFOMPHIFD3	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 3)	MPS R.F.D.			3.31E-05
ASMAVFOMPHOFD1	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 1)	MPS R.F.D.			3.31E-05
ASMAVFOMPHOFD2	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 2)	MPS R.F.D.			3.31E-05
ASMAVFOMPHOFD3	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 3)	MPS R.F.D.			3.31E-05
ASMAVFOMPHRPR1	SSME LH2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	LOCKHEED PRA			6.36E-05
ASMAVFOMPHRPR2	SSME LH2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	LOCKHEED PRA			6.36E-05
ASMAVFOMPHTOG1	SSME-1 FUEL TOPPING VALVE FAILS TO OPEN	MPS R.F.D.			8.98E-05
ASMAVFOMPHTOG2	SSME-2 FUEL TOPPING VALVE FAILS TO OPEN	MPS R.F.D.			8.98E-05
ASMAVFOMPHTOG3	SSME-3 FUEL TOPPING VALVE FAILS TO OPEN	MPS R.F.D.			8.98E-05
ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	LOCKHEED PRA			6.62E-05
ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	LOCKHEED PRA			6.62E-05
ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	LOCKHEED PRA			6.62E-05
ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	LOCKHEED PRA			6.62E-05
ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	LOCKHEED PRA			6.62E-05
ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	LOCKHEED PRA			6.62E-05
ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	LOCKHEED PRA			6.30E-05
ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	LOCKHEED PRA			6.36E-05
ASMCOFPBCFFCHA1	FAILURE ON CHANNEL A TO CONTROL FPOV POSITION (ENGINE 1)	HYPOTHESIS			1.00E-07
ASMCOFPBCFFCHB1	FAILURE ON CHANNEL B TO CONTROL FPOV POSITION (ENGINE 1)	HYPOTHESIS			1.00E-07
ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	HYPOTHESIS			1.00E-07
ASMCOFPBCFOCHA2	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 2)	HYPOTHESIS			1.00E-07
ASMCOFPBCFOCHA3	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 3)	HYPOTHESIS			1.00E-07
ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	HYPOTHESIS			1.00E-07
ASMCOFPBCFOCHB2	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 2)	HYPOTHESIS			1.00E-07

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
ASMCOFPBCFOCHB3	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 3)	HYPOTHESIS			1.00E-07
ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	HYPOTHESIS			1.00E-02
ASMHUHSPHFEMESD	HUMAN ERROR TO INITIATE THE MANUAL EMERGENCY HYDRAULIC S/D	HYPOTHESIS	15	Lognormal	1.00E-02
ASMHVCPPHFFSAB1	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	NPRD-3; B=0.05			2.70E-07
ASMHVCPPHFOSAB1	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B (ENGINE 1)	NPRD-3; B=0.05			2.70E-07
ASMHVCPPHFOSAB2	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	NPRD-3; B=0.05			2.70E-07
ASMHVCPPHFOSAB3	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	NPRD-3; B=0.05			2.70E-07
ASMHVCPPHFSVA&B	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	NPRD-3; B=0.05			2.70E-07
ASMHVFOPHFFSWA1	FPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	NPRD-3			4.02E-06
ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	NPRD-3			4.02E-06
ASMHVFOPHFOSWA2	OPOV SERVO-SWITCH B FAILS TO CHANGE ITS POSITION (ENGINE 2)	NPRD-3			4.02E-06
ASMHVFOPHFOSWA3	OPOV SERVO-SWITCH B FAILS TO CHANGE ITS POSITION (ENGINE 3)	NPRD-3			4.02E-06
ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	HYPOTHESIS			1.00E-04
ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	HYPOTHESIS			1.00E-04
ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	HYPOTHESIS			1.00E-04
ASMHVFPPHFFPSH1	FPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	NPRD-3			5.58E-06
ASMHVFPPHFFSVA1	FPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	NPRD-3			5.58E-06
ASMHVFPPHFFSVB1	FPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	NPRD-3			5.58E-06
ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	NPRD-3			5.58E-06
ASMHVFPPHFOPSH2	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 2)	NPRD-3			5.58E-06
ASMHVFPPHFOPSH3	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 3)	NPRD-3			5.58E-06
ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	NPRD-3			5.58E-06
ASMHVFPPHFOSVA2	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 2)	NPRD-3			5.58E-06
ASMHVFPPHFOSVA3	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 3)	NPRD-3			5.58E-06
ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	NPRD-3			5.58E-06
ASMHVFPPHFOSVB2	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 2)	NPRD-3			5.58E-06
ASMHVFPPHFOSVB3	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 3)	NPRD-3			5.58E-06
ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	HYPOTHESIS			1.40E-04
ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	HYPOTHESIS			1.40E-04
ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	HYPOTHESIS			1.40E-04
ASMPAFPMPPRPB1	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 1)	NPRD-3			7.76E-08
ASMPAFPMPPRPB2	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 2)	NPRD-3			7.76E-08
ASMPAFPMPPRPB3	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 3)	NPRD-3			7.76E-08
ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	MPS R.F.D.			6.90E-05
ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	MPS R.F.D.			6.90E-05
ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	LOCKHEED PRA			1.66E-04
ASMSVFOMPHPRV1	SSME-1 LH2 PREVALVE FAILS TO OPEN	MPS R.F.D.			4.07E-05
ASMSVFOMPHPRV2	SSME-2 LH2 PREVALVE FAILS TO OPEN	MPS R.F.D.			4.07E-05
ASMSVFOMPHPRV3	SSME-3 LH2 PREVALVE FAILS TO OPEN	MPS R.F.D.			4.07E-05
ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	LOCKHEED PRA			1.66E-04
ASMSVFOMPOPRV1	SSME-1 LO2 PREVALVE FAILS TO OPEN	MPS R.F.D.			4.07E-05
ASMSVFOMPOPRV2	SSME-2 LO2 PREVALVE FAILS TO OPEN	MPS R.F.D.			4.07E-05

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ASMSVFOMPOPRV3	SSME-3 LO2 PREVALVE FAILS TO OPEN	MPS R.F.D.			4.07E-05
ATTSNSFAIL	ATTITUDE SENSORS OR PROCESSING FAILS	HYPOTHESIS			1.00E-05
BADFE2O3	THRUST TRANSIENTS DUE TO INHOMOGENEOUS IRON OXIDE	HYPOTHESIS			1.00E-04
BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	HYPOTHESIS			5.00E-02
CCFAPU	COMMON CAUSE FAILURE OF THREE APUS	PRA ANALYSIS	5	Lognormal	1.92E-04
CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	HYPOTHESIS	15	Lognormal	1.12E-06
COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	HYPOTHESIS			1.00E-01
CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	NPRD-3.B=0.1			5.40E-07
CPFAILGENCOM	CENTER PITCH FAILURE TO GENERATE A COMMAND	HYPOTHESIS			1.00E-07
CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	NPRD-3	10	Lognormal	2.29E-05
CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	NPRD-3			2.00E-05
CPSTFAILACTRAM	CENTER PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	NPRD-3			4.28E-08
CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	NPRD-3			5.58E-06
CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	NPRD-3			5.58E-06
CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	NPRD-3			5.58E-06
CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	NPRD-3			5.58E-06
CPSWVFAILTOMOVE	CENTER PITCH SWITCHING VALVE FAILURE TO MOVE	NPRD-3			4.58E-06
CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	NPRD-3.B=0.1			5.40E-07
CYFAILGENCOM	CENTER YAW FAILURE TO GENERATE A COMMAND	HYPOTHESIS			1.00E-07
CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	NPRD-3	10	Lognormal	2.29E-05
CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	NPRD-3			2.00E-05
CYSTFAILACTRAM	CENTER YAW STRUCTURAL FAILURE OF ACTUATOR RAM	NPRD-3			4.28E-08
CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	NPRD-3			5.58E-06
CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	NPRD-3			5.58E-06
CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	NPRD-3			5.58E-06
CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	NPRD-3			5.58E-06
CYSWVFAILTOMOVE	CENTER YAW SWITCHING VALVE FAILURE TO MOVE	NPRD-3			4.58E-06
EAOAAFRA1OSL004	LEAKAGE INDUCED FAILURE START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA1OSL007	LEAKAGE INDUCED FAILURE START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA1OSL011	LEAKAGE INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA1OSL012	LEAKAGE INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA1OSL016	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA1OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA1OSL023	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA1OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA1OSLT04	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA1OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA1OSLT11	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA1OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA1OSOK09	LEAKAGE INDUCED FAILURE START OR RUN; OK	MD APU STUDY	1.3	Lognormal	3.00E-01
EAOAAFRA1OSOK12	LEAKAGE INDUCED FAILURE START OR RUN; OK	MD APU STUDY	1.3	Lognormal	3.00E-01
EAOAAFRA1OSOK16	LEAKAGE INDUCED FAILURE TO START OR RUN;	MD APU STUDY	1.3	Lognormal	3.00E-01

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
EAOAAFRA1OSOK17	LEAKAGE INDUCED FAILURE TO START OR RUN;	MD APU STUDY	1.3	Lognormal	3.00E-01
EAOAAFRA1OSOK21	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY	1.3	Lognormal	3.00E-01
EAOAAFRA1OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY	1.3	Lognormal	3.00E-01
EAOAAFRA1OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY	1.3	Lognormal	3.00E-01
EAOAAFRA1OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY	1.3	Lognormal	3.00E-01
EAOAAFRA1ULL004	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	MD APU STUDY			1.00E-01
EAOAAFRA1ULL006	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	MD APU STUDY			1.00E-01
EAOAAFRA1ULL016	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	MD APU STUDY			1.00E-01
EAOAAFRA1ULL018	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL;	MD APU STUDY			1.00E-01
EAOAAFRA1ULLT04	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	MD APU STUDY			1.00E-01
EAOAAFRA1ULLT06	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL;	MD APU STUDY			1.00E-01
EAOAAFRA1ULOK04	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK	MD APU STUDY	5	Lognormal	1.00E-01
EAOAAFRA1ULOK09	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	MD APU STUDY	5	Lognormal	1.00E-01
EAOAAFRA1ULOK11	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	MD APU STUDY	5	Lognormal	1.00E-01
EAOAAFRA1ULOK21	SINGLE APU/HYD RTL UNSUCCESSFUL; OK STATE	MD APU STUDY	5	Lognormal	1.00E-01
EAOAAFRA1ULOK23	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK	MD APU STUDY	5	Lognormal	1.00E-01
EAOAAFRA2OSL016	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA2OSL018	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA2OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA2OSL023	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA2OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA2OSLT04	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA2OSLT06	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA2OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA2OSLT11	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA2OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA2OSOK21	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY	1.3	Lognormal	3.00E-01
EAOAAFRA2OSOK23	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY	1.3	Lognormal	3.00E-01
EAOAAFRA2OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY	1.3	Lognormal	3.00E-01
EAOAAFRA2OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY	1.3	Lognormal	3.00E-01
EAOAAFRA2OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY	1.3	Lognormal	3.00E-01
EAOAAFRA3OSL016	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA3OSL018	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA3OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA3OSL023	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA3OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA3OSLT04	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA3OSLT06	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA3OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA3OSLT11	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA3OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY			3.00E-01
EAOAAFRA3OSOK21	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY	1.3	Lognormal	3.00E-01

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
EAOAAFRA3OSOK23	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY	1.3	Lognormal	3.00E-01
EAOAAFRA3OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY	1.3	Lognormal	3.00E-01
EAOAAFRA3OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY	1.3	Lognormal	3.00E-01
EAOAAFRA3OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	MD APU STUDY	1.3	Lognormal	3.00E-01
EAOAAFRCEIDLL03	FLIGHT CRITICAL EQUIPMENT FAILURE; LARGE	MD APU STUDY	15	Lognormal	1.00E-01
EAOAAL0A1SRL006	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 1	MD APU STUDY			9.94E-01
EAOAAL0A1SRL018	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 1	MD APU STUDY			9.94E-01
EAOAALTA1SRLT06	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 3	MD APU STUDY			9.94E-01
EAOAAOKA1SROK11	RESTART/RUN SUCCESSFUL; OK STATE DURING	MD APU STUDY			9.94E-01
EAOAAOKA1SROK23	RESTART/RUN SUCCESSFUL; OK STATE DURING	MD APU STUDY			9.94E-01
EAOAASRA1CSL004	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY			8.87E-04
EAOAASRA1CSL006	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY			4.44E-04
EAOAASRA1CSL007	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY			3.43E-04
EAOAASRA1CSL011	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY			1.33E-03
EAOAASRA1CSL012	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY			3.43E-04
EAOAASRA1CSL016	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY			8.87E-04
EAOAASRA1CSL018	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY			4.44E-04
EAOAASRA1CSL019	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY			3.43E-04
EAOAASRA1CSL023	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY			1.33E-03
EAOAASRA1CSL024	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY			3.43E-04
EAOAASRA1CSLT04	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY			8.87E-04
EAOAASRA1CSLT06	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY			4.44E-04
EAOAASRA1CSLT07	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY			3.43E-04
EAOAASRA1CSLT11	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY			1.33E-03
EAOAASRA1CSLT12	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY			3.43E-04
EAOAASRA1CSOK04	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY	10	Lognormal	1.33E-03
EAOAASRA1CSOK05	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY	10	Lognormal	3.43E-04
EAOAASRA1CSOK09	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY	10	Lognormal	8.87E-04
EAOAASRA1CSOK11	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY			4.44E-04
EAOAASRA1CSOK12	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY	10	Lognormal	3.43E-04
EAOAASRA1CSOK16	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY	10	Lognormal	1.33E-03
EAOAASRA1CSOK17	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY	10	Lognormal	3.43E-04
EAOAASRA1CSOK21	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY			8.87E-04
EAOAASRA1CSOK23	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY			4.44E-04
EAOAASRA1CSOK24	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY			3.43E-04
EAOAASRA1CSOK28	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY			1.33E-03
EAOAASRA1CSOK29	COMMON CAUSE FAILURE TO START OR RUN;	MD APU STUDY			3.43E-04
EAOAASRA1ISL004	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA1ISL007	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA1ISL011	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA1ISL012	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA1ISL016	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
EAOAASRA1ISL019	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA1ISL023	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA1ISL024	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA1ISLT04	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA1ISLT07	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA1ISLT11	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA1ISLT12	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA1ISOK04	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY	2.7	Lognormal	1.09E-02
EAOAASRA1ISOK05	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY	2.7	Lognormal	1.09E-02
EAOAASRA1ISOK09	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY	2.7	Lognormal	1.09E-02
EAOAASRA1ISOK12	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY			1.09E-02
EAOAASRA1ISOK16	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY	2.7	Lognormal	1.09E-02
EAOAASRA1ISOK17	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY	2.7	Lognormal	1.09E-02
EAOAASRA1ISOK21	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY			1.09E-02
EAOAASRA1ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY			1.09E-02
EAOAASRA1ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY			1.09E-02
EAOAASRA1ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY			1.09E-02
EAOAASRA1LSL016	OTHER UNIT LEAK INDUCED FAILURE TO START OR	MD APU STUDY			7.00E-02
EAOAASRA1LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	MD APU STUDY			7.00E-02
EAOAASRA1LSL023	OTHER UNIT LEAK INDUCED FAILURE TO START OR	MD APU STUDY			7.00E-02
EAOAASRA1LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	MD APU STUDY			7.00E-02
EAOAASRA1LSLT04	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			7.00E-02
EAOAASRA1LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			7.00E-02
EAOAASRA1LSLT11	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			7.00E-02
EAOAASRA1LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			7.00E-02
EAOAASRA1LSOK21	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			0.00E+00
EAOAASRA1LSOK24	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			0.00E+00
EAOAASRA1LSOK28	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			0.00E+00
EAOAASRA1LSOK29	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			0.00E+00
EAOAASRA2CSOK04	COMMON CAUSE FAILURE TO START OR RUN; OK STATE DURING RTL SEQ 4	MD APU STUDY	15	Lognormal	1.33E-03
EAOAASRA2ISL004	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA2ISL006	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA2ISL007	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA2ISL011	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA2ISL012	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA2ISL016	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA2ISL018	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA2ISL019	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA2ISL023	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA2ISL024	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA2ISLT04	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA2ISLT06	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
EAOAASRA2ISLT07	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA2ISLT11	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA2ISLT12	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA2ISOK04	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY	2.7	Lognormal	1.09E-02
EAOAASRA2ISOK05	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY	2.7	Lognormal	1.09E-02
EAOAASRA2ISOK09	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY	2.7	Lognormal	1.09E-02
EAOAASRA2ISOK11	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY	2.7	Lognormal	1.09E-02
EAOAASRA2ISOK12	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY	2.7	Lognormal	1.09E-02
EAOAASRA2ISOK16	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY	2.7	Lognormal	1.09E-02
EAOAASRA2ISOK17	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY	2.7	Lognormal	1.09E-02
EAOAASRA2ISOK21	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY			1.09E-02
EAOAASRA2ISOK23	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY			1.09E-02
EAOAASRA2ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY			1.09E-02
EAOAASRA2ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY			1.09E-02
EAOAASRA2ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY			1.09E-02
EAOAASRA2LSL004	LEAKAGE INDUCED FAILURE TO START OR RUN;	MD APU STUDY			7.00E-02
EAOAASRA2LSL006	LEAKAGE INDUCED FAILURE START OR RUN;	MD APU STUDY			7.00E-02
EAOAASRA2LSL007	LEAKAGE INDUCED FAILURE START OR RUN;	MD APU STUDY			7.00E-02
EAOAASRA2LSL011	LEAKAGE INDUCED FAILURE TO START OR RUN;	MD APU STUDY			7.00E-02
EAOAASRA2LSL012	LEAKAGE INDUCED FAILURE TO START OR RUN;	MD APU STUDY			7.00E-02
EAOAASRA2LSL016	OTHER UNIT LEAK INDUCED FAILURE TO START OR	MD APU STUDY			7.00E-02
EAOAASRA2LSL018	OTHER UNIT LEAK INDUCED FAILURE TO START OR	MD APU STUDY			7.00E-02
EAOAASRA2LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	MD APU STUDY			7.00E-02
EAOAASRA2LSL023	OTHER UNIT LEAK INDUCED FAILURE TO START OR	MD APU STUDY			7.00E-02
EAOAASRA2LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	MD APU STUDY			7.00E-02
EAOAASRA2LSLT04	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			7.00E-02
EAOAASRA2LSLT06	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			7.00E-02
EAOAASRA2LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			7.00E-02
EAOAASRA2LSLT11	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			7.00E-02
EAOAASRA2LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			7.00E-02
EAOAASRA2LSOK09	LEAKAGE INDUCED FAILURE TO START OR RUN;	MD APU STUDY	3.02	Lognormal	7.00E-02
EAOAASRA2LSOK11	LEAKAGE INDUCED FAILURE START OR RUN; OK	MD APU STUDY	3.02	Lognormal	7.00E-02
EAOAASRA2LSOK12	LEAKAGE INDUCED FAILURE START OR RUN; OK	MD APU STUDY	3.02	Lognormal	7.00E-02
EAOAASRA2LSOK16	LEAKAGE INDUCED FAILURE TO START OR RUN;	MD APU STUDY	3.02	Lognormal	7.00E-02
EAOAASRA2LSOK17	LEAKAGE INDUCED FAILURE TO START OR RUN;	MD APU STUDY	3.02	Lognormal	7.00E-02
EAOAASRA2LSOK21	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			0.00E+00
EAOAASRA2LSOK23	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			0.00E+00
EAOAASRA2LSOK24	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			0.00E+00
EAOAASRA2LSOK28	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			0.00E+00
EAOAASRA2LSOK29	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			0.00E+00
EAOAASRA3CSOK04	COMMON CAUSE FAILURE TO START OR RUN; OK STATE DURING RTL SEQ 4	MD APU STUDY	15	Lognormal	1.33E-03
EAOAASRA3ISL004	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
EAOAASRA3ISL006	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA3ISL007	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA3ISL011	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA3ISL012	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA3ISL016	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA3ISL018	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA3ISL019	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA3ISL023	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA3ISL024	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA3ISLT04	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA3ISLT06	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA3ISLT07	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA3ISLT11	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA3ISLT12	INDEPENDENT FAILURE TO START OR RUN;	MD APU STUDY			1.09E-02
EAOAASRA3ISOK04	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY	2.7	Lognormal	1.09E-02
EAOAASRA3ISOK05	INDEPENDENT FAILURE TO START OR RUN; OK STATE DURING RTL; SEQ 5	MD APU STUDY	2.7	Lognormal	1.09E-02
EAOAASRA3ISOK09	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY	2.7	Lognormal	1.09E-02
EAOAASRA3ISOK11	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY	2.7	Lognormal	1.09E-02
EAOAASRA3ISOK12	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY	2.7	Lognormal	1.09E-02
EAOAASRA3ISOK16	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY	2.7	Lognormal	1.09E-02
EAOAASRA3ISOK17	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY	2.7	Lognormal	1.09E-02
EAOAASRA3ISOK21	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY			1.09E-02
EAOAASRA3ISOK23	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY			1.09E-02
EAOAASRA3ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY			1.09E-02
EAOAASRA3ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY			1.09E-02
EAOAASRA3ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	MD APU STUDY			1.09E-02
EAOAASRA3LSL004	LEAKAGE INDUCED FAILURE TO START OR RUN;	MD APU STUDY			7.00E-02
EAOAASRA3LSL006	LEAKAGE INDUCED FAILURE START OR RUN;	MD APU STUDY			7.00E-02
EAOAASRA3LSL007	LEAKAGE INDUCED FAILURE START OR RUN;	MD APU STUDY			7.00E-02
EAOAASRA3LSL011	LEAKAGE INDUCED FAILURE TO START OR RUN;	MD APU STUDY			7.00E-02
EAOAASRA3LSL012	LEAKAGE INDUCED FAILURE TO START OR RUN;	MD APU STUDY			7.00E-02
EAOAASRA3LSL016	OTHER UNIT LEAK INDUCED FAILURE TO START OR	MD APU STUDY			7.00E-02
EAOAASRA3LSL018	OTHER UNIT LEAK INDUCED FAILURE TO START OR	MD APU STUDY			7.00E-02
EAOAASRA3LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	MD APU STUDY			7.00E-02
EAOAASRA3LSL023	OTHER UNIT LEAK INDUCED FAILURE TO START OR	MD APU STUDY			7.00E-02
EAOAASRA3LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	MD APU STUDY			7.00E-02
EAOAASRA3LSLT04	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			7.00E-02
EAOAASRA3LSLT06	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			7.00E-02
EAOAASRA3LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			7.00E-02
EAOAASRA3LSLT11	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			7.00E-02
EAOAASRA3LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			7.00E-02
EAOAASRA3LSOK09	LEAKAGE INDUCED FAILURE TO START OR RUN;	MD APU STUDY	3.02	Lognormal	7.00E-02

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
EAOAASRA3LSOK11	LEAKAGE INDUCED FAILURE START OR RUN; OK	MD APU STUDY	3.02	Lognormal	7.00E-02
EAOAASRA3LSOK12	LEAKAGE INDUCED FAILURE START OR RUN; OK	MD APU STUDY	3.02	Lognormal	7.00E-02
EAOAASRA3LSOK16	LEAKAGE INDUCED FAILURE TO START OR RUN;	MD APU STUDY	3.02	Lognormal	7.00E-02
EAOAASRA3LSOK17	LEAKAGE INDUCED FAILURE TO START OR RUN;	MD APU STUDY	3.02	Lognormal	7.00E-02
EAOAASRA3LSOK21	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			0.00E+00
EAOAASRA3LSOK23	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			0.00E+00
EAOAASRA3LSOK24	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			0.00E+00
EAOAASRA3LSOK28	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			0.00E+00
EAOAASRA3LSOK29	OTHER UNIT LEAK INDUCED FAILURE TO START	MD APU STUDY			0.00E+00
ENOAACEA1IDTU07	FLIGHT CRITICAL EQUIPMENT FAILURE; APU/HYD	MD APU STUDY			8.80E-01
ENOAACOA1IDTU05	UNCONTAINED WITHIN APU; APU/HYD TURBINE	MD APU STUDY			1.00E+00
ENOAACOA1IDTU06	UNCONTAINED WITHIN APU; APU/HYD TURBINE	MD APU STUDY			1.00E+00
ENOAACOA1IDTU07	UNCONTAINED WITHIN APU; APU/HYD TURBINE	MD APU STUDY			1.00E+00
ENOAAFRA1ULL011	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	MD APU STUDY			1.00E-01
ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	MD APU STUDY			1.00E-01
ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs; SEQ 11	MD APU STUDY			1.00E-01
ENOAAFRA1ULOK16	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	MD APU STUDY	1.9	Lognormal	1.00E-01
ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL SEQ 28	MD APU STUDY	1.9	Lognormal	1.00E-01
ENOAAFRA3ULTU05	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL;	MD APU STUDY			1.00E-01
ENOAAFRSIIDLL02	STRUCTURAL INTEGRITY FAILURE; LARGE	MD APU STUDY			1.00E+00
ENOAAHBA1IDTU05	HUB BREAKUP; APU/HYD TURBINE OVERSPEED;	MD APU STUDY			9.00E-01
ENOAAHBA1IDTU06	HUB BREAKUP; APU/HYD TURBINE OVERSPEED;	MD APU STUDY	1.8	Lognormal	9.00E-01
ENOAAHBA1IDTU07	HUB BREAKUP; APU/HYD TURBINE OVERSPEED;	MD APU STUDY	1.8	Lognormal	9.00E-01
ENOAALKA1CLL016	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	MD APU STUDY			2.70E-02
ENOAALKA1CLL018	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	MD APU STUDY			2.70E-02
ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	MD APU STUDY			2.70E-02
ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	MD APU STUDY			2.70E-02
ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	MD APU STUDY			2.70E-02
ENOAALKA1CLOK21	COMMON CAUSE LEAK; OK STATE DURING RTL;	MD APU STUDY	10	Lognormal	9.57E-04
ENOAALKA1CLOK23	COMMON CAUSE LEAK; OK STATE DURING RTL;	MD APU STUDY	10	Lognormal	9.57E-04
ENOAALKA1CLOK24	COMMON CAUSE LEAK; OK STATE DURING RTL;	MD APU STUDY	10	Lognormal	9.57E-04
ENOAALKA1CLOK28	COMMON CAUSE LEAK; OK STATE DURING RTL;	MD APU STUDY	10	Lognormal	9.57E-04
ENOAALKA1CLOK29	COMMON CAUSE LEAK; OK STATE DURING RTL;	MD APU STUDY	10	Lognormal	9.57E-04
ENOAALKA1LAL016	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	MD APU STUDY			1.67E-01
ENOAALKA1LAL018	LEAKS DETECTED/CONFIRMED; INITIAL LEAK IN 1	MD APU STUDY			1.67E-01
ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	MD APU STUDY			1.67E-01
ENOAALKA1LALT04	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	MD APU STUDY			1.67E-01
ENOAALKA1LALT06	LEAKS DETECTED/CONFIRMED; INITIAL LEAK IN 3	MD APU STUDY			1.67E-01
ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	MD APU STUDY			1.67E-01
ENOAALKA1LAOK21	LEAK IS DETECTED/CONFIRMED; OK STATE	MD APU STUDY			1.67E-01
ENOAALKA1LAOK23	LEAKS DETECTED/CONFIRMED; OK STATE	MD APU STUDY			1.67E-01
ENOAALKA1LAOK24	LEAK IS DETECTED/CONFIRMED; OK STATE	MD APU STUDY			1.67E-01

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
ENOAALKA1LDL004	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	MD APU STUDY			1.67E-01
ENOAALKA1LDL006	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	MD APU STUDY			1.67E-01
ENOAALKA1LDL007	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	MD APU STUDY			1.67E-01
ENOAALKA1LDOK09	LEAK DETECTED/CONFIRMED; OK STATE DURING	MD APU STUDY			1.67E-01
ENOAALKA1LDOK11	LEAK DETECTED/CONFIRMED; OK STATE DURING	MD APU STUDY			1.67E-01
ENOAALKA1LDOK12	LEAK DETECTED/CONFIRMED; OK STATE DURING	MD APU STUDY	5.18	Lognormal	1.67E-01
ENOAALKA1LKOK09	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	MD APU STUDY	5.18	Lognormal	8.57E-02
ENOAALKA1LKOK11	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	MD APU STUDY	5.18	Lognormal	8.57E-02
ENOAALKA1LKOK12	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	MD APU STUDY	5.18	Lognormal	8.57E-02
ENOAALKA1LKOK16	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	MD APU STUDY	5.18	Lognormal	8.57E-02
ENOAALKA1LKOK17	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	MD APU STUDY	5.18	Lognormal	8.57E-02
ENOAALKA1LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	MD APU STUDY			2.86E-02
ENOAALKA1LKOK23	INDEPENDENT LEAK; OK STATE DURING RTL;	MD APU STUDY			2.86E-02
ENOAALKA1LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	MD APU STUDY			2.86E-02
ENOAALKA1LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	MD APU STUDY			2.86E-02
ENOAALKA1LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	MD APU STUDY			2.86E-02
ENOAALKA1LUL011	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	MD APU STUDY			8.33E-01
ENOAALKA1LUL012	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	MD APU STUDY			8.33E-01
ENOAALKA1LUOK16	LEAK UNDETECTED; OK STATE DURING RTL;	MD APU STUDY			8.33E-01
ENOAALKA1LUOK17	LEAK UNDETECTED; OK STATE DURING RTL;	MD APU STUDY			8.33E-01
ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	MD APU STUDY			8.33E-01
ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	MD APU STUDY			8.33E-01
ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	MD APU STUDY			8.33E-01
ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	MD APU STUDY			8.33E-01
ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	MD APU STUDY			8.33E-01
ENOAALKA1LZOK29	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	MD APU STUDY			8.33E-01
ENOAALKA2LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	MD APU STUDY			2.86E-02
ENOAALKA2LKOK23	INDEPENDENT LEAK; OK STATE DURING RTL;	MD APU STUDY			2.86E-02
ENOAALKA2LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	MD APU STUDY			2.86E-02
ENOAALKA2LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	MD APU STUDY			2.86E-02
ENOAALKA2LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	MD APU STUDY			2.86E-02
ENOAALKA3LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	MD APU STUDY			2.86E-02
ENOAALKA3LKOK23	INDEPENDENT LEAK; OK STATE DURING RTL;	MD APU STUDY			2.86E-02
ENOAALKA3LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	MD APU STUDY			2.86E-02
ENOAALKA3LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	MD APU STUDY			2.86E-02
ENOAALKA3LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	MD APU STUDY			2.86E-02
ENOAAOKA1OKLL02	FLIGHT CRITICAL EQUIPMENT OK; LARGE	MD APU STUDY	15	Lognormal	1.00E-01
ENOAAOKA1OKTU05	FLIGHT CRITICAL EQUIPMENT OK; APU/HYD	MD APU STUDY			1.20E-01
ENOAAOKA1OKTU06	FLIGHT CRITICAL EQUIPMENT OK; APU/HYD	MD APU STUDY			1.20E-01
ENOAASIA2IDTU05	SECOND APU/HYD UNIT FAILED; APU/HYD TURBINE	MD APU STUDY			8.80E-01
ENOAASIA2IDTU06	SECOND APU/HYD UNIT FAILED; APU/HYD TURBINE	MD APU STUDY			8.80E-01
ENOAASIA3IDTU06	THIRD APU/HYD UNIT FAILED; APU/HYD TURBINE	MD APU STUDY			8.80E-01

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
GH2_LEAK	GASEOUS HYDROGEN LEAKAGE	LOCKHEED PRA			1.10E-04
GHYPRESS1	FAILURE TO MAINTAIN PROPER HYDRAULIC PRESSURE (ENGINE 1)	APU FAULT TREE			6.23E-03
GHYPRESS2	FAILURE TO MAINTAIN PROPER HYDRAULIC PRESSURE (ENGINE 2)	APU FAULT TREE			6.23E-03
GHYPRESS3	FAILURE TO MAINTAIN PROPER HYDRAULIC PRESSURE (ENGINE 3)	APU FAULT TREE			6.23E-03
GO2_LEAK	GASEOUS OXYGEN LEAKAGE	LOCKHEED PRA			1.04E-04
HENDETILOTTEST	PB OF NO RECOVER THE H.E. BY THE LOT ACCEPTENCE TESTS (IGNITER)	HYPOTHESIS			1.00E-02
HENDETISTDTEST	PB OF NO RECOVERY THE H.E. BY STANDARIZE TESTS (IGNITER)	HYPOTHESIS			1.00E-02
HENDETMSTDTEST	PB OF NO RECOVERY THE H.E. BY STANDARIZE TESTS (MOTOR)	HYPOTHESIS			1.00E-02
HENRECVBYVERF	PB OF NO RECOVERY THE H.E. BY THE VERIFICATION OF THE 160 MIXES (MOTOR)	HYPOTHESIS			6.25E-03
HESELIMATMIX	H.E. IN MIXTURE PROCESS (IGNITER)	HYPOTHESIS			1.00E-03
HESELIRAWMAT	RAW MATERIAL SELECTION ERROR (IGNITER)	HYPOTHESIS			1.00E-04
HESELMMATMIX	H.E. IN MIXTURE PROCESS (MOTOR)	HYPOTHESIS			1.00E-03
HESELMRAWMAT	RAW MATERIAL SELECTION ERROR (MOTOR)	HYPOTHESIS			1.00E-04
IL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	LOCKHEED PRA			6.04E-01
ILO	REENTRY WITH UNDETECTED LEAK IN ONE APU	MD APU STUDY			1.70E-04
ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	MD APU STUDY			1.70E-06
LE	OPOV COMMAND LIMIT ENGAGED	HYPOTHESIS			1.00E+00
LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	HYPOTHESIS	15	Lognormal	1.12E-06
LH2_LEAK	LIQUID HYDROGEN LEAKAGE	LOCKHEED PRA			2.31E-04
LL	LARGE GAS/HYDRAZINE LEAK DURING ENTRY	LOCKHEED PRA			2.80E-05
LLOSSELECPWRSUP	LEFT SRB LOSS OF ELECTRICAL POWER SUPPLY	PRA ANALYSIS			1.00E-07
LO2_LEAK	LIQUID OXYGEN LEAKAGE	LOCKHEED PRA			3.51E-04
LOSSELECPWRSUP	LOSS OF 2 OF 3 ELECTRICAL BUSES DURING ASCENT	PRA ANALYSIS			1.00E-07
LOV_APSLAG	TRANSIENTS DUE TO SLAG ACCUMULATION FRACTURE FWD ET LOAD BEARING CONNECTION	MSFC			0.00E+00
LOV_BADFE2O3	TRANSIENT DUE TO BAD FE2O3 FRACTURES ET CONNECT POINT	THIOKOL			1.00E-04
LOV_ET	LOV DUE TO EXTERNAL TANK FAILURE	PHASE 1 STUDY	7.69	Lognormal	1.92E-04
LOV_LANDING	LOV DUE TO LANDING FAILURE OR ERROR	NASA HQ	15	Lognormal	4.11E-04
LOV_SSWRTHR	INSUFFICIENT SSME AUTHORITY TO COMPENSATE FOR SRB WRONG THRUST	HYPOTHESIS			1.00E-06
LOV_TPS	LOV DUE TO THERMAL PROTECTION SYSTEM FAILURE	TPS STUDY			1.19E-03
LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	NPRD-3.B=0.1			5.40E-07
LPFAILGENCOM	LEFT PITCH FAILURE TO GENERATE A COMMAND	HYPOTHESIS			1.00E-07
LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	NPRD-3	10	Lognormal	2.29E-05
LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	NPRD-3			2.00E-05
LPSTFAILACTRAM	LEFT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	NPRD-3			4.20E-08
LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	NPRD-3			5.58E-06
LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	NPRD-3			5.58E-06
LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	NPRD-3			5.58E-06
LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	NPRD-3			5.58E-06
LPSWVFAILTOMOVE	LEFT PITCH SWITCHING VALVE FAILURE TO MOVE	NPRD-3			4.58E-06
LRCCFSV	LEFT ROCK CCF SERVO-VALVE	NPRD-3;B=0.1	10	Lognormal	3.90E-06
LRFAILGENCOM	ORBITER FAILS TO SEND COMMAND TO LEFT ROCK ACTUATOR	HYPOTHESIS			1.00E-07
LRHWFAILACTRAM	LEFT ROCK HARDWARE FAILURE ACTUATOR RAM	NPRD-3	10	Lognormal	6.88E-06

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
LRISOVALFAIL	FAILURE TO ISOLATE ROCK ACTUATOR DAMAGE SERVO-VALVES (L SRB)	NPRD-3			2.00E-05
LRSTFAILACTRAM	LEFT ROCK STRUCTURAL FAILURE ACTUATOR RAM	NPRD-3			4.20E-08
LRSV1FAIL	LEFT ROCK SERVO-VALVE 1 FAILURE	NPRD-3			3.90E-05
LRSV2FAIL	LEFT ROCK SERVO-VALVE 2 FAILURE	NPRD-3			3.90E-05
LRSV3FAIL	LEFT ROCK SERVO-VALVE 3 FAILURE	NPRD-3			3.90E-05
LRSV4FAIL	LEFT ROCK SERVO-VALVE 4 FAILURE	NPRD-3			3.90E-05
LSNSRAFAIL	L Pc SENSOR A FAILURE	NPRD-91			5.00E-03
LSNSRBFAIL	L Pc SENSOR B FAILURE	NPRD-91			5.00E-03
LSNSRCFAIL	L Pc SENSOR C FAILURE	NPRD-91			5.00E-03
LSNSRCMNCSE	L Pc SENSOR COMMON CAUSE FAILURE	NPRD-91			1.00E-04
LSRBAPU1FAIL	LEFT SRB HPU 1 FAILURE	MOD. APU EST.			9.85E-04
LSRBAPU2FAIL	LEFT SRB HPU 2 FAILURE	MOD. APU EST.			9.85E-04
LSRBGIMJTFAIL	LEFT SRB GIMBAL JOINT FAILURE	NPRD-3	10	Lognormal	7.80E-06
LSWVALFAILTOMOVE	LEFT SWITCHING VALVE FAILURE TO MOVE	NPRD-3			3.20E-05
LTCCFSV	LEFT TILT CCF SERVO-VALVE	NPRD-3;B-0.1	10	Lognormal	3.90E-06
LTFAILGENCOM	ORBITER FAILS TO SEND COMMAND TO LEFT TILT ACTUATOR	HYPOTHESIS			1.00E-07
LTHWFAILACTRAM	LEFT TILT HARDWARE FAILURE ACTUATOR RAM	NPRD-3	10	Lognormal	6.88E-06
LTISOVALFAIL	FAILURE TO ISOLATE TILT ACTUATOR DAMAGE SERVO-VALVES (L SRB)	NPRD-3			2.00E-05
LTSTFAILACTRAM	LEFT TILT STRUCTURAL FAILURE ACTUATOR RAM	NPRD-3			4.20E-08
LTSV1FAIL	LEFT TILT SERVO-VALVE 1 FAILURE	NPRD-3			3.90E-05
LTSV2FAIL	LEFT TILT SERVO-VALVE 2 FAILURE	NPRD-3			3.90E-05
LTSV3FAIL	LEFT TILT SERVO-VALVE 3 FAILURE	NPRD-3			3.90E-05
LTSV4FAIL	LEFT TILT SERVO-VALVE 4 FAILURE	NPRD-3			3.90E-05
LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	NPRD-3.B=0.1			5.40E-07
LYFAILGENCOM	LEFT YAW FAILURE TO GENERATE A COMMAND	HYPOTHESIS			1.00E-07
LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	NPRD-3	10	Lognormal	2.29E-05
LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	NPRD-3			2.00E-05
LYSTFAILACTRAM	LEFT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	NPRD-3			4.20E-08
LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	NPRD-3			5.58E-06
LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	NPRD-3			5.58E-06
LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	NPRD-3			5.58E-06
LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	NPRD-3			5.58E-06
LYSWVFAILTOMOVE	LEFT YAW SWITCHING VALVE FAILURE TO MOVE	NPRD-3			4.58E-06
METFAIL	MASTER EVENT TIMER FAILS	HYPOTHESIS			1.00E-05
MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	USBI EXPERT OPI			9.00E-01
NOT_PP	POGO PRESSURE TRANSDUCER FAILURE	NPRD-3			1.50E-04
OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	PRA ANALYSIS			1.00E+00
OPOVCOMLCREL	OPOV COMMAND LIMIT ENGAGED	PRACA-F (FMC)			9.98E-01
OVPOWER	OV POWER FAILURE	PRA ANALYSIS			1.00E-06
OVTHERMAL	OV THERMAL CONTROL FAILURE	PRA ANALYSIS			1.00E-05
PBSHFAIL	CREW FAILURE TO INITIATE MANUAL SEPARATION	PRA ANALYSIS			1.00E-03
REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	HYPOTHESIS	15	Lognormal	1.12E-06

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
RLOSSELECPWRSUP	BOOSTER ELECTRICAL POWER SUPPLY FAILURE	PRA ANALYSIS			1.00E-07
RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	NPRD-3.B=0.1			5.40E-07
RPFAILGENCOM	RIGHT PITCH FAILURE TO GENERATE A COMMAND	HYPOTHESIS			1.00E-07
RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	NPRD-3	10	Lognormal	2.29E-05
RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	NPRD-3			2.00E-05
RPSTFAILACTRAM	RIGHT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	NPRD-3			4.28E-08
RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	NPRD-3			5.58E-06
RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	NPRD-3			5.58E-06
RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	NPRD-3			5.58E-06
RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	NPRD-3			5.58E-06
RPSWVFAILTOMOVE	RIGHT PITCH SWITCHING VALVE FAILURE TO MOVE	NPRD-3			4.58E-06
RRCCFSV	RIGHT ROCK CCF SERVO-VALVE	NPRD-3;B=0.1	10	Lognormal	3.90E-06
RRFAILGENCOM	ORBITER FAILS TO SEND COMMAND TO RIGHT ROCK ACTUATOR	HYPOTHESIS			1.00E-07
RRHWFAILACTRAM	RIGHT ROCK HARDWARE FAILURE ACTUATOR RAM	NPRD-3	10	Lognormal	6.88E-06
RRISOVALFAIL	FAILURE TO ISOLATE ROCK ACTUATOR DAMAGE SERVO-VALVES (R SRB)	NPRD-3			2.00E-05
RRSTFAILACTRAM	RIGHT ROCK STRUCTURAL FAILURE ACTUATOR RAM	NPRD-3			4.20E-08
RRSV1FAIL	RIGHT ROCK SERVO-VALVE 1 FAILURE	NPRD-3			3.90E-05
RRSV2FAIL	RIGHT ROCK SERVO-VALVE 2 FAILURE	NPRD-3			3.90E-05
RRSV3FAIL	RIGHT ROCK SERVO-VALVE FAILURE	NPRD-3			3.90E-05
RRSV4FAIL	RIGHT ROCK SERVO-VALVE FAILURE	NPRD-3			3.90E-05
RSNSRAFAIL	R Pc SENSOR A FAILURE	NPRD91			5.00E-03
RSNSRBFAIL	R Pc SENSOR B FAILURE	NPRD91			5.00E-03
RSNSRCFAIL	R Pc SENSOR C FAILURE	NPRD91			5.00E-03
RSNSRCMNCSE	R Pc SENSOR COMMON CAUSE FAILURE	NPRD91			1.00E-04
RSRBAPU1FAIL	RIGHT SRB HPU 1 FAILURE	MOD. APU EST.			9.85E-04
RSRBAPU2FAIL	RIGHT SRB APU 2 FAILURE	MOD. APU EST.			9.85E-04
RSRBGIMJTFAIL	RIGHT SRB GIMBAL JOINT FAILURE	NPRD-3	10	Lognormal	7.80E-06
RSWVALFAILTOMOVE	RIGHT SWITCHING VALVE FAILURE TO MOVE	NPRD-3			3.20E-05
RTCCFSV	RIGHT TILT CCF SERVO-VALVE	NPRD-3;B=0.1	10	Lognormal	3.90E-06
RTFAILGENCOM	ORBITER FAILS TO SEND COMMAND TO RIGHT TILT ACTUATOR	HYPOTHESIS			1.00E-07
RTHWFAILACTRAM	RIGHT TILT HARDWARE FAILURE ACTUATOR RAM	NPRD-3	10	Lognormal	6.88E-06
RTISOVALFAIL	FAILURE TO ISOLATE TILT ACTUATOR DAMAGE SERVO-VALVES (R SRB)	NPRD-3			2.00E-05
RTSTFAILACTRAM	RIGHT TILT STRUCTURAL FAILURE ACTUATOR RAM	NPRD-3			4.20E-08
RTSV1FAIL	RIGHT SERVO-VALVE 1 FAILURE	NPRD-3			3.90E-05
RTSV2FAIL	RIGHT SERVO-VALVE 2 FAILURE	NPRD-3			3.90E-05
RTSV3FAIL	RIGHT SERVO-VALVE 3 FAILURE	NPRD-3			3.90E-05
RTSV4FAIL	RIGHT SERVO-VALVE 4 FAILURE	NPRD-3			3.90E-05
RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	NPRD-3.B=0.1			5.40E-07
RYFAILGENCOM	RIGHT YAW FAILURE TO GENERATE A COMMAND	HYPOTHESIS			1.00E-07
RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	NPRD-3	10	Lognormal	2.29E-05
RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	NPRD-3			2.00E-05
RYSTFAILACTRAM	RIGHT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	NPRD-3			4.28E-08

Basic Event ID	Basic Event Description	Data Source	Error Factor	Distribution Type	Probability of Occurrence (per Mission)
RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	NPRD-3			5.58E-06
RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	NPRD-3			5.58E-06
RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	NPRD-3			5.58E-06
RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	NPRD-3			5.58E-06
RYSWVFAILTOMOVE	RIGHT YAW SWITCHING VALVE FAILURE TO MOVE	NPRD-3			4.58E-06
SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	PRA ANALYSIS			9.43E-01
SMEFH	INITIATING EVENT LOSS OF GROSS H2 FLOW	SSME C/O DATA			1.25E-03
SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	SSME C/O DATA			1.00E-02
SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	APU PRA			4.00E-03
SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	LOCKHEED PRA	10	Lognormal	6.46E-04
SMELO	INITIATING EVENT COOLANT LINER OVERPRESSURE	PRACA-F;IFA			1.00E-03
SMEMF	INITIATING EVENT HIGH MIXTURE RATIO IN FUEL PREBURNER	SSME C/O DATA			6.27E-04
SMEMO	INITIATING EVENT HIGH MIXTURE RATIO IN OXIDIZER PREBURNERS	SSME C/O DATA			6.27E-04
SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	SSME C/O DATA			1.56E-02
SMEPG	INITIATING EVENT FAILURE TO PRECHARGE POGO ACC	HYPOTHESIS			6.05E-04
SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIONS	SSME C/O DATA			6.27E-04
SRBCCFAPU	COMMON CAUSE FAILURE BOOSTER APUS (4)	SHUPRA. B=0.01	10	Lognormal	9.85E-06
SWCMNCOD	FLIGHT CONTROL SW COMMON CAUSE FAILURE IN CODE	HYPOTHESIS-1			1.00E-05
TGLHFAIL	CREW FAILURE TO SELECT MANUAL SEPARATION	HYPOTHESIS-1			1.00E-03
TOP_DSAFTDRP109	SIMULTANEOUS DUEL SSME SHUTDOWN OCCURS BEFORE DROOP(109) CALL	FLIGHT RULES	3	Lognormal	6.46E-01
TOP_DSAFTERLO	SIMULTANEOUS DUAL SSME SHUTDOWN OCCURS AFTER LIFT-OFF	CON. ASSUMP.			1.00E+00
TOP_DSBEFORELO	SIMULTANEOUS DUAL SSME SHUTDOWN OCCURS AFTER TO LIFT-OFF	CON. ASSUMP.			1.00E+00
TOP_DSBFRDRP109	SIMULTANEOUS DUEL SSME SHUTDOWN OCCURS BEFORE DROOP(109) CALL	FLIGHT RULES			6.46E-01
TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	LOCKHEED PRA	10	Lognormal	6.04E-01
TOP_OPOVCOMLE	OPOV COMMAND LIMIT ENGAGED	PRACA-F (FMC)			9.98E-01
TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	EXPERT OPINION			2.00E-01
TU	APU/HYD TURBINE OVERSPEED	MD APU STUDY	3.04	Lognormal	6.96E-05
VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	EXPERT OPINION			2.00E-01
WRILOAD	WRONG I LOAD	HYPOTHESIS-1			3.00E-05
WRVALILD	WRONG VALUES IN I LOAD	HYPOTHESIS-1			3.00E-05
WRVALILD1	WRONG VALUES IN I LOAD	HYPOTHESIS-1			3.00E-05

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
1)	ANMOBSFPRPMHPOBR	HPOTP BEARING FAILURE DUE TO SPALLING; PITTING; WEAR OR CORR	4.52E-04	4.52E-04
2)	LOV_LANDING	LOV DUE TO LANDING FAILURE OR ERROR	4.11E-04	4.11E-04
3)	EAOAASRA1CSOK05	COMMON CAUSE FAILURE TO START OR RUN;	3.43E-04	3.43E-04
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
4)	ANMMWSFPRPMMCCMW	MCC MANIFOLD WELD FAILURE	2.53E-04	2.53E-04
5)	ANMTBSFPRPMHPFTB	HPFTP TURBINE BLADE FAILURE	2.51E-04	2.51E-04
6)	ANOTPSBT9ID2121	CATASTROPHIC FAILURE OF RIGHT SIDE TPS; FWD MID EDGE; 624 TILES	2.48E-04	2.48E-04
7)	ANMHOCDPRPMHPOCD	HPOTP FAILURE DUE TO CAVITATION DAMAGE	2.01E-04	2.01E-04
8)	ANMPSSFPRPMHPFSF	HPFTP IMPELLER/DIFFUSER FAILURE	2.01E-04	2.01E-04
9)	AAOAAFRA1CFOK04	COMMON CAUSE FAILURE; ASCENT WITH OK	1.92E-04	1.92E-04
	AOK	ASCENT WITH OK START	1.00E+00	
10)	LOV_ET	LOV DUE TO EXTERNAL TANK FAILURE	1.92E-04	1.92E-04
11)	ANOTPSBT4ID1131	CATASTROPHIC FAILURE OF LEFT SIDE NEAR MAIN LDG GEAR TPS; 780 TILE	1.87E-04	1.87E-04
12)	ANMEDDBPRPMEDNCO	FAILURE IN MCC EDNi LINER CLOSEOUT STRUCTURE	1.76E-04	1.76E-04
13)	ANOTPSBT3ID1121	CATASTROPHIC FAILURE OF RIGHT SIDE NEAR MAIN LDG GEAR (FWD) TPS; 6	1.75E-04	1.75E-04
14)	ANMLPSFPRPMMI	MI LOX POST STRUCTURAL FAILURE	1.51E-04	1.51E-04
15)	ANMFPSFPRPMFPBFP	FPB FACEPLATE FAILURE DUE TO EROSION	1.51E-04	1.51E-04
16)	ANMCPSFPRPMLPOTP	STRUCTURAL FAILURE OF LPOTP	1.51E-04	1.51E-04
17)	ANMOTSFPRPMHPOTB	HPOTP TURBINE BLADE FAILURE	1.51E-04	1.51E-04
18)	EAOAAFRA1OSOK16	LEAKAGE INDUCED FAILURE TO START OR RUN;	3.00E-01	1.50E-04
	EAOAASRA2LSOK16	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAAFRA1ULOK16	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	
	ENOAALKA1LKOK16	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	ENOAALKA1LUOK16	LEAK UNDETECTED; OK STATE DURING RTL;	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
19)	EAOAAFRA1OSOK16	LEAKAGE INDUCED FAILURE TO START OR RUN;	3.00E-01	1.50E-04
	EAOAASRA3LSOK16	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAAFRA1ULOK16	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	
	ENOAALKA1LKOK16	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	ENOAALKA1LUOK16	LEAK UNDETECTED; OK STATE DURING RTL;	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
20)	EAOAAFRA1ULOK04	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK	1.00E-01	1.33E-04
	EAOAASRA2CSOK04	COMMON CAUSE FAILURE TO START OR RUN; OK STATE DURING RTL. SEQ 4	1.33E-03	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
21)	EAOAAFRA1ULOK04	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK	1.00E-01	1.33E-04
	EAOAASRA1CSOK04	COMMON CAUSE FAILURE TO START OR RUN;	1.33E-03	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
22)	EAOAAFRA1ULOK04	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK	1.00E-01	1.33E-04

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	EAOAASRA3CSOK04	COMMON CAUSE FAILURE TO START OR RUN; OK STATE DURING RTL. SEQ 4	1.33E-03	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
23)	ANMRRSFPRPMHPORR	HPOTP RETAINER RING FAILURE DUE TO LOSS OF BOLT PRELOAD	1.25E-04	1.25E-04
24)	ANOTPSBT2ID1111	CATASTROPHIC FAILURE OF RIGHT SIDE NEAR MAIN LDG GEAR (AFT) TPS; 1	1.23E-04	1.23E-04
25)	ANOTPSBT1ID1111	CATASTROPHIC FAILURE OF RIGHT SIDE TPS; UNDER CREW; 156 TILES	1.23E-04	1.23E-04
26)	ANMMBSFPRPMMCCBP	MCC MULTIPLE BOLT FAILURE DUE TO INADEQUATE PRELOAD	1.06E-04	1.06E-04
27)	ANRGSCCLKRIJSA	IGNITER JOINT CCF OF S&A PRIMARY AND SECONDARY GASKET SEALS	1.05E-04	1.05E-04
28)	ANRGSCCLKLIJSA	IGNITER JOINT CCF OF S&A PRIMARY AND SECONDARY GASKET SEALS	1.05E-04	1.05E-04
29)	EAOAAFRA1OSOK17	LEAKAGE INDUCED FAILURE TO START OR RUN;	3.00E-01	1.05E-04
	EAOAASRA2LSOK17	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	EAOAASRA3LSOK17	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAALKA1LKOK17	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	ENOAALKA1LUOK17	LEAK UNDETECTED; OK STATE DURING RTL;	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
30)	ACRPRFDLEFTSRM	LEFT RSRM PROPELLENT FAILS TO IGNITE	1.00E-04	1.00E-04
31)	ACRPRFDRGHTSRM	RGHT RSRM PROPELLENT FAILS TO IGNITE	1.00E-04	1.00E-04
32)	ANMOTLCPRPMHPOTB	LOSS OF COOLANT TO HPOTP BEARINGS	1.00E-04	1.00E-04
33)	ANRNZTP000SRM	RSRM NOZZLE THERMAL FAILURE LEADING TO LOV	8.90E-05	8.90E-05
34)	ANOTPSBT5ID1211	CATASTROPHIC FAILURE OF CERNTERLINE UNDER CREW TPS; 364 TILES	7.30E-05	7.30E-05
35)	ANRPVTP000SRM	RSRM PRESSURE VESSEL THERMAL / PRESSURE FAILURES CAUSING LOV	6.46E-05	6.46E-05
36)	ANOTPSBT11ID2311	CATASTROPHIC FAILURE OF LEFT WING TPS; CENTER MID; 468 TILES	5.60E-05	5.60E-05
37)	ENOAACEA1IDTU07	FLIGHT CRITICAL EQUIPMENT FAILURE; APU/HYD	8.80E-01	5.51E-05
	ENOAACOA1IDTU07	UNCONTAINED WITHIN APU; APU/HYD TURBINE	1.00E+00	
	ENOAAHBA1IDTU07	HUB BREAKUP; APU/HYD TURBINE OVERSPEED;	9.00E-01	
	TU	APU/HYD TURBINE OVERSPEED	6.96E-05	
38)	ANMHWCRPRPMMCCHW	MCC HOT GAS WALL FAILURE DUE TO UNSTABLE CRACK GROWTH	5.29E-05	5.29E-05
39)	ANMFAERPRPMFPASI	EXTERNAL RUPTURE OF FPB ASI LOX LINE	5.02E-05	5.02E-05
40)	ANMHOEVPRPMHPOEV	HPOTP EXCESSIVE VIBRATION	5.02E-05	5.02E-05
41)	ANMBESFPRPMMIBE	MI BAFFLE ELEMENT INNER COPPER JACKET BURNTHROUGH	5.02E-05	5.02E-05
42)	ANMBBSFPRPMHPFTB	HPFTP THRUST BALL FAILURE	5.02E-05	5.02E-05
43)	ANMNZSFPRPMHPONZ	HPOTP TURBINE NOZZLE STRUCTURAL FAILURE	5.02E-05	5.02E-05
44)	ANMFRBTPRPMFRI	FAILURE OF MCC FLOW RECIRCULATION INHIBITOR	4.61E-05	4.61E-05
45)	ANOTPSBT12ID2311	CATASTROPHIC FAILURE OF RIGHT SIDE TPS; MID EDGE; 1664 TILES	4.30E-05	4.30E-05
46)	EAOAASRA2LSOK16	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	3.50E-05
	EAOAASRA3LSOK16	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAAFRA1ULOK16	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	
	ENOAALKA1LKOK16	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	ENOAALKA1LUOK16	LEAK UNDETECTED; OK STATE DURING RTL;	8.33E-01	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
47)	ANOTPSBT19ID2321	CATASTROPHIC FAILURE OF RIGHT WING TPS; FWD; 2132 TILES	3.40E-05	3.40E-05
48)	EAOAAFRA1OSOK09	LEAKAGE INDUCED FAILURE START OR RUN; OK	3.00E-01	3.01E-05
	EAOAAFRA1ULOK09	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	
	EAOAASRA3LSOK09	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAALKA1LDOK09	LEAK DETECTED/CONFIRMED; OK STATE DURING	1.67E-01	
	ENOAALKA1LKOK09	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
49)	EAOAAFRA1OSOK09	LEAKAGE INDUCED FAILURE START OR RUN; OK	3.00E-01	3.01E-05
	EAOAAFRA1ULOK09	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	
	EAOAASRA2LSOK09	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAALKA1LDOK09	LEAK DETECTED/CONFIRMED; OK STATE DURING	1.67E-01	
	ENOAALKA1LKOK09	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
50)	ANMHMWFPRPMHGMWF	HGM TRANSFER TUBE WELD FAILURE	3.00E-05	3.00E-05
51)	ANOTPSBT13ID2312	CATASTROPHIC FAILURE OF LEFT SIDE TPS; MID EDGE; 1196 TILES	2.90E-05	2.90E-05
52)	ANOTPSBT10ID2131	CATASTROPHIC FAILURE OF CENTER OF BODY FLAP TPS; 208 TILES	2.60E-05	2.60E-05
53)	EAOAASRA1CSOK17	COMMON CAUSE FAILURE TO START OR RUN;	3.43E-04	2.45E-05
	ENOAALKA1LKOK17	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	ENOAALKA1LUOK17	LEAK UNDETECTED; OK STATE DURING RTL;	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
54)	EAOAAFRA1OSOK16	LEAKAGE INDUCED FAILURE TO START OR RUN;	3.00E-01	2.33E-05
	EAOAASRA2ISOK16	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAAFRA1ULOK16	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	
	ENOAALKA1LKOK16	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	ENOAALKA1LUOK16	LEAK UNDETECTED; OK STATE DURING RTL;	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
55)	EAOAAFRA1OSOK16	LEAKAGE INDUCED FAILURE TO START OR RUN;	3.00E-01	2.33E-05
	EAOAASRA3ISOK16	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAAFRA1ULOK16	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	
	ENOAALKA1LKOK16	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	ENOAALKA1LUOK16	LEAK UNDETECTED; OK STATE DURING RTL;	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
56)	EAOAAFRA1OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.15E-05
	EAOAAFRA2OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAAFRA3OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAALKA1CLOK29	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LZOK29	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
57)	EAOAAFRA1OSOK12	LEAKAGE INDUCED FAILURE START OR RUN; OK	3.00E-01	2.10E-05
	EAOAASRA2LSOK12	LEAKAGE INDUCED FAILURE START OR RUN; OK	7.00E-02	
	EAOAASRA3LSOK12	LEAKAGE INDUCED FAILURE START OR RUN; OK	7.00E-02	
	ENOAALKA1LDOK12	LEAK DETECTED/CONFIRMED; OK STATE DURING	1.67E-01	
	ENOAALKA1LKOK12	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
58)	ANMPVFCPRPMPMSPV	PREVALVE FAILS TO REMAIN OPEN DURING SSME OPERATION (1 OF 6)	1.76E-05	1.76E-05
59)	EAOAAFRA1OSOK17	LEAKAGE INDUCED FAILURE TO START OR RUN;	3.00E-01	1.63E-05
	EAOAASRA2ISOK17	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3LSOK17	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAALKA1LKOK17	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	ENOAALKA1LUOK17	LEAK UNDETECTED; OK STATE DURING RTL;	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
60)	EAOAAFRA1OSOK17	LEAKAGE INDUCED FAILURE TO START OR RUN;	3.00E-01	1.63E-05
	EAOAASRA2LSOK17	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	EAOAASRA3ISOK17	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LKOK17	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	ENOAALKA1LUOK17	LEAK UNDETECTED; OK STATE DURING RTL;	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
61)	ANRORCCLKLIJOPT	IGNITER JOINT OPT CCF OF PRIMARY AND SECONDARY O-RINGS	1.56E-05	1.56E-05
62)	ANRORCCLKRIJOPT	IGNITER JOINT OPT CCF OF PRIMARY AND SECONDARY O-RINGS	1.56E-05	1.56E-05
63)	ANOTPSBT6ID1311	CATASTROPHIC FAILURE OF LEFT SIDE TPS; UNDER CREW; 312 TILES	1.50E-05	1.50E-05
64)	ACRHDHRHDN5SRB	HOLD DOWN STUD HDN5 HANGS UP	3.85E-03	1.48E-05
	ACRHDHRHDN6RSB	HOLD DOWN STUD HDN6 HANGS UP	3.85E-03	
65)	ACRHDHRHDN2SRB	HOLD DOWN STUD HDN2 HANGS UP	3.85E-03	1.48E-05
	ACRHDHRHDN3SRB	HOLD DOWN STUD HDN3 HANGS UP	3.85E-03	
66)	ACRHDHRHDN3SRB	HOLD DOWN STUD HDN3 HANGS UP	3.85E-03	1.48E-05
	ACRHDHRHDN4SRB	HOLD DOWN STUD HDN4 HANGS UP	3.85E-03	
67)	ACRHDHRHDN7SRB	HOLD DOWN STUD HDN7 HANGS UP	3.85E-03	1.48E-05
	ACRHDHRHDN8SRB	HOLD DOWN STUD HDN8 HANGS UP	3.85E-03	
68)	ACRHDHRHDN6RSB	HOLD DOWN STUD HDN6 HANGS UP	3.85E-03	1.48E-05
	ACRHDHRHDN7SRB	HOLD DOWN STUD HDN7 HANGS UP	3.85E-03	
69)	ACRHDHRHDN5SRB	HOLD DOWN STUD HDN5 HANGS UP	3.85E-03	1.48E-05
	ACRHDHRHDN8SRB	HOLD DOWN STUD HDN8 HANGS UP	3.85E-03	
70)	ACRHDHRHDN2SRB	HOLD DOWN STUD HDN2 HANGS UP	3.85E-03	1.48E-05
	ACRHDHRHDN4SRB	HOLD DOWN STUD HDN4 HANGS UP	3.85E-03	
71)	ACRHDHRHDN6RSB	HOLD DOWN STUD HDN6 HANGS UP	3.85E-03	1.48E-05

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRHDHRHDN8SRB	HOLD DOWN STUD HDN8 HANGS UP	3.85E-03	
72)	ACRHDHRHDN5SRB	HOLD DOWN STUD HDN5 HANGS UP	3.85E-03	1.48E-05
	ACRHDHRHDN7SRB	HOLD DOWN STUD HDN7 HANGS UP	3.85E-03	
73)	ACRHDHRHDN1SRB	HOLD DOWN STUD HDN1 HANGS UP	3.85E-03	1.48E-05
	ACRHDHRHDN2SRB	HOLD DOWN STUD HDN2 HANGS UP	3.85E-03	
74)	ACRHDHRHDN1SRB	HOLD DOWN STUD HDN1 HANGS UP	3.85E-03	1.48E-05
	ACRHDHRHDN4SRB	HOLD DOWN STUD HDN4 HANGS UP	3.85E-03	
75)	ACRHDHRHDN1SRB	HOLD DOWN STUD HDN1 HANGS UP	3.85E-03	1.48E-05
	ACRHDHRHDN3SRB	HOLD DOWN STUD HDN3 HANGS UP	3.85E-03	
76)	ANRORCCLKLTI	CCF OF NOZZLE JOINT 3 PRIMARY AND SECONDARY O-RINGS	1.02E-04	1.44E-05
	ANRRBBFLKLTI	NOZZLE JOINT 3 RTV BACKFILL FAILURE	1.41E-01	
77)	ANRORCCLKRTE	CCF OF NOZZLE JOINT 4 PRIMARY AND SECONDARY O-RINGS	1.02E-04	1.44E-05
	ANRRBBFLKRTE	NOZZLE JOINT 4 RTV BACKFILL FAILURE	1.41E-01	
78)	ANRORCCLKLTE	CCF OF NOZZLE JOINT 4 PRIMARY AND SECONDARY O-RINGS	1.02E-04	1.44E-05
	ANRRBBFLKLTE	NOZZLE JOINT 4 RTV BACKFILL FAILURE	1.41E-01	
79)	ANRORCCLKRTI	CCF OF NOZZLE JOINT 3 PRIMARY AND SECONDARY O-RINGS	1.02E-04	1.44E-05
	ANRRBBFLKRTI	NOZZLE JOINT 3 RTV BACKFILL FAILURE	1.41E-01	
80)	ANOTPSBT14ID2321	CATASTROPHIC FAILURE OF LEFT SIDE TPS; FWD MID EDGE; 572 TILES	1.40E-05	1.40E-05
81)	ANOTPSBT21ID2321	CATASTROPHIC FAILURE OF LEFT WING TPS; FWD; 1768 TILES	1.30E-05	1.30E-05
82)	EAOAAFRA1ULOK04	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK	1.00E-01	1.19E-05
	EAOAASRA1ISOK04	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3ISOK04	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
83)	EAOAAFRA1ULOK04	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK	1.00E-01	1.19E-05
	EAOAASRA2ISOK04	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3ISOK04	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
84)	EAOAAFRA1ULOK04	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK	1.00E-01	1.19E-05
	EAOAASRA1ISOK04	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA2ISOK04	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
85)	ANMCCCRPRPMMCCCC	FAILURE OF MCC COOLANT CHANNEL DUE TO UNSTABLE CRACK GROWTH	1.12E-05	1.12E-05
86)	ANRORCCLKRIJRTR	IGNITER JOINT ROTOR CCF OF PRIMARY AND SECONDARY O-RINGS	1.05E-05	1.05E-05
87)	ANRORCCLKLIJSII	IGNITER JOINT SII CCF OF PRIMARY AND SECONDARY O-RINGS	1.05E-05	1.05E-05
88)	ANRORCCLKLIJRTR	IGNITER JOINT ROTOR CCF OF PRIMARY AND SECONDARY O-RINGS	1.05E-05	1.05E-05
89)	ANRORCCLKRIJSII	IGNITER JOINT SII CCF OF PRIMARY AND SECONDARY O-RINGS	1.05E-05	1.05E-05
90)	ACRFNFFHDN2SRB	FRANGIBLE NUT HDN2 FAILS TO FRAGMENT	1.00E-05	1.00E-05
91)	ACRFNFFHDN7SRB	FRANGIBLE NUT HDN7 FAILS TO FRAGMENT	1.00E-05	1.00E-05

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
92)	ACRFNFFHDN5SRB	FRANGIBLE NUT HDN5 FAILS TO FRAGMENT	1.00E-05	1.00E-05
93)	ACRSBFFRAS3SRB	SEPARATION BOLT RAS3 FAILS TO FRACTURE	1.00E-05	1.00E-05
94)	ACRFNFFHDN8SRB	FRANGIBLE NUT HDN8 FAILS TO FRAGMENT	1.00E-05	1.00E-05
95)	ACRFNFFHDN4SRB	FRANGIBLE NUT HDN4 FAILS TO FRAGMENT	1.00E-05	1.00E-05
96)	ACRCDFDLFMNSRB	CDF L FWD MAN FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-05
97)	ACREXFDLAMSRB	CDF L AFT MAN FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-05
98)	ACRSBFFRAS1SRB	SEPARATION BOLT RAS1 FAILS TO FRACTURE	1.00E-05	1.00E-05
99)	ACRSBFFRFWSSRB	SEPARATION BOLT RFWS FAILS TO FRACTURE	1.00E-05	1.00E-05
100)	ACRSBFFLAS2SRB	SEPARATION BOLT LAS2 FAILS TO FRACTURE	1.00E-05	1.00E-05
101)	ACRSBFFLAS1SRB	SEPARATION BOLT LAS1 FAILS TO FRACTURE	1.00E-05	1.00E-05
102)	ACRCDFDRFMNSRD	CDF R FWD MAN FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-05
103)	ACRFNFFHDN3SRB	FRANGIBLE NUT HDN3 FAILS TO FRAGMENT	1.00E-05	1.00E-05
104)	ACOMCNCFR3SRB	MEC FAILS TO PROCESS FIRE 3 CMD	1.00E-05	1.00E-05
105)	ACRFNFFHDN1SRB	FRANGIBLE NUT HDN1 FAILS TO FRAGMENT	1.00E-05	1.00E-05
106)	ACRFNFFHDN6SRB	FRANGIBLE NUT HDN6 FAILS TO FRAGMENT	1.00E-05	1.00E-05
107)	ACRCDFDRAMNSRD	CDF R AFT MAN FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-05
108)	ACRIGFDRGHTSRM	IGNITER RIGHT RSRM FAILS TO DETONATE	1.00E-05	1.00E-05
109)	ACRIGFDLEFTSRM	IGNITER LEFT RSRM FAILS TO DETONATE	1.00E-05	1.00E-05
110)	ACRSBFFLFWSSRB	SEPARATION BOLT LFWS FAILS TO FRACTURE	1.00E-05	1.00E-05
111)	ACRSBFFLAS3SRB	SEPARATION BOLT LAS3 FAILS TO FRACTURE	1.00E-05	1.00E-05
112)	ACRSBFFRAS2SRB	SEPARATION BOLT RAS2 FAILS TO FRACTURE	1.00E-05	1.00E-05
113)	SRBCCFAPU	COMMON CAUSE FAILURE BOOSTER APUS (4)	9.85E-06	9.85E-06
114)	EAOAASRA1CSOK16	COMMON CAUSE FAILURE TO START OR RUN;	1.33E-03	9.49E-06
	ENOAAFRA1ULOK16	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	
	ENOAALKA1LKOK16	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	ENOAALKA1LUOK16	LEAK UNDETECTED; OK STATE DURING RTL;	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
115)	RSRBGIMJTFAIL	RIGHT SRB GIMBAL JOINT FAILURE	7.80E-06	7.80E-06
116)	LSRBGIMJTFAIL	LEFT SRB GIMBAL JOINT FAILURE	7.80E-06	7.80E-06
117)	ANRPVLR000SRM	RSRM PRESSURE VESSEL STRUCTURAL FAILURE CAUSING LOV	7.56E-06	7.56E-06
118)	EAOAAFRA1OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	7.17E-06
	EAOAAFRA3OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1CLOK28	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
119)	EAOAAFRA1OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	7.17E-06
	EAOAAFRA2OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1CLOK28	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
120)	EAOAAFRA2OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	7.17E-06
	EAOAAFRA3OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1CLOK28	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
121)	ANOTPSBT16ID2321	CATASTROPHIC FAILURE OF LEFT WING TPS; CENTER OUTBOARD; 832 TILES	7.00E-06	7.00E-06
122)	EAOAAFRA1ULOK11	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	6.97E-06
	EAOAAOKA1SROK11	RESTART/RUN SUCCESSFUL; OK STATE DURING	9.94E-01	
	EAOAASRA2LSOK11	LEAKAGE INDUCED FAILURE START OR RUN; OK	7.00E-02	
	EAOAASRA3LSOK11	LEAKAGE INDUCED FAILURE START OR RUN; OK	7.00E-02	
	ENOAALKA1LDOK11	LEAK DETECTED/CONFIRMED; OK STATE DURING	1.67E-01	
	ENOAALKA1LKOK11	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
123)	RTHWFAILACTRAM	RIGHT TILT HARDWARE FAILURE ACTUATOR RAM	6.88E-06	6.88E-06
124)	RRHWFAILACTRAM	RIGHT ROCK HARDWARE FAILURE ACTUATOR RAM	6.88E-06	6.88E-06
125)	LRHWFAILACTRAM	LEFT ROCK HARDWARE FAILURE ACTUATOR RAM	6.88E-06	6.88E-06
126)	LTHWFAILACTRAM	LEFT TILT HARDWARE FAILURE ACTUATOR RAM	6.88E-06	6.88E-06
127)	APMMECCPRPMSEINT	SECOND SSME/MPS INITIATED SHUTDOWN BEFORE REDLINE INHIBITS ACTIVAT	2.30E-04	5.94E-06
	APMMESDPRPMSEINT	FIRST MPS/SSME INITIATED SSME SHUTDOWN	4.00E-02	
	TOP_DSAFTDRP109	SIMULTANEOUS DUEL SSME SHUTDOWN OCCURS BEFORE DROOP(109) CALL	6.46E-01	
	TOP_DSBEFORELO	SIMULTANEOUS DUAL SSME SHUTDOWN OCCURS AFTER TO LIFT-OFF	1.00E+00	
128)	ENOAACOA1IDTU06	UNCONTAINED WITHIN APU; APU/HYD TURBINE	1.00E+00	5.82E-06
	ENOAAHBA1IDTU06	HUB BREAKUP; APU/HYD TURBINE OVERSPEED;	9.00E-01	
	ENOAAOKA1OKTU06	FLIGHT CRITICAL EQUIPMENT OK; APU/HYD	1.20E-01	
	ENOAASIA2IDTU06	SECOND APU/HYD UNIT FAILED; APU/HYD TURBINE	8.80E-01	
	ENOAASIA3IDTU06	THIRD APU/HYD UNIT FAILED; APU/HYD TURBINE	8.80E-01	
	TU	APU/HYD TURBINE OVERSPEED	6.96E-05	
129)	ANRORCCLKLAEC	CCF OF NOZZLE JOINT 1 PRIMARY AND SECONDARY O-RINGS	1.02E-04	5.66E-06
	ANRRBBFLKLAEC	NOZZLE JOINT 1 RTV BACKFILL FAILURE	5.55E-02	
130)	ANRORCCLKRAEC	CCF OF NOZZLE JOINT 1 PRIMARY AND SECONDARY O-RINGS	1.02E-04	5.66E-06
	ANRRBBFLKRAEC	NOZZLE JOINT 1 RTV BACKFILL FAILURE	5.55E-02	
131)	EAOAASRA2LSOK16	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	5.45E-06
	EAOAASRA3ISOK16	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ENOAAFRA1ULOK16	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	
	ENOAALKA1LKOK16	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	ENOAALKA1LUOK16	LEAK UNDETECTED; OK STATE DURING RTL;	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
132)	EAOAASRA1ISOK16	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	5.45E-06
	EAOAASRA2LSOK16	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAAFRA1ULOK16	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	
	ENOAALKA1LKOK16	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	ENOAALKA1LUOK16	LEAK UNDETECTED; OK STATE DURING RTL;	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
133)	EAOAASRA2ISOK16	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	5.45E-06
	EAOAASRA3LSOK16	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAAFRA1ULOK16	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	
	ENOAALKA1LKOK16	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	ENOAALKA1LUOK16	LEAK UNDETECTED; OK STATE DURING RTL;	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
134)	EAOAASRA1ISOK16	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	5.45E-06
	EAOAASRA3LSOK16	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAAFRA1ULOK16	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	
	ENOAALKA1LKOK16	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	ENOAALKA1LUOK16	LEAK UNDETECTED; OK STATE DURING RTL;	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
135)	ANOTPSBT7ID1331	CATASTROPHIC FAILURE OF CENTER OF RIGHT ELEVON TPS; 104 TILES	5.00E-06	5.00E-06
136)	EAOAASRA1CSOK12	COMMON CAUSE FAILURE TO START OR RUN;	3.43E-04	4.91E-06
	ENOAALKA1LDOK12	LEAK DETECTED/CONFIRMED; OK STATE DURING	1.67E-01	
	ENOAALKA1LKOK12	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
137)	EAOAAFRA1OSOK09	LEAKAGE INDUCED FAILURE START OR RUN; OK	3.00E-01	4.68E-06
	EAOAAFRA1ULOK09	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	
	EAOAASRA3ISOK09	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LDOK09	LEAK DETECTED/CONFIRMED; OK STATE DURING	1.67E-01	
	ENOAALKA1LKOK09	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
138)	EAOAAFRA1OSOK09	LEAKAGE INDUCED FAILURE START OR RUN; OK	3.00E-01	4.68E-06
	EAOAAFRA1ULOK09	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	
	EAOAASRA2ISOK09	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LDOK09	LEAK DETECTED/CONFIRMED; OK STATE DURING	1.67E-01	
	ENOAALKA1LKOK09	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
139)	ANRGSCCLKLICJ	IGNITER TO CASE JOINT CCF OF OUTER GASKET AND INNER/OUTER SEAL	1.81E-04	4.63E-06
	ANROJSFLKLICJ	IGNITER TO CASE JOINT OUTER J-LEG SEAL FAILURE	2.56E-02	
140)	ANRGSCCLKRICJ	IGNITER TO CASE JOINT CCF OF OUTER GASKET AND INNER/OUTER SEAL	1.81E-04	4.63E-06
	ANROJSFLKRICJ	IGNITER TO CASE JOINT OUTER J-LEG SEAL FAILURE	2.56E-02	
141)	EAOAAFRA1OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	4.32E-06
	EAOAAFRA2OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAAFRA3OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAALKA1CLOK24	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LAOK24	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
142)	ACRCACCLPABSRB	CABLE (REPLACEABLE) CCF (POWER) L SRB BUS A AND B	4.10E-06	4.10E-06
143)	ACRCACCRPABSRB	CABLE (REPLACEABLE) CCF (POWER) R SRB BUS A AND B	4.10E-06	4.10E-06
144)	ANRORCCLKRFBIR	CCF OF NOZZLE JOINT 2 PRIMARY AND SECONDARY O-RINGS	1.02E-05	3.97E-06
	ANRRBBFLKRFBIR	NOZZLE JOINT 2 RTV BACKFILL FAILURE	3.89E-01	
145)	ANRORCCLKLFBIR	CCF OF NOZZLE JOINT 2 PRIMARY AND SECONDARY O-RINGS	1.02E-05	3.97E-06
	ANRRBBFLKLFBIR	NOZZLE JOINT 2 RTV BACKFILL FAILURE	3.89E-01	
146)	RTCCFSV	RIGHT TILT CCF SERVO-VALVE	3.90E-06	3.90E-06
147)	LRCCFSV	LEFT ROCK CCF SERVO-VALVE	3.90E-06	3.90E-06
148)	LTCCFSV	LEFT TILT CCF SERVO-VALVE	3.90E-06	3.90E-06
149)	RRCCFSV	RIGHT ROCK CCF SERVO-VALVE	3.90E-06	3.90E-06
150)	EAOAASRA1ISOK17	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	3.81E-06
	EAOAASRA2LSOK17	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	EAOAASRA3LSOK17	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAALKA1LKOK17	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	ENOAALKA1LUOK17	LEAK UNDETECTED; OK STATE DURING RTL;	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
151)	EAOAAFRA1OSOK12	LEAKAGE INDUCED FAILURE START OR RUN; OK	3.00E-01	3.28E-06
	EAOAASRA2LSOK12	LEAKAGE INDUCED FAILURE START OR RUN; OK	7.00E-02	
	EAOAASRA3ISOK12	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LDOK12	LEAK DETECTED/CONFIRMED; OK STATE DURING	1.67E-01	
	ENOAALKA1LKOK12	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
152)	EAOAAFRA1OSOK12	LEAKAGE INDUCED FAILURE START OR RUN; OK	3.00E-01	3.28E-06
	EAOAASRA2ISOK12	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3LSOK12	LEAKAGE INDUCED FAILURE START OR RUN; OK	7.00E-02	
	ENOAALKA1LDOK12	LEAK DETECTED/CONFIRMED; OK STATE DURING	1.67E-01	
	ENOAALKA1LKOK12	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	

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	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
153)	ANOTPSBT15ID2321	CATASTROPHIC FAILURE OF RIGHT SIDE TPS; NOSE; 277 TILES	3.00E-06	3.00E-06
154)	ENOAAFRSIIDLL02	STRUCTURAL INTEGRITY FAILURE; LARGE	1.00E+00	2.80E-06
	ENOAAOKA1OKLL02	FLIGHT CRITICAL EQUIPMENT OK; LARGE	1.00E-01	
	LL	LARGE GAS/HYDRAZINE LEAK DURING ENTRY	2.80E-05	
155)	EAOAAFRCEIDLL03	FLIGHT CRITICAL EQUIPMENT FAILURE; LARGE	1.00E-01	2.80E-06
	LL	LARGE GAS/HYDRAZINE LEAK DURING ENTRY	2.80E-05	
156)	ANRPGSFLKRIJSA	IGNITER JOINT S&A PRIMARY GASKET SEAL FAILURE	1.05E-03	2.77E-06
	ANRSGSFLKRIJSA	IGNITER JOINT S&A SECONDARY GASKET SEAL FAILURE	2.64E-03	
157)	ANRPGSFLKLIJSA	IGNITER JOINT S&A PRIMARY GASKET SEAL FAILURE	1.05E-03	2.77E-06
	ANRSGSFLKLIJSA	IGNITER JOINT S&A SECONDARY GASKET SEAL FAILURE	2.64E-03	
158)	ANRPRSFLKLIJSII	IGNITER JOINT SII PRIMARY O-RING SEAL FAILURE	1.05E-03	2.73E-06
	ANRSRSFLKLIJSII	IGNITER JOINT SII SECONDARY O-RING SEAL FAILURE	2.60E-03	
159)	ANRPRSFLKRIJSII	IGNITER JOINT SII PRIMARY O-RING SEAL FAILURE	1.05E-03	2.73E-06
	ANRSRSFLKRIJSII	IGNITER JOINT SII SECONDARY O-RING SEAL FAILURE	2.60E-03	
160)	ANRPRSFLKRIJRTR	IGNITER JOINT ROTOR PRIMARY O-RING SEAL LEAKAGE	1.05E-03	2.70E-06
	ANRSRSFLKRIJRTR	IGNITER JOINT ROTOR SECONDARY O-RING SEAL FAILURE	2.57E-03	
161)	ANRPRSFLKLIJRTR	IGNITER JOINT ROTOR PRIMARY O-RING SEAL LEAKAGE	1.05E-03	2.70E-06
	ANRSRSFLKLIJRTR	IGNITER JOINT ROTOR SECONDARY O-RING SEAL FAILURE	2.57E-03	
162)-	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	2.56E-06
	ASMHUHSPHFEMESD	HUMAN ERROR TO INITIATE THE MANUAL EMERGENCY HYDRAULIC S/D	1.00E-02	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
163)	EAOAAFRA1OSOK17	LEAKAGE INDUCED FAILURE TO START OR RUN;	3.00E-01	2.54E-06
	EAOAASRA2ISOK17	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3ISOK17	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LKOK17	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	ENOAALKA1LUOK17	LEAK UNDETECTED; OK STATE DURING RTL;	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
164)	ANOTPSBT23ID3112	CATASTROPHIC FAILURE OF RIGHT WING TPS; CENTER INBOARD; 364 TILES	2.00E-06	2.00E-06
165)	ANOTPSBT25ID3122	CATASTROPHIC FAILURE OF PAYLOAD BAY TPS; FWD; 1664 TILES	2.00E-06	2.00E-06
166)	ANOTPSBT26ID3132	CATASTROPHIC FAILURE OF PAYLOAD BAY TPS; AFT; 1976 TILES	2.00E-06	2.00E-06
167)	ANOTPSBT22ID2332	CATASTROPHIC FAILURE OF RIGHT ELEVON TPS; OUTBOARD; 312 TILES	2.00E-06	2.00E-06
168)	ANOTPSBT20ID2321	CATASTROPHIC FAILURE OF LEFT SIDE NOSE TPS; 312 TILES	2.00E-06	2.00E-06
169)	ACRHDPREREL	SRB HOLDDOWN: PREMATURE RELEASE	1.60E-06	1.60E-06
170)	EAOAAFRA1OSOK21	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.44E-06
	EAOAAFRA1ULOK21	SINGLE APU/HYD RTL UNSUCCESSFUL; OK STATE	1.00E-01	
	EAOAAFRA2OSOK21	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAALKA1CLOK21	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ENOAALKA1LAOK21	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
171)	EAOAAFRA1OSOK21	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.44E-06
	EAOAAFRA1ULOK21	SINGLE APU/HYD RTL UNSUCCESSFUL; OK STATE	1.00E-01	
	EAOAAFRA3OSOK21	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAALKA1CLOK21	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LAOK21	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
172)	EAOAAFRA1ULOK23	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK	1.00E-01	1.43E-06
	EAOAAFRA2OSOK23	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAAFRA3OSOK23	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAAOKA1SROK23	RESTART/RUN SUCCESSFUL; OK STATE DURING	9.94E-01	
	ENOAALKA1CLOK23	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LAOK23	LEAKS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
173)	ANMDVFCPRPMPMSDV	17 INCH DISCONNECT FAILS TO REMAIN OPEN DURING SSME OPERATION	1.31E-06	1.31E-06
174)	EAOAASRA1ISOK05	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	1.30E-06
	EAOAASRA2ISOK05	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3ISOK05	INDEPENDENT FAILURE TO START OR RUN; OK STATE DURING RTL; SEQ 5	1.09E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
175)	EAOAAFRA1ULOK09	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	1.27E-06
	EAOAASRA1CSOK09	COMMON CAUSE FAILURE TO START OR RUN;	8.87E-04	
	ENOAALKA1LDOK09	LEAK DETECTED/CONFIRMED; OK STATE DURING	1.67E-01	
	ENOAALKA1LKOK09	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
176)	EAOAAFRA1ULOK09	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	1.09E-06
	EAOAASRA1ISOK09	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA2LSOK09	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAALKA1LDOK09	LEAK DETECTED/CONFIRMED; OK STATE DURING	1.67E-01	
	ENOAALKA1LKOK09	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
177)	EAOAAFRA1ULOK09	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	1.09E-06
	EAOAASRA1ISOK09	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3LSOK09	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAALKA1LDOK09	LEAK DETECTED/CONFIRMED; OK STATE DURING	1.67E-01	
	ENOAALKA1LKOK09	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
178)	EAOAAFRA1ULOK11	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	1.09E-06

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	EAOAAOKA1SROK11	RESTART/RUN SUCCESSFUL; OK STATE DURING	9.94E-01	
	EAOAASRA2ISOK11	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3LSOK11	LEAKAGE INDUCED FAILURE START OR RUN; OK	7.00E-02	
	ENOAALKA1LDOK11	LEAK DETECTED/CONFIRMED; OK STATE DURING	1.67E-01	
	ENOAALKA1LKOK11	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
179)	EAOAAFRA1ULOK11	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	1.09E-06
	EAOAAOKA1SROK11	RESTART/RUN SUCCESSFUL; OK STATE DURING	9.94E-01	
	EAOAASRA2LSOK11	LEAKAGE INDUCED FAILURE START OR RUN; OK	7.00E-02	
	EAOAASRA3ISOK11	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LDOK11	LEAK DETECTED/CONFIRMED; OK STATE DURING	1.67E-01	
	ENOAALKA1LKOK11	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
180)	ACRSKRTFRCT	SRB AFT SKIRT FRACTURE DURING TWANG	1.00E-06	1.00E-06
181)	ACRSATSRGHTSRM	RIGHT SAFE AND ARM DEVICE TRANSFERS SAFE	1.00E-06	1.00E-06
182)	ANOTPSBT18ID2321	CATASTROPHIC FAILURE OF LEFT SIDE TPS; BODY FLAP; 104 TILES	1.00E-06	1.00E-06
183)	ACRREPRLFWDF	SPURIOUS ACTUATION OF THE L SRB FOWARD FULSTRUM SEPARATION	1.00E-06	1.00E-06
184)	ACRREPRREXTC	SPURIOUS ACTUATION OF THE R SRB EXTERNAL CONE SEPARATION	1.00E-06	1.00E-06
185)	ANOTPSBT24ID3122	CATASTROPHIC FAILURE OF LEFT WING TPS; CENTER INBOARD; 468 TILES	1.00E-06	1.00E-06
186)	ACRREPRRCHUT	SPURIOUS ACTUATION OF R SRB DROGUE & PILOT PARACHUTES	1.00E-06	1.00E-06
187)	ANOTPSBT17ID2321	CATASTROPHIC FAILURE OF RIGHT SIDE TPS; BODY FLAP; 104 TILES	1.00E-06	1.00E-06
188)	ACRHDDBOVETSRB	HOLD DOWN FRAGMENTS DAMAGE OV OR ET LEADING TO LOV	1.00E-06	1.00E-06
189)	ACRREPRLEXTC	SPURIOUS ACTUATION OF THE L SRB EXTERNAL CONE SEPARATION	1.00E-06	1.00E-06
190)	ACRSATSLEFTSRM	LEFT SAFE AND ARM DEVICE TRANSFERS SAFE	1.00E-06	1.00E-06
191)	ACRREPRLCHUT	SPURIOUS ACTUATION OF L SRB DROGUE & PILOT PARACHUTES	1.00E-06	1.00E-06
192)	ANOTPSBT27ID3132	CATASTROPHIC FAILURE OF RIGHT WING TPS; CENTER MID; 468 TILES	1.00E-06	1.00E-06
193)	ACRREPRRFWDF	SPURIOUS ACTUATION OF THE R SRB FOWARD FULSTRUM SEPARATION	1.00E-06	1.00E-06
194)	LSRBAPU1FAIL	LEFT SRB HPU 1 FAILURE	9.85E-04	9.70E-07
	LSRBAPU2FAIL	LEFT SRB HPU 2 FAILURE	9.85E-04	
195)	RSRBAPU1FAIL	RIGHT SRB HPU 1 FAILURE	9.85E-04	9.70E-07
	RSRBAPU2FAIL	RIGHT SRB APU 2 FAILURE	9.85E-04	
196)	ANRPRSFLKLIJOPT	IGNITER JOINT OPT PRIMARY O-RING SEAL FAILURE	1.56E-04	8.50E-07
	ANRSRSFLKLIJOPT	IGNITER JOINT OPT SECONDARY O-RING SEAL FAILURE	5.45E-03	
197)	ANRPRSFLKRIJOPT	IGNITER JOINT OPT PRIMARY O-RING SEAL FAILURE	1.56E-04	8.50E-07
	ANRSRSFLKRIJOPT	IGNITER JOINT OPT SECONDARY O-RING SEAL FAILURE	5.45E-03	
198)	EAOAASRA1ISOK16	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	8.48E-07
	EAOAASRA3ISOK16	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAAFRA1ULOK16	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ENOAALKA1LKOK16	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	ENOAALKA1LUOK16	LEAK UNDETECTED; OK STATE DURING RTL;	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
199)	EAOAASRA1ISOK16	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	8.48E-07
	EAOAASRA2ISOK16	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAAFRA1ULOK16	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	
	ENOAALKA1LKOK16	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	ENOAALKA1LUOK16	LEAK UNDETECTED; OK STATE DURING RTL;	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
200)	EAOAASRA2ISOK16	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	8.48E-07
	EAOAASRA3ISOK16	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAAFRA1ULOK16	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	
	ENOAALKA1LKOK16	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	ENOAALKA1LUOK16	LEAK UNDETECTED; OK STATE DURING RTL;	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
201)	EAOAAFRA1OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	7.82E-07
	EAOAAFRA2OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA3ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1CLOK29	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LZOK29	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
202)	EAOAAFRA1OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	7.82E-07
	EAOAAFRA3OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA2ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1CLOK29	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LZOK29	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
203)	EAOAAFRA2OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	7.82E-07
	EAOAAFRA3OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA1ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1CLOK29	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LZOK29	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
204)	EAOAASRA1ISOK12	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	7.64E-07
	EAOAASRA2LSOK12	LEAKAGE INDUCED FAILURE START OR RUN; OK	7.00E-02	
	EAOAASRA3LSOK12	LEAKAGE INDUCED FAILURE START OR RUN; OK	7.00E-02	
	ENOAALKA1LDOK12	LEAK DETECTED/CONFIRMED; OK STATE DURING	1.67E-01	
	ENOAALKA1LKOK12	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
205)	APMHVFCPRPMOPO1	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 1)	8.10E-07	7.64E-07
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
206)	APMHVFCPRPMOPO3	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 3)	8.10E-07	7.64E-07
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
207)	APMHVFCPRPMOPO2	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 2)	8.10E-07	7.64E-07
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
208)	ANRORCCLKLFHFB	CCF OF NOZZLE JOINT 5 PRIMARY AND SECONDARY O-RINGS	1.02E-05	6.94E-07
	ANRRBBFLKLFHFB	NOZZLE JOINT 5 RTV BACKFILL FAILURE	6.80E-02	
209)	ANRORCCLKRFHFB	CCF OF NOZZLE JOINT 5 PRIMARY AND SECONDARY O-RINGS	1.02E-05	6.94E-07
	ANRRBBFLKRFHFB	NOZZLE JOINT 5 RTV BACKFILL FAILURE	6.80E-02	
210)	ENOAACOA1IDTU05	UNCONTAINED WITHIN APU; APU/HYD TURBINE	1.00E+00	6.61E-07
	ENOAAFRA3ULTU05	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL;	1.00E-01	
	ENOAAHBA1IDTU05	HUB BREAKUP; APU/HYD TURBINE OVERSPEED;	9.00E-01	
	ENOAAOKA1OKTU05	FLIGHT CRITICAL EQUIPMENT OK; APU/HYD	1.20E-01	
	ENOAASIA2IDTU05	SECOND APU/HYD UNIT FAILED; APU/HYD TURBINE	8.80E-01	
	TU	APU/HYD TURBINE OVERSPEED	6.96E-05	
211)	ANRSBRSFLKRICJ	IGNITER TO CASE JOINT SPECIAL BOLT O-RING SEAL FAILURE	1.04E-03	6.55E-07
	ANRSSSFLKRICJ	IGNITER TO CASE JOINT STAT-O-SEAL FAILURE (1 OF 36)	6.30E-04	
212)	ANRSBRSFLKLICJ	IGNITER TO CASE JOINT SPECIAL BOLT O-RING SEAL FAILURE	1.04E-03	6.55E-07
	ANRSSSFLKLICJ	IGNITER TO CASE JOINT STAT-O-SEAL FAILURE (1 OF 36)	6.30E-04	
213)	ANRCPSFLKLIJSA	IGNITER JOINT S&A LEAK CHECK PORT PLUG SEAL FAILURE	6.10E-04	6.40E-07
	ANRPGSFLKLIJSA	IGNITER JOINT S&A PRIMARY GASKET SEAL FAILURE	1.05E-03	
214)	ANRCPSFLKLIJSII	IGNITER JOINT SII LEAK CHECK PORT PLUG SEAL FAILURE	6.10E-04	6.40E-07
	ANRPRSFLKLIJSII	IGNITER JOINT SII PRIMARY O-RING SEAL FAILURE	1.05E-03	
215)	ANRCPSFLKRIJSII	IGNITER JOINT SII LEAK CHECK PORT PLUG SEAL FAILURE	6.10E-04	6.40E-07
	ANRPRSFLKRIJSII	IGNITER JOINT SII PRIMARY O-RING SEAL FAILURE	1.05E-03	
216)	ANRCPSFLKRIJSA	IGNITER JOINT S&A LEAK CHECK PORT PLUG SEAL FAILURE	6.10E-04	6.40E-07
	ANRPGSFLKRIJSA	IGNITER JOINT S&A PRIMARY GASKET SEAL FAILURE	1.05E-03	
217)	ANRCPSFLKLIJRTR	IGNITER JOINT LEAK CHECK PORT PLUG SEAL FAILURE	6.10E-04	6.40E-07
	ANRPRSFLKLIJRTR	IGNITER JOINT ROTOR PRIMARY O-RING SEAL LEAKAGE	1.05E-03	
218)	ANRCPSFLKRIJRTR	IGNITER JOINT LEAK CHECK PORT PLUG SEAL FAILURE	6.10E-04	6.40E-07
	ANRPRSFLKRIJRTR	IGNITER JOINT ROTOR PRIMARY O-RING SEAL LEAKAGE	1.05E-03	
219)	ANRCPSFLKLICJ	IGNITER TO CASE JOINT LEAK CHECK PLUG SEAL FAILURE	6.10E-04	6.34E-07
	ANRSBRSFLKLICJ	IGNITER TO CASE JOINT SPECIAL BOLT O-RING SEAL FAILURE	1.04E-03	
220)	ANRCPSFLKRICJ	IGNITER TO CASE JOINT LEAK CHECK PLUG SEAL FAILURE	6.10E-04	6.34E-07
	ANRSBRSFLKRICJ	IGNITER TO CASE JOINT SPECIAL BOLT O-RING SEAL FAILURE	1.04E-03	
221)	EAOAAFRA1ULOK11	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	6.32E-07

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	EAOAAOKA1SROK11	RESTART/RUN SUCCESSFUL; OK STATE DURING	9.94E-01	
	EAOAASRA1CSOK11	COMMON CAUSE FAILURE TO START OR RUN;	4.44E-04	
	ENOAALKA1LDOK11	LEAK DETECTED/CONFIRMED; OK STATE DURING	1.67E-01	
	ENOAALKA1LKOK11	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
222)	EAOAASRA1ISOK17	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	5.94E-07
	EAOAASRA2LSOK17	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	EAOAASRA3ISOK17	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LKOK17	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	ENOAALKA1LUOK17	LEAK UNDETECTED; OK STATE DURING RTL;	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
223)	EAOAASRA1ISOK17	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	5.94E-07
	EAOAASRA2ISOK17	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3LSOK17	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAALKA1LKOK17	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	ENOAALKA1LUOK17	LEAK UNDETECTED; OK STATE DURING RTL;	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
224)	EAOAAFRA1OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	5.26E-07
	EAOAAFRA2OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAAFRA3OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAALKA1LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA1LZOK29	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	ENOAALKA2LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
225)	AOK2APUCCF	TWO APUS FAIL DUE TO COMMON CAUSE	2.00E-04	5.17E-07
	APMSDCCPRPMVDHLI	SECOND SSME IN HYDRAULIC LOCK-UP SHUTS DOWN BEFORE REDLINE INHIBIT	2.00E-02	
	APMSDVDPRPMVDHLI	FIRST SSME IN HYDRAULIC LOCK-UP SHUTS DOWN DUE TO VALVE DRIFT	2.00E-01	
	TOP_DSAFTDRP109	SIMULTANEOUS DUEL SSME SHUTDOWN OCCURS BEFORE DROOP(109) CALL	6.46E-01	
	TOP_DSBEFORELO	SIMULTANEOUS DUAL SSME SHUTDOWN OCCURS AFTER TO LIFT-OFF	1.00E+00	
226)	EAOAAFRA1OSOK12	LEAKAGE INDUCED FAILURE START OR RUN; OK	3.00E-01	5.10E-07
	EAOAASRA2ISOK12	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3ISOK12	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LDOK12	LEAK DETECTED/CONFIRMED; OK STATE DURING	1.67E-01	
	ENOAALKA1LKOK12	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
227)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	4.48E-07
	ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	1.40E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
228)	EAOAAFRA1OSL011	LEAKAGE INDUCED FAILURE TO START OR RUN;	3.00E-01	2.97E-07
	EAOAASRA3LSL011	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAAFRA1ULL011	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	
	ENOAALKA1LUL011	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
229)	EAOAAFRA1OSL011	LEAKAGE INDUCED FAILURE TO START OR RUN;	3.00E-01	2.97E-07
	EAOAASRA2LSL011	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAAFRA1ULL011	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	
	ENOAALKA1LUL011	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
230)	EAOAASRA1CSOK29	COMMON CAUSE FAILURE TO START OR RUN;	3.43E-04	2.73E-07
	ENOAALKA1CLOK29	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LZOK29	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
231)	EAOAAFRA1OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.61E-07
	EAOAASRA2ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1CLOK28	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
232)	EAOAAFRA3OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.61E-07
	EAOAASRA2ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1CLOK28	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
233)	EAOAAFRA2OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.61E-07
	EAOAASRA3ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1CLOK28	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
234)	EAOAAFRA3OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.61E-07
	EAOAASRA1ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1CLOK28	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
235)	EAOAAFRA2OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.61E-07
	EAOAASRA1ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1CLOK28	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
236)	EAOAAFRA1OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.61E-07
	EAOAASRA3ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1CLOK28	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
237)	ANRFAJTLK0SRM	HOT GAS LEAK AT FACTORY JOINT (1 OF 8)	2.56E-07	2.56E-07
238)	ANRCPSFLKRFBIR	NOZZLE JOINT 2 LEAK CHECK PORT PLUG FAILURE	6.10E-04	2.42E-07
	ANRPRSFLKRFBIR	NOZZLE JOINT 2 PRIMARY O-RING SEAL FAILURE	1.02E-03	
	ANRRBBFLKRFBIR	NOZZLE JOINT 2 RTV BACKFILL FAILURE	3.89E-01	
239)	ANRCPSFLKLFBIR	NOZZLE JOINT 2 LEAK CHECK PORT PLUG FAILURE	6.10E-04	2.42E-07
	ANRPRSFLKLFBIR	NOZZLE JOINT 2 PRIMARY O-RING SEAL FAILURE	1.02E-03	
	ANRRBBFLKLFBIR	NOZZLE JOINT 2 RTV BACKFILL FAILURE	3.89E-01	
240)	AAOAAFRA1IFOK04	APU/HYD UNIT 1 INDEPENDENT FAILURE;	6.23E-03	2.42E-07
	AAOAAFRA2IFOK04	APU/HYD UNIT 2 INDEPENDENT FAILURE;	6.23E-03	
	AAOAAFRA3IFOK04	APU/HYD UNIT 3 INDEPENDENT FAILURE;	6.23E-03	
	AOK	ASCENT WITH OK START	1.00E+00	
241)	EAOAAFRA1OSL012	LEAKAGE INDUCED FAILURE TO START OR RUN;	3.00E-01	2.08E-07
	EAOAASRA2LSL012	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	EAOAASRA3LSL012	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAALKA1LUL012	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
242)	ANMHUHSMPISO	HUMAN ERROR TO ISOLATE THE LEAKAGE	5.00E-02	1.95E-07
	ASMHUHSPHFEMESD	HUMAN ERROR TO INITIATE THE MANUAL EMERGENCY HYDRAULIC S/D	1.00E-02	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
243)	ANMHUHSMPCROSS	HUMAN ERROR TO OPEN THE CROSS LINES VALVES	5.00E-02	1.95E-07
	ASMHUHSPHFEMESD	HUMAN ERROR TO INITIATE THE MANUAL EMERGENCY HYDRAULIC S/D	1.00E-02	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
244)	EAOAAFRA1OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.75E-07

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	EAOAAFRA3OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	ENOAALKA2LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
245)	EAOAAFRA1OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.75E-07
	EAOAAFRA2OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	ENOAALKA2LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
246)	EAOAAFRA2OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.75E-07
	EAOAAFRA3OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	ENOAALKA2LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
247)	EAOAAFRA1ULOK09	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	1.70E-07
	EAOAASRA1ISOK09	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA2ISOK09	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LDOK09	LEAK DETECTED/CONFIRMED; OK STATE DURING	1.67E-01	
	ENOAALKA1LKOK09	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
248)	EAOAAFRA1ULOK09	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	1.70E-07
	EAOAASRA1ISOK09	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3ISOK09	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LDOK09	LEAK DETECTED/CONFIRMED; OK STATE DURING	1.67E-01	
	ENOAALKA1LKOK09	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
249)	EAOAAFRA1ULOK11	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL; OK	1.00E-01	1.69E-07
	EAOAAOKA1SROK11	RESTART/RUN SUCCESSFUL; OK STATE DURING	9.94E-01	
	EAOAASRA2ISOK11	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	EAOAASRA3ISOK11	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LDOK11	LEAK DETECTED/CONFIRMED; OK STATE DURING	1.67E-01	
	ENOAALKA1LKOK11	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
250)	ANRPRSFLKLFBIR	NOZZLE JOINT 2 PRIMARY O-RING SEAL FAILURE	1.02E-03	1.67E-07
	ANRRBBFLKLFBIR	NOZZLE JOINT 2 RTV BACKFILL FAILURE	3.89E-01	
	ANRSRSFLKLFBIR	NOZZLE JOINT 2 SECONDARY O-RING SEAL FAILURE	4.20E-04	
251)	ANRPRSFLKRFBIR	NOZZLE JOINT 2 PRIMARY O-RING SEAL FAILURE	1.02E-03	1.67E-07
	ANRRBBFLKRFBIR	NOZZLE JOINT 2 RTV BACKFILL FAILURE	3.89E-01	
	ANRSRSFLKRFBIR	NOZZLE JOINT 2 SECONDARY O-RING SEAL FAILURE	4.20E-04	
252)	ANRORCCLKRNC	CASE TO NOZZLE JOINT CCF OF PRIMARY AND SECONDARY O-RING	5.70E-05	1.57E-07
	ANRPSGLLKRNC	CASE TO NOZZLE JOINT POLYSULFIDE LEAK THROUGH	6.90E-02	
	ANRWRSFLKRNC	CASE TO NOZZLE JOINT WIPER O-RING SEAL FAILURE	4.00E-02	
253)	ANRORCCLKLNC	CASE TO NOZZLE JOINT CCF OF PRIMARY AND SECONDARY O-RING	5.70E-05	1.57E-07
	ANRPSGLLKLNC	CASE TO NOZZLE JOINT POLYSULFIDE LEAK THROUGH	6.90E-02	
	ANRWRSFLKLNC	CASE TO NOZZLE JOINT WIPER O-RING SEAL FAILURE	4.00E-02	
254)	EAOAAFRA2OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.57E-07
	EAOAAFRA3OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA1ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1CLOK24	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LAOK24	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
255)	EAOAAFRA1OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.57E-07
	EAOAAFRA3OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA2ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1CLOK24	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LAOK24	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
256)	EAOAAFRA1OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.57E-07
	EAOAAFRA2OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA3ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1CLOK24	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LAOK24	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
257)	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	1.25E-07
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEFH	INITIATING EVENT LOSS OF GROSS H2 FLOW	1.25E-03	
258)	EAOAASRA1ISOK12	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	1.19E-07

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	EAOAASRA2ISOK12	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3LSOK12	LEAKAGE INDUCED FAILURE START OR RUN; OK	7.00E-02	
	ENOAALKA1LDOK12	LEAK DETECTED/CONFIRMED; OK STATE DURING	1.67E-01	
	ENOAALKA1LKOK12	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
259)	EAOAASRA1ISOK12	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	1.19E-07
	EAOAASRA2LSOK12	LEAKAGE INDUCED FAILURE START OR RUN; OK	7.00E-02	
	EAOAASRA3ISOK12	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LDOK12	LEAK DETECTED/CONFIRMED; OK STATE DURING	1.67E-01	
	ENOAALKA1LKOK12	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
260)	ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	1.40E-04	1.12E-07
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	
261)	EAOAASRA1CSOK28	COMMON CAUSE FAILURE TO START OR RUN;	1.33E-03	1.06E-07
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1CLOK28	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
262)	EAOAAFRA1OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.05E-07
	EAOAAFRA2OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAAFRA3OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAALKA1LAOK24	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	ENOAALKA1LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA2LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
263)	EAOAAFRA1OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.03E-07
	EAOAAFRA2OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAAFRA3OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
264)	LTFAILGENCOM	ORBITER FAILS TO SEND COMMAND TO LEFT TILT ACTUATOR	1.00E-07	1.00E-07
265)	LRFAILGENCOM	ORBITER FAILS TO SEND COMMAND TO LEFT ROCK ACTUATOR	1.00E-07	1.00E-07
266)	APMPSFPPRPMCLCHA	HPFTP CL SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	1.00E-07
	APMPSFPPRPMCLCHB	HPFTP CL SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMELO	INITIATING EVENT COOLANT LINER OVERPRESSURE	1.00E-03	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
267)	RLOSSELECPWRSUP	BOOSTER ELECTRICAL POWER SUPPLY FAILURE	1.00E-07	1.00E-07
268)	RTFAILGENCOM	ORBITER FAILS TO SEND COMMAND TO RIGHT TILT ACTUATOR	1.00E-07	1.00E-07
269)	LOSSELECPWRSUP	LOSS OF 2 OF 3 ELECTRICAL BUSES DURING ASCENT	1.00E-07	1.00E-07
270)	RRFAILGENCOM	ORBITER FAILS TO SEND COMMAND TO RIGHT ROCK ACTUATOR	1.00E-07	1.00E-07
271)	LLOSSELECPWRSUP	LEFT SRB LOSS OF ELECTRICAL POWER SUPPLY	1.00E-07	1.00E-07
272)	ANRPRSFLKLFHFB	NOZZLE JOINT 5 PRIMARY O-RING SEAL FAILURE	1.02E-03	9.36E-08
	ANRRBBFLKLFHFB	NOZZLE JOINT 5 RTV BACKFILL FAILURE	6.80E-02	
	ANRSSSFLKLFHFB	NOZZLE JOINT 5 STAT-O-SEAL FAILURE (1 OF 77)	1.35E-03	
273)	ANRPRSFLKRFHFB	NOZZLE JOINT 5 PRIMARY O-RING SEAL FAILURE	1.02E-03	9.36E-08
	ANRRBBFLKRFHFB	NOZZLE JOINT 5 RTV BACKFILL FAILURE	6.80E-02	
	ANRSSSFLKRFHFB	NOZZLE JOINT 5 STAT-O-SEAL FAILURE (1 OF 77)	1.35E-03	
274)	EAOAASRA1ISOK17	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	9.24E-08
	EAOAASRA2ISOK17	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3ISOK17	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LKOK17	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	ENOAALKA1LUOK17	LEAK UNDETECTED; OK STATE DURING RTL;	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
275)	NOT_PP	POGO PRESSURE TRANSDUCER FAILURE	1.50E-04	9.08E-08
	SMEPG	INITIATING EVENT FAILURE TO PRECHARGE POGO ACC	6.05E-04	
276)	ANRCPSFLKLTI	NOZZLE JOINT 3 LEAK CHECK PORT PLUG FAILURE	6.10E-04	8.77E-08
	ANRPRSFLKLTI	NOZZLE JOINT 3 PRIMARY O-RING SEAL FAILURE	1.02E-03	
	ANRRBBFLKLTI	NOZZLE JOINT 3 RTV BACKFILL FAILURE	1.41E-01	
277)	ANRCPSFLKRTE	NOZZLE JOINT 4 LEAK CHECK PORT PLUG FAILURE	6.10E-04	8.77E-08
	ANRPRSFLKRTE	NOZZLE JOINT 4 PRIMARY O-RING SEAL FAILURE	1.02E-03	
	ANRRBBFLKRTE	NOZZLE JOINT 4 RTV BACKFILL FAILURE	1.41E-01	
278)	ANRCPSFLKRTI	NOZZLE JOINT 3 LEAK CHECK PORT PLUG FAILURE	6.10E-04	8.77E-08
	ANRPRSFLKRTI	NOZZLE JOINT 3 PRIMARY O-RING SEAL FAILURE	1.02E-03	
	ANRRBBFLKRTI	NOZZLE JOINT 3 RTV BACKFILL FAILURE	1.41E-01	
279)	ANRCPSFLKLTE	NOZZLE JOINT 4 LEAK CHECK PORT PLUG FAILURE	6.10E-04	8.77E-08
	ANRPRSFLKLTE	NOZZLE JOINT 4 PRIMARY O-RING SEAL FAILURE	1.02E-03	
	ANRRBBFLKLTE	NOZZLE JOINT 4 RTV BACKFILL FAILURE	1.41E-01	
280)	LH2_LEAK	LIQUID HYDROGEN LEAKAGE	2.31E-04	8.11E-08
	LO2_LEAK	LIQUID OXYGEN LEAKAGE	3.51E-04	
281)	ASMPAFPMPPRPB3	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 3)	7.76E-08	7.32E-08
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
282)	ASMPAFPMPPRPB1	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 1)	7.76E-08	7.32E-08
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
283)	ASMPAFPMPPRPB2	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 2)	7.76E-08	7.32E-08

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
284)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	7.02E-08
	ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	1.40E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
285)	EAOAASRA2LSL011	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	6.94E-08
	EAOAASRA3LSL011	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAAFRA1ULL011	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	
	ENOAALKA1LUL011	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
286)	ANRPRSFLKLNC	CASE TO NOZZLE JOINT PRIMARY O-RING SEAL FAILURE	5.70E-03	6.36E-08
	ANRPSGLLKLNC	CASE TO NOZZLE JOINT POLYSULFIDE LEAK THROUGH	6.90E-02	
	ANRSRSFLKLNC	CASE TO NOZZLE JOINT SECONDARY O-RING SEAL FAILURE	4.04E-03	
	ANRWRSFLKLNC	CASE TO NOZZLE JOINT WIPER O-RING SEAL FAILURE	4.00E-02	
287)	ANRPRSFLKRNC	CASE TO NOZZLE JOINT PRIMARY O-RING SEAL FAILURE	5.70E-03	6.36E-08
	ANRPSGLLKRNC	CASE TO NOZZLE JOINT POLYSULFIDE LEAK THROUGH	6.90E-02	
	ANRSRSFLKRNC	CASE TO NOZZLE JOINT SECONDARY O-RING SEAL FAILURE	4.04E-03	
	ANRWRSFLKRNC	CASE TO NOZZLE JOINT WIPER O-RING SEAL FAILURE	4.00E-02	
288)	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	6.27E-08
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEMO	INITIATING EVENT HIGH MIXTURE RATIO IN OXIDIZER PREBURNERS	6.27E-04	
289)	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	6.27E-08
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEMF	INITIATING EVENT HIGH MIXTURE RATIO IN FUEL PREBURNER	6.27E-04	
290)	APMTSCCPRPMFDTAB	CCF OF CHANNEL A AND CHANNEL B HPFTP DT SENSORS	5.00E-05	6.25E-08
	SMEFH	INITIATING EVENT LOSS OF GROSS H2 FLOW	1.25E-03	
291)	ANRIGISFLKLICJ	IGNITER TO CASE JOINT INNER GASKET/INNER SEAL FAILURE	3.81E-03	6.14E-08
	ANRIJSFLKLICJ	IGNITER TO CASE JOINT INNER J-LEG SEAL FAILURE	2.56E-02	
	ANRSSSFLKLICJ	IGNITER TO CASE JOINT STAT-O-SEAL FAILURE (1 OF 36)	6.30E-04	
292)	ANRIGISFLKRICJ	IGNITER TO CASE JOINT INNER GASKET/INNER SEAL FAILURE	3.81E-03	6.14E-08
	ANRIJSFLKRICJ	IGNITER TO CASE JOINT INNER J-LEG SEAL FAILURE	2.56E-02	
	ANRSSSFLKRICJ	IGNITER TO CASE JOINT STAT-O-SEAL FAILURE (1 OF 36)	6.30E-04	
293)	ANRPRSFLKRTE	NOZZLE JOINT 4 PRIMARY O-RING SEAL FAILURE	1.02E-03	6.04E-08
	ANRRBBFLKRTE	NOZZLE JOINT 4 RTV BACKFILL FAILURE	1.41E-01	
	ANRSRSFLKRTE	NOZZLE JOINT 4 SECONDARY O-RING SEAL FAILURE	4.20E-04	
294)	ANRPRSFLKLTE	NOZZLE JOINT 4 PRIMARY O-RING SEAL FAILURE	1.02E-03	6.04E-08
	ANRRBBFLKLTE	NOZZLE JOINT 4 RTV BACKFILL FAILURE	1.41E-01	
	ANRSRSFLKLTE	NOZZLE JOINT 4 SECONDARY O-RING SEAL FAILURE	4.20E-04	
295)	ANRPRSFLKRTI	NOZZLE JOINT 3 PRIMARY O-RING SEAL FAILURE	1.02E-03	6.04E-08

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ANRRBBFLKRTI	NOZZLE JOINT 3 RTV BACKFILL FAILURE	1.41E-01	
	ANRSRSFLKRTI	NOZZLE JOINT 3 SECONDARY O-RING SEAL FAILURE	4.20E-04	
296)	ANRPRSFLKLTI	NOZZLE JOINT 3 PRIMARY O-RING SEAL FAILURE	1.02E-03	6.04E-08
	ANRRBBFLKLTI	NOZZLE JOINT 3 RTV BACKFILL FAILURE	1.41E-01	
	ANRSRSFLKLTI	NOZZLE JOINT 3 SECONDARY O-RING SEAL FAILURE	4.20E-04	
297)	EAOAAFRA1OSL004	LEAKAGE INDUCED FAILURE START OR RUN;	3.00E-01	5.96E-08
	EAOAAFRA1ULL004	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	
	EAOAASRA2LSL004	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAALKA1LDL004	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
298)	EAOAAFRA1OSL004	LEAKAGE INDUCED FAILURE START OR RUN;	3.00E-01	5.96E-08
	EAOAAFRA1ULL004	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	
	EAOAASRA3LSL004	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAALKA1LDL004	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
299)	ANRCPSFLKRICJ	IGNITER TO CASE JOINT LEAK CHECK PLUG SEAL FAILURE	6.10E-04	5.95E-08
	ANRIGISFLKRICJ	IGNITER TO CASE JOINT INNER GASKET/INNER SEAL FAILURE	3.81E-03	
	ANRIJSFLKRICJ	IGNITER TO CASE JOINT INNER J-LEG SEAL FAILURE	2.56E-02	
300)	ANRCPSFLKLICJ	IGNITER TO CASE JOINT LEAK CHECK PLUG SEAL FAILURE	6.10E-04	5.95E-08
	ANRIGISFLKLICJ	IGNITER TO CASE JOINT INNER GASKET/INNER SEAL FAILURE	3.81E-03	
	ANRIJSFLKLICJ	IGNITER TO CASE JOINT INNER J-LEG SEAL FAILURE	2.56E-02	
301)	EAOAASRA1CSOK24	COMMON CAUSE FAILURE TO START OR RUN;	3.43E-04	5.48E-08
	ENOAALKA1CLOK24	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LAOK24	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
302)	EAOAAFRA1ULOK21	SINGLE APU/HYD RTL UNSUCCESSFUL; OK STATE	1.00E-01	5.23E-08
	EAOAAFRA3OSOK21	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA1ISOK21	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1CLOK21	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LAOK21	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
303)	EAOAAFRA1ULOK21	SINGLE APU/HYD RTL UNSUCCESSFUL; OK STATE	1.00E-01	5.23E-08
	EAOAAFRA2OSOK21	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA1ISOK21	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1CLOK21	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LAOK21	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
304)	EAOAAFRA1OSOK21	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	5.23E-08

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	EAOAAFRA1ULOK21	SINGLE APU/HYD RTL UNSUCCESSFUL; OK STATE	1.00E-01	
	EAOAASRA3ISOK21	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1CLOK21	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LAOK21	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
305)	EAOAAFRA1OSOK21	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	5.23E-08
	EAOAAFRA1ULOK21	SINGLE APU/HYD RTL UNSUCCESSFUL; OK STATE	1.00E-01	
	EAOAASRA2ISOK21	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1CLOK21	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LAOK21	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
306)	EAOAAFRA1ULOK23	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK	1.00E-01	5.19E-08
	EAOAAFRA2OSOK23	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAAOKA1SROK23	RESTART/RUN SUCCESSFUL; OK STATE DURING	9.94E-01	
	EAOAASRA3ISOK23	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1CLOK23	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LAOK23	LEAKS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
307)	EAOAAFRA1ULOK23	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK	1.00E-01	5.19E-08
	EAOAAFRA3OSOK23	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAAOKA1SROK23	RESTART/RUN SUCCESSFUL; OK STATE DURING	9.94E-01	
	EAOAASRA2ISOK23	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1CLOK23	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LAOK23	LEAKS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
308)	APMPSCCPRPMCLCAB	CCF OF CH A AND CH B HPFTP COOLANT LINER PRESSURE SENSORS	5.00E-05	5.00E-08
	SMELO	INITIATING EVENT COOLANT LINER OVERPRESSURE	1.00E-03	
309)	EAOAASRA1CSL012	COMMON CAUSE FAILURE TO START OR RUN;	3.43E-04	4.86E-08
	ENOAALKA1LUL012	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
310)	EAOAAFRA1OSL011	LEAKAGE INDUCED FAILURE TO START OR RUN;	3.00E-01	4.63E-08
	EAOAASRA2ISL011	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULL011	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	
	ENOAALKA1LUL011	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
311)	EAOAAFRA1OSL011	LEAKAGE INDUCED FAILURE TO START OR RUN;	3.00E-01	4.63E-08
	EAOAASRA3ISL011	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULL011	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ENOAALKA1LUL011	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
312)	ANRCPSFLKRFHFB	NOZZLE JOINT 5 LEAK CHECK PORT PLUG FAILURE	6.10E-04	4.23E-08
	ANRPRSFLKRFHFB	NOZZLE JOINT 5 PRIMARY O-RING SEAL FAILURE	1.02E-03	
	ANRRBBFLKRFHFB	NOZZLE JOINT 5 RTV BACKFILL FAILURE	6.80E-02	
313)	ANRCPSFLKLFHFB	NOZZLE JOINT 5 LEAK CHECK PORT PLUG FAILURE	6.10E-04	4.23E-08
	ANRPRSFLKLFHFB	NOZZLE JOINT 5 PRIMARY O-RING SEAL FAILURE	1.02E-03	
	ANRRBBFLKLFHFB	NOZZLE JOINT 5 RTV BACKFILL FAILURE	6.80E-02	
314)	ANRNZLR000SRM	RSRM NOZZLE STRUCTURAL FAILURE CAUSING LOV	4.20E-08	4.20E-08
315)	LRSTFAILACTRAM	LEFT ROCK STRUCTURAL FAILURE ACTUATOR RAM	4.20E-08	4.20E-08
316)	ANMTDDBPRPMHPFTD	HPFTP TURNAROUND DUCT DISTORTION/BUCKLING	4.20E-08	4.20E-08
317)	ANMMAERPRPMMIASI	EXTERNAL RUPTURE OF MI LOX OR FUEL ASI LINE	4.20E-08	4.20E-08
318)	ANMHXSFPRPMHEXSF	STRUCTURAL FAILURE OF HEX	4.20E-08	4.20E-08
319)	ANMDSECPRPMHPODS	HPOTP EXCESSIVE PBP DAMPING SEAL CLEARANCE	4.20E-08	4.20E-08
320)	ANMIPSFPRPMMIIPF	MI INTERPROPELLANT PLATE CRACK	4.20E-08	4.20E-08
321)	ANMIPSFPRPMFPBIP	FPB INTERPROPELLANT PLATE OR BRAZE JOINT FAILURE	4.20E-08	4.20E-08
322)	ANMBNLPPRPMHPOBN	HPOTP LOSS OF BEARING RETAINER NUT PRELOAD	4.20E-08	4.20E-08
323)	ANMLPSFPRPMFPBLP	FPB LOX POST CRACK	4.20E-08	4.20E-08
324)	RRSTFAILACTRAM	RIGHT ROCK STRUCTURAL FAILURE ACTUATOR RAM	4.20E-08	4.20E-08
325)	ANMTDLCPRPMHPFTD	HPFTP LOSS OF COOLANT TO BEARINGS OR TURBINE DISCS	4.20E-08	4.20E-08
326)	ANMTSSFPRPMHPFTS	HPFTP SHAFT FAILURE	4.20E-08	4.20E-08
327)	ANMTBLCPRPMHPOTB	LOSS OF COOLANT TO FIRST AND SECOND STAGE TURBINES	4.20E-08	4.20E-08
328)	ANMOOBLPRPMMIOBL	MI BLOCKAGE OF AN OXIDIZER ORIFICE	4.20E-08	4.20E-08
329)	ANMNZSFPRPMNOZSF	STRUCTURAL FAILURE OF NOZZLE	4.20E-08	4.20E-08
330)	ANMSMSFPRPMHPFSM	HPFTP SHEET METAL FAILURE	4.20E-08	4.20E-08
331)	ANMIPSFPRPMOPBIP	OPB INTERPROPELLANT PLATE OR BRAZE JOINT FAILURE	4.20E-08	4.20E-08
332)	ANMBBLPPRPMHPOBB	HPOTP LOSS OF BEARING RETAINING BOLT PRELOAD	4.20E-08	4.20E-08
333)	ANMABLOPRPMHPFAB	HPFTP LOSS OF AXIAL BALANCING CAPABILITY	4.20E-08	4.20E-08
334)	LTSTFAILACTRAM	LEFT TILT STRUCTURAL FAILURE ACTUATOR RAM	4.20E-08	4.20E-08
335)	ANMLPSFPRPMOPBLP	OPB LOX POST CRACK	4.20E-08	4.20E-08
336)	RTSTFAILACTRAM	RIGHT TILT STRUCTURAL FAILURE ACTUATOR RAM	4.20E-08	4.20E-08
337)	ANMTSSFPRPMHPOTS	HPOTP TURBINE SHAFT FAILURE	4.20E-08	4.20E-08
338)	ANMCPSFPPMLPFTP	STRUCTURAL FAILURE OF LPFTP	4.20E-08	4.20E-08
339)	ANMOAERPRPMOPASI	EXTERNAL RUPTURE OF OPB ASI LINE	4.20E-08	4.20E-08
340)	EAOAAFRA1OSL007	LEAKAGE INDUCED FAILURE START OR RUN;	3.00E-01	4.17E-08
	EAOAASRA2LSL007	LEAKAGE INDUCED FAILURE START OR RUN;	7.00E-02	
	EAOAASRA3LSL007	LEAKAGE INDUCED FAILURE START OR RUN;	7.00E-02	
	ENOAALKA1LDL007	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
341)	GH2_LEAK	GASEOUS HYDROGEN LEAKAGE	1.10E-04	3.86E-08
	LO2_LEAK	LIQUID OXYGEN LEAKAGE	3.51E-04	
342)	EAOAAFRA1OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	3.82E-08
	EAOAAFRA2OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAAFRA3OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
343)	EAOAAFRA1OSOK21	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	3.52E-08
	EAOAAFRA1ULOK21	SINGLE APU/HYD RTL UNSUCCESSFUL; OK STATE	1.00E-01	
	EAOAAFRA2OSOK21	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAALKA1LAOK21	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	ENOAALKA1LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA2LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
344)	EAOAAFRA1OSOK21	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	3.52E-08
	EAOAAFRA1ULOK21	SINGLE APU/HYD RTL UNSUCCESSFUL; OK STATE	1.00E-01	
	EAOAAFRA3OSOK21	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAALKA1LAOK21	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	ENOAALKA1LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA2LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
345)	EAOAAFRA1ULOK23	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK	1.00E-01	3.49E-08
	EAOAAFRA2OSOK23	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAAFRA3OSOK23	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAAOKA1SROK23	RESTART/RUN SUCCESSFUL; OK STATE DURING	9.94E-01	
	ENOAALKA1LAOK23	LEAKS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	ENOAALKA1LKOK23	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA2LKOK23	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK23	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
346)	ANRCPSFLKRAEC	NOZZLE JOINT 1 LEAK CHECK PORT PLUG FAILURE	6.10E-04	3.45E-08
	ANRPRSFLKRAEC	NOZZLE JOINT 1 PRIMARY O-RING SEAL FAILURE	1.02E-03	
	ANRRBBFLKRAEC	NOZZLE JOINT 1 RTV BACKFILL FAILURE	5.55E-02	
347)	ANRCPSFLKLAEC	NOZZLE JOINT 1 LEAK CHECK PORT PLUG FAILURE	6.10E-04	3.45E-08
	ANRPRSFLKLAEC	NOZZLE JOINT 1 PRIMARY O-RING SEAL FAILURE	1.02E-03	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ANRRBBFLKLAEC	NOZZLE JOINT 1 RTV BACKFILL FAILURE	5.55E-02	
348)	EAOAAFRA2OSL023	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	3.44E-08
	EAOAAFRA3OSL023	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
349)	EAOAAFRA1OSL023	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	3.44E-08
	EAOAAFRA2OSL023	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
350)	EAOAAFRA1OSL023	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	3.44E-08
	EAOAAFRA3OSL023	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
351)	AAOAAFRA1CFLK12	COMMON CAUSE FAILURE; APU/HYD	1.92E-04	3.26E-08
	ANOAALKA1LKLK12	APU/HYD UNIT 1 LEAK; APU/HYD HYDRAZINE	1.70E-04	
	ANOAALKA1LULK12	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
352)	EAOAAFRA1OSL012	LEAKAGE INDUCED FAILURE TO START OR RUN;	3.00E-01	3.24E-08
	EAOAASRA2LSL012	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	EAOAASRA3ISL012	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LUL012	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
353)	EAOAAFRA1OSL012	LEAKAGE INDUCED FAILURE TO START OR RUN;	3.00E-01	3.24E-08
	EAOAASRA2ISL012	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSL012	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAALKA1LUL012	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
354)	RSRBAPU1FAIL	RIGHT SRB HPU 1 FAILURE	9.85E-04	3.15E-08
	RSWVALFAILTOMOVE	RIGHT SWITCHING VALVE FAILURE TO MOVE	3.20E-05	
355)	LSRBAPU1FAIL	LEFT SRB HPU 1 FAILURE	9.85E-04	3.15E-08
	LSWVALFAILTOMOVE	LEFT SWITCHING VALVE FAILURE TO MOVE	3.20E-05	
356)	APMTSCCPRPMODTAB	CCF OF CHANNEL A CHANNEL B HPOTP DT SENSORS	5.00E-05	3.13E-08
	SMEMO	INITIATING EVENT HIGH MIXTURE RATIO IN OXIDIZER PREBURNERS	6.27E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
357)	APMTSCCPRPMFDTAB	CCF OF CHANNEL A AND CHANNEL B HPFTP DT SENSORS	5.00E-05	3.13E-08
	SMEMF	INITIATING EVENT HIGH MIXTURE RATIO IN FUEL PREBURNER	6.27E-04	
358)	ANRPRSFLKRFHFB	NOZZLE JOINT 5 PRIMARY O-RING SEAL FAILURE	1.02E-03	2.91E-08
	ANRRBBFLKRFHFB	NOZZLE JOINT 5 RTV BACKFILL FAILURE	6.80E-02	
	ANRSRSFLKRFHFB	NOZZLE JOINT 5 SECONDARY O-RING SEAL FAILURE	4.20E-04	
359)	ANRPRSFLKLFHFB	NOZZLE JOINT 5 PRIMARY O-RING SEAL FAILURE	1.02E-03	2.91E-08
	ANRRBBFLKLFHFB	NOZZLE JOINT 5 RTV BACKFILL FAILURE	6.80E-02	
	ANRSRSFLKLFHFB	NOZZLE JOINT 5 SECONDARY O-RING SEAL FAILURE	4.20E-04	
360)	EAOAAFRA2OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.84E-08
	EAOAASRA1ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1CLOK29	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LZOK29	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
361)	EAOAAFRA1OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.84E-08
	EAOAASRA2ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1CLOK29	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LZOK29	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
362)	EAOAAFRA3OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.84E-08
	EAOAASRA1ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA2ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1CLOK29	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LZOK29	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
363)	ANRCPSFLKRICJ	IGNITER TO CASE JOINT LEAK CHECK PLUG SEAL FAILURE	6.10E-04	2.83E-08
	ANROGISFLKRICJ	IGNITER TO CASE JOINT OUTER GASKET/INNER SEAL PATH	1.81E-03	
	ANROJSFLKRICJ	IGNITER TO CASE JOINT OUTER J-LEG SEAL FAILURE	2.56E-02	
364)	ANRCPSFLKLICJ	IGNITER TO CASE JOINT LEAK CHECK PLUG SEAL FAILURE	6.10E-04	2.83E-08
	ANROGISFLKLICJ	IGNITER TO CASE JOINT OUTER GASKET/INNER SEAL PATH	1.81E-03	
	ANROJSFLKLICJ	IGNITER TO CASE JOINT OUTER J-LEG SEAL FAILURE	2.56E-02	
365)	ANRPRSFLKLNC	CASE TO NOZZLE JOINT PRIMARY O-RING SEAL FAILURE	5.70E-03	2.75E-08
	ANRPSGLLKLNC	CASE TO NOZZLE JOINT POLYSULFIDE LEAK THROUGH	6.90E-02	
	ANRSSSFLKLNC	CASE TO NOZZLE JOINT STAT-O-SEAL FAILURE (1 OF 100)	1.75E-03	
	ANRWRSFLKLNC	CASE TO NOZZLE JOINT WIPER O-RING SEAL FAILURE	4.00E-02	
366)	ANRPRSFLKRNC	CASE TO NOZZLE JOINT PRIMARY O-RING SEAL FAILURE	5.70E-03	2.75E-08
	ANRPSGLLKRNC	CASE TO NOZZLE JOINT POLYSULFIDE LEAK THROUGH	6.90E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ANRSSSFLKRNC	CASE TO NOZZLE JOINT STAT-O-SEAL FAILURE (1 OF 100)	1.75E-03	
	ANRWRSFLKRNC	CASE TO NOZZLE JOINT WIPER O-RING SEAL FAILURE	4.00E-02	
367)	ANRCVSFLKRNC	CASE TO NOZZLE JOINT CLOSURE VPP SEAL FAILURE	1.53E-03	2.70E-08
	ANRPSGLLKRNC	CASE TO NOZZLE JOINT POLYSULFIDE LEAK THROUGH	6.90E-02	
	ANRPVSFLKRNC	CASE TO NOZZLE JOINT VPP PRIMARY O-RING SEAL FAILURE	6.40E-03	
	ANRWRSFLKRNC	CASE TO NOZZLE JOINT WIPER O-RING SEAL FAILURE	4.00E-02	
368)	ANRCVSFLKLNC	CASE TO NOZZLE JOINT CLOSURE VPP SEAL FAILURE	1.53E-03	2.70E-08
	ANRPSGLLKLNC	CASE TO NOZZLE JOINT POLYSULFIDE LEAK THROUGH	6.90E-02	
	ANRPVSFLKLNC	CASE TO NOZZLE JOINT VPP PRIMARY O-RING SEAL FAILURE	6.40E-03	
	ANRWRSFLKLNC	CASE TO NOZZLE JOINT WIPER O-RING SEAL FAILURE	4.00E-02	
369)	EAOAAFRA2OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.41E-08
	EAOAAFRA3OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA1LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
370)	EAOAAFRA1OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.41E-08
	EAOAAFRA3OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA2LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
371)	EAOAAFRA1OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.41E-08
	EAOAAFRA2OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA3LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
372)	GO2_LEAK	GASEOUS OXYGEN LEAKAGE	1.04E-04	2.40E-08
	LH2_LEAK	LIQUID HYDROGEN LEAKAGE	2.31E-04	
373)	ANRPRSFLKRAEC	NOZZLE JOINT 1 PRIMARY O-RING SEAL FAILURE	1.02E-03	2.38E-08
	ANRRBBFLKRAEC	NOZZLE JOINT 1 RTV BACKFILL FAILURE	5.55E-02	
	ANRSRSFLKRAEC	NOZZLE JOINT 1 SECONDARY O-RING SEAL FAILURE	4.20E-04	
374)	ANRPRSFLKLAEC	NOZZLE JOINT 1 PRIMARY O-RING SEAL FAILURE	1.02E-03	2.38E-08
	ANRRBBFLKLAEC	NOZZLE JOINT 1 RTV BACKFILL FAILURE	5.55E-02	
	ANRSRSFLKLAEC	NOZZLE JOINT 1 SECONDARY O-RING SEAL FAILURE	4.20E-04	
375)	ANRIGOSFLKLICJ	IGNITER TO CASE JOINT INNER GASKET/OUTER SEAL FAILURE	1.47E-03	2.37E-08
	ANROJSFLKLICJ	IGNITER TO CASE JOINT OUTER J-LEG SEAL FAILURE	2.56E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ANRSSSFLKLICJ	IGNITER TO CASE JOINT STAT-O-SEAL FAILURE (1 OF 36)	6.30E-04	
376)	ANRIGOSFLKRICJ	IGNITER TO CASE JOINT INNER GASKET/OUTER SEAL FAILURE	1.47E-03	2.37E-08
	ANROJSFLKRICJ	IGNITER TO CASE JOINT OUTER J-LEG SEAL FAILURE	2.56E-02	
	ANRSSSFLKRICJ	IGNITER TO CASE JOINT STAT-O-SEAL FAILURE (1 OF 36)	6.30E-04	
377)	ANRCPSFLKRICJ	IGNITER TO CASE JOINT LEAK CHECK PLUG SEAL FAILURE	6.10E-04	2.30E-08
	ANRIGOSFLKRICJ	IGNITER TO CASE JOINT INNER GASKET/OUTER SEAL FAILURE	1.47E-03	
	ANROJSFLKRICJ	IGNITER TO CASE JOINT OUTER J-LEG SEAL FAILURE	2.56E-02	
378)	ANRCPSFLKLICJ	IGNITER TO CASE JOINT LEAK CHECK PLUG SEAL FAILURE	6.10E-04	2.30E-08
	ANRIGOSFLKLICJ	IGNITER TO CASE JOINT INNER GASKET/OUTER SEAL FAILURE	1.47E-03	
	ANROJSFLKLICJ	IGNITER TO CASE JOINT OUTER J-LEG SEAL FAILURE	2.56E-02	
379)	EAOAAFRA1OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.07E-08
	EAOAAFRA2OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAAFRA3OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
380)	EAOAAFRA1OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.91E-08
	EAOAAFRA2OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA3ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA1LZOK29	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	ENOAALKA2LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
381)	EAOAAFRA1OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.91E-08
	EAOAAFRA3OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA2ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA1LZOK29	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	ENOAALKA2LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
382)	EAOAAFRA2OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.91E-08
	EAOAAFRA3OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA1ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA1LZOK29	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	ENOAALKA2LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ENOAALKA3LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
383)	EAOAASRA1CSL011	COMMON CAUSE FAILURE TO START OR RUN;	1.33E-03	1.88E-08
	ENOAAFRA1ULL011	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	
	ENOAALKA1LUL011	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
384)	EAOAASRA1ISOK12	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	1.85E-08
	EAOAASRA2ISOK12	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3ISOK12	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LDOK12	LEAK DETECTED/CONFIRMED; OK STATE DURING	1.67E-01	
	ENOAALKA1LKOK12	APU/HYD UNIT 1 LEAK; OK STATE DURING RTL;	8.57E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
385)	ANRPSGLLKLNC	CASE TO NOZZLE JOINT POLYSULFIDE LEAK THROUGH	6.90E-02	1.80E-08
	ANRPVSFLKLNC	CASE TO NOZZLE JOINT VPP PRIMARY O-RING SEAL FAILURE	6.40E-03	
	ANRSVSFLKLNC	CASE TO NOZZLE JOINT VPP SECONDARY O-RING SEAL FAILURE	1.02E-03	
	ANRWRSFLKLNC	CASE TO NOZZLE JOINT WIPER O-RING SEAL FAILURE	4.00E-02	
386)	ANRPSGLLKRNC	CASE TO NOZZLE JOINT POLYSULFIDE LEAK THROUGH	6.90E-02	1.80E-08
	ANRPVSFLKRNC	CASE TO NOZZLE JOINT VPP PRIMARY O-RING SEAL FAILURE	6.40E-03	
	ANRSVSFLKRNC	CASE TO NOZZLE JOINT VPP SECONDARY O-RING SEAL FAILURE	1.02E-03	
	ANRWRSFLKRNC	CASE TO NOZZLE JOINT WIPER O-RING SEAL FAILURE	4.00E-02	
387)	ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	1.40E-04	1.76E-08
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	
388)	EAOAAFRA1ULOK21	SINGLE APU/HYD RTL UNSUCCESSFUL; OK STATE	1.00E-01	1.42E-08
	EAOAASRA1CSOK21	COMMON CAUSE FAILURE TO START OR RUN;	8.87E-04	
	ENOAALKA1CLOK21	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LAOK21	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
389)	ASMAVFOMPHTOG2	SSME-2 FUEL TOPPING VALVE FAILS TO OPEN	8.98E-05	1.41E-08
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
390)	ASMAVFOMPHTOG3	SSME-3 FUEL TOPPING VALVE FAILS TO OPEN	8.98E-05	1.41E-08
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
391)	ASMAVFOMPHTOG1	SSME-1 FUEL TOPPING VALVE FAILS TO OPEN	8.98E-05	1.41E-08
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
392)	EAOAAFRA1ULL006	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	1.38E-08

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	EAOAAL0A1SRL006	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 1	9.94E-01	
	EAOAASRA2LSL006	LEAKAGE INDUCED FAILURE START OR RUN;	7.00E-02	
	EAOAASRA3LSL006	LEAKAGE INDUCED FAILURE START OR RUN;	7.00E-02	
	ENOAALKA1LDL006	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
393)	EAOAAFRA1OSLT11	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.27E-08
	EAOAAFRA3OSLT11	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
394)	EAOAAFRA1OSLT11	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.27E-08
	EAOAAFRA2OSLT11	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
395)	EAOAAFRA2OSLT11	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.27E-08
	EAOAAFRA3OSLT11	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
396)	APMHVFCPRPMOPO1	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 1)	8.10E-07	1.26E-08
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
397)	GH2_LEAK	GASEOUS HYDROGEN LEAKAGE	1.10E-04	1.14E-08
	GO2_LEAK	GASEOUS OXYGEN LEAKAGE	1.04E-04	
398)	EAOAASRA2LSL011	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	1.08E-08
	EAOAASRA3ISL011	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULL011	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	
	ENOAALKA1LUL011	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
399)	EAOAASRA1ISL011	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	1.08E-08
	EAOAASRA3LSL011	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAAFRA1ULL011	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	
	ENOAALKA1LUL011	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
400)	EAOAASRA1ISL011	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	1.08E-08
	EAOAASRA2LSL011	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAAFRA1ULL011	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	
	ENOAALKA1LUL011	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
401)	EAOAASRA2ISL011	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	1.08E-08
	EAOAASRA3LSL011	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAAFRA1ULL011	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	
	ENOAALKA1LUL011	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
402)	BADFE2O3	THRUST TRANSIENTS DUE TO INHOMOGENEOUS IRON OXIDE	1.00E-04	1.00E-08
	LOV_BADFE2O3	TRANSIENT DUE TO BAD FE2O3 FRACTURES ET CONNECT POINT	1.00E-04	
403)	EAOAASRA1CSL007	COMMON CAUSE FAILURE TO START OR RUN;	3.43E-04	9.74E-09
	ENOAALKA1LDL007	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
404)	ANRCPSFLKRNC	CASE TO NOZZLE JOINT LEAK CHECK PORT PLUG SEAL FAILURE	6.10E-04	9.60E-09
	ANRPRSFLKRNC	CASE TO NOZZLE JOINT PRIMARY O-RING SEAL FAILURE	5.70E-03	
	ANRPSGLLKRNC	CASE TO NOZZLE JOINT POLYSULFIDE LEAK THROUGH	6.90E-02	
	ANRWRSFLKRNC	CASE TO NOZZLE JOINT WIPER O-RING SEAL FAILURE	4.00E-02	
405)	ANRCPSFLKLNC	CASE TO NOZZLE JOINT LEAK CHECK PORT PLUG SEAL FAILURE	6.10E-04	9.60E-09
	ANRPRSFLKLNC	CASE TO NOZZLE JOINT PRIMARY O-RING SEAL FAILURE	5.70E-03	
	ANRPSGLLKLNC	CASE TO NOZZLE JOINT POLYSULFIDE LEAK THROUGH	6.90E-02	
	ANRWRSFLKLNC	CASE TO NOZZLE JOINT WIPER O-RING SEAL FAILURE	4.00E-02	
406)	EAOAASRA1ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	9.47E-09
	EAOAASRA3ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1CLOK28	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
407)	EAOAASRA2ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	9.47E-09
	EAOAASRA3ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1CLOK28	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
408)	EAOAASRA1ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	9.47E-09
	EAOAASRA2ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1CLOK28	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
409)	EAOAAFRA1OSL004	LEAKAGE INDUCED FAILURE START OR RUN;	3.00E-01	9.28E-09

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	EAOAAFRA1ULL004	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	
	EAOAASRA3ISL004	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LDL004	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
410)	EAOAAFRA1OSL004	LEAKAGE INDUCED FAILURE START OR RUN;	3.00E-01	9.28E-09
	EAOAAFRA1ULL004	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	
	EAOAASRA2ISL004	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LDL004	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
411)	APMAVFPPRPMBYPAS	BY-PASS VALVE FAILS TO CHANGE ITS POSITION	2.32E-06<	9.28E-09
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
412)	EAOAAFRA1OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	8.92E-09
	EAOAAFRA2OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA3LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
413)	EAOAAFRA1OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	8.92E-09
	EAOAAFRA3OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA2LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
414)	EAOAAFRA2OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	8.92E-09
	EAOAAFRA3OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA1LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
415)	APMHVFCPRPMOPO1	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 1)	8.10E-07	8.10E-09
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
416)	EAOAAFRA1OSL023	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	8.03E-09
	EAOAASRA2LSL023	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
417)	EAOAAFRA1OSL023	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	8.03E-09
	EAOAASRA3LSL023	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
418)	EAOAAFRA3OSL023	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	8.03E-09
	EAOAASRA2LSL023	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
419)	EAOAAFRA2OSL023	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	8.03E-09
	EAOAASRA3LSL023	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
420)	EAOAAFRA3OSL023	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	8.03E-09
	EAOAASRA1LSL023	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
421)	EAOAAFRA2OSL023	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	8.03E-09
	EAOAASRA1LSL023	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
422)	EAOAAFRA1OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	7.67E-09
	EAOAAFRA2OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAAFRA3OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
423)	EAOAASRA1ISL012	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	7.56E-09
	EAOAASRA2LSL012	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	EAOAASRA3LSL012	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAALKA1LUL012	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
424)	EAOAAFRA1ULOK23	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK	1.00E-01	7.05E-09
	EAOAAOKA1SROK23	RESTART/RUN SUCCESSFUL; OK STATE DURING	9.94E-01	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	EAOAASRA1CSOK23	COMMON CAUSE FAILURE TO START OR RUN;	4.44E-04	
	ENOAALKA1CLOK23	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LAOK23	LEAKS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
425)	EAOAAFRA1OSL016	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	6.90E-09
	EAOAAFRA1ULL016	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	
	EAOAAFRA3OSL016	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAALKA1CLL016	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL016	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
426)	EAOAAFRA1OSL016	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	6.90E-09
	EAOAAFRA1ULL016	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	
	EAOAAFRA2OSL016	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAALKA1CLL016	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL016	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
427)	EAOAAFRA1ULL018	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL;	1.00E-01	6.86E-09
	EAOAAFRA2OSL018	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAAFRA3OSL018	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAAL0A1SRL018	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 1	9.94E-01	
	ENOAALKA1CLL018	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL018	LEAKS DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
428)	EAOAASRA1CSOK29	COMMON CAUSE FAILURE TO START OR RUN;	3.43E-04	6.68E-09
	ENOAALKA1LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA1LZOK29	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	ENOAALKA2LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
429)	EAOAAFRA1OSL007	LEAKAGE INDUCED FAILURE START OR RUN;	3.00E-01	6.50E-09
	EAOAASRA2ISL007	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSL007	LEAKAGE INDUCED FAILURE START OR RUN;	7.00E-02	
	ENOAALKA1LDL007	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
430)	EAOAAFRA1OSL007	LEAKAGE INDUCED FAILURE START OR RUN;	3.00E-01	6.50E-09
	EAOAASRA2LSL007	LEAKAGE INDUCED FAILURE START OR RUN;	7.00E-02	
	EAOAASRA3ISL007	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LDL007	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
431)	EAOAAFRA1OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	6.37E-09
	EAOAASRA2ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	ENOAALKA2LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
432)	EAOAAFRA2OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	6.37E-09
	EAOAASRA1ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	ENOAALKA2LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
433)	EAOAAFRA3OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	6.37E-09
	EAOAASRA1ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	ENOAALKA2LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
434)	EAOAAFRA2OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	6.37E-09
	EAOAASRA3ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	ENOAALKA2LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
435)	EAOAAFRA1OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	6.37E-09
	EAOAASRA3ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ENOAALKA2LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
436)	EAOAAFRA3OSOK28	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	6.37E-09
	EAOAASRA2ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	ENOAALKA2LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
437)	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	6.37E-09
	ASMSVFOMPHPRV2	SSME-2 LH2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
438)	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	6.37E-09
	ASMSVFOMPHPRV1	SSME-1 LH2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
439)	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	6.37E-09
	ASMSVFOMPOPRV1	SSME-1 LO2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
440)	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	6.37E-09
	ASMSVFOMPHPRV3	SSME-3 LH2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
441)	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	6.37E-09
	ASMSVFOMPOPRV3	SSME-3 LO2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
442)	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	6.37E-09
	ASMSVFOMPOPRV2	SSME-2 LO2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
443)	ASMAVFOMPHTOG3	SSME-3 FUEL TOPPING VALVE FAILS TO OPEN	8.98E-05	5.84E-09
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
444)	ASMAVFOMPHTOG2	SSME-2 FUEL TOPPING VALVE FAILS TO OPEN	8.98E-05	5.84E-09
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
445)	ASMAVFOMPHTOG1	SSME-1 FUEL TOPPING VALVE FAILS TO OPEN	8.98E-05	5.84E-09
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
446)	EAOAAFRA3OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	5.70E-09
	EAOAASRA1ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA2ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1CLOK24	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LAOK24	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
447)	EAOAAFRA2OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	5.70E-09
	EAOAASRA1ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1CLOK24	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LAOK24	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
448)	EAOAAFRA1OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	5.70E-09
	EAOAASRA2ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1CLOK24	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LAOK24	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
449)	EAOAAFRA3OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	5.62E-09
	EAOAASRA1LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA2LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
450)	EAOAAFRA1OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	5.62E-09
	EAOAASRA2LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA3LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
451)	EAOAAFRA2OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	5.62E-09
	EAOAASRA1LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA3LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
452)	ASMAVFOMPHIFD3	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 3)	3.31E-05	5.18E-09
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
453)	ASMAVFOMPHOFD1	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 1)	3.31E-05	5.18E-09
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
454)	ASMAVFOMPHOFD2	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 2)	3.31E-05	5.18E-09
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
455)	ASMAVFOMPHIFD2	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 2)	3.31E-05	5.18E-09
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
456)	ASMAVFOMPHIFD1	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 1)	3.31E-05	5.18E-09
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
457)	ASMAVFOMPHOFD3	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 3)	3.31E-05	5.18E-09
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
458)	EAOAAFRA1OSL012	LEAKAGE INDUCED FAILURE TO START OR RUN;	3.00E-01	5.05E-09
	EAOAASRA2ISL012	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISL012	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LUL012	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
459)	EAOAAFRA1OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	4.83E-09
	EAOAAFRA3OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA2LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
460)	EAOAAFRA2OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	4.83E-09
	EAOAAFRA3OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA1LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
461)	EAOAAFRA1OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	4.83E-09
	EAOAAFRA2OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA3LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
462)	ASMHVCPPHFOSAB1	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B (ENGINE 1)	2.70E-07	4.21E-09
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
463)	EAOAAFRA1OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	3.83E-09
	EAOAAFRA2OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA3ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LAOK24	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	ENOAALKA1LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA2LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
464)	EAOAAFRA2OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	3.83E-09
	EAOAAFRA3OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA1ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LAOK24	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	ENOAALKA1LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA2LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
465)	EAOAAFRA1OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	3.83E-09
	EAOAAFRA3OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA2ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LAOK24	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	ENOAALKA1LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA2LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
466)	EAOAAFRA2OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	3.75E-09
	EAOAAFRA3OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA1ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
467)	EAOAAFRA1OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	3.75E-09
	EAOAAFRA3OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA2ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Bacic Event Probability	Cutset Probability
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
468)	EAOAAFRA1OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	3.75E-09
	EAOAAFRA2OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA3ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
469)	EAOAAFRA3OSLT11	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.97E-09
	EAOAASRA2LSLT11	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
470)	EAOAAFRA1OSLT11	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.97E-09
	EAOAASRA3LSLT11	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
471)	EAOAAFRA2OSLT11	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.97E-09
	EAOAASRA3LSLT11	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
472)	EAOAAFRA2OSLT11	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.97E-09
	EAOAASRA1LSLT11	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
473)	EAOAAFRA3OSLT11	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.97E-09
	EAOAASRA1LSLT11	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
474)	EAOAAFRA1OSLT11	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.97E-09
	EAOAASRA2LSLT11	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
475)	ASMHVCPPHFOSAB1	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B (ENGINE 1)	2.70E-07	2.70E-09

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Bacic Event Probability	Cutset Probability
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
476)	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	2.65E-09
	ASMSVFOMPHPRV2	SSME-2 LH2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
477)	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	2.65E-09
	ASMSVFOMPOPRV3	SSME-3 LO2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
478)	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	2.65E-09
	ASMSVFOMPOPRV1	SSME-1 LO2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
479)	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	2.65E-09
	ASMSVFOMPHPRV1	SSME-1 LH2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
480)	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	2.65E-09
	ASMSVFOMPHPRV3	SSME-3 LH2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
481)	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	2.65E-09
	ASMSVFOMPOPRV2	SSME-2 LO2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
482)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.59E-09
	APMHVFCPRPMOPO3	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 3)	8.10E-07	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
483)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.59E-09
	APMHVFCPRPMOPO1	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 1)	8.10E-07	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
484)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.59E-09
	APMHVFCPRPMOPO2	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 2)	8.10E-07	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
485)	EAOAASRA1CSOK28	COMMON CAUSE FAILURE TO START OR RUN;	1.33E-03	2.59E-09
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	ENOAALKA2LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
486)	EAOAAFRA1OSLT04	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.56E-09
	EAOAAFRA1ULLT04	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	
	EAOAAFRA2OSLT04	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	

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	ENOAALKA1LALT04	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
487)	EAOAAFRA1OSLT04	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.56E-09
	EAOAAFRA1ULLT04	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	
	EAOAAFRA3OSLT04	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	ENOAALKA1LALT04	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
488)	EAOAAFRA1ULLT06	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL;	1.00E-01	2.54E-09
	EAOAAFRA2OSLT06	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAAFRA3OSLT06	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAALTA1SRLT06	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 3	9.94E-01	
	ENOAALKA1LALT06	LEAKS DETECTED/CONFIRMED; INITIAL LEAK IN 3	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
489)	EAOAAFRA1ULL004	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	2.52E-09
	EAOAASRA1CSL004	COMMON CAUSE FAILURE TO START OR RUN;	8.87E-04	
	ENOAALKA1LDL004	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
490)	EAOAAFRA1ULL004	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	2.17E-09
	EAOAASRA1ISL004	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA2LSL004	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAALKA1LDL004	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
491)	EAOAAFRA1ULL004	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	2.17E-09
	EAOAASRA1ISL004	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSL004	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAALKA1LDL004	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
492)	ASMAVFOMPHOFD3	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 3)	3.31E-05	2.15E-09
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
493)	ASMAVFOMPHOFD1	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 1)	3.31E-05	2.15E-09
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
494)	ASMAVFOMPHIFD3	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 3)	3.31E-05	2.15E-09
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
495)	ASMAVFOMPHIFD1	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 1)	3.31E-05	2.15E-09
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
496)	ASMAVFOMPHIFD2	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 2)	3.31E-05	2.15E-09
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
497)	ASMAVFOMPHOFD2	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 2)	3.31E-05	2.15E-09
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
498)	EAOAAFRA1ULL006	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	2.15E-09
	EAOAAL0A1SRL006	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 1	9.94E-01	
	EAOAASRA2LSL006	LEAKAGE INDUCED FAILURE START OR RUN;	7.00E-02	
	EAOAASRA3ISL006	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LDL006	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	ILO	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
499)	EAOAAFRA1ULL006	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	2.15E-09
	EAOAAL0A1SRL006	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 1	9.94E-01	
	EAOAASRA2ISL006	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSL006	LEAKAGE INDUCED FAILURE START OR RUN;	7.00E-02	
	ENOAALKA1LDL006	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	ILO	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
500)	EAOAAFRA3OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.08E-09
	EAOAASRA1LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA2LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
501)	EAOAAFRA2OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.08E-09
	EAOAASRA1LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA3LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
502)	EAOAAFRA1OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.08E-09
	EAOAASRA2LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA3LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
503)-	OPOVCOMLCREL	OPOV COMMAND LIMIT ENGAGED	9.98E-01	2.00E-09
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
504)	EAOAAFRA1ULOK21	SINGLE APU/HYD RTL UNSUCCESSFUL; OK STATE	1.00E-01	1.90E-09
	EAOAASRA1ISOK21	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3ISOK21	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1CLOK21	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LAOK21	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
505)	EAOAAFRA1ULOK21	SINGLE APU/HYD RTL UNSUCCESSFUL; OK STATE	1.00E-01	1.90E-09
	EAOAASRA1ISOK21	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA2ISOK21	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1CLOK21	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LAOK21	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
506)	EAOAAFRA1ULOK23	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK	1.00E-01	1.89E-09
	EAOAAOKA1SROK23	RESTART/RUN SUCCESSFUL; OK STATE DURING	9.94E-01	
	EAOAASRA2ISOK23	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3ISOK23	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1CLOK23	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LAOK23	LEAKS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
507)	EAOAASRA1LSL023	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	1.87E-09
	EAOAASRA3LSL023	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
508)	EAOAASRA2LSL023	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	1.87E-09
	EAOAASRA3LSL023	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
509)	EAOAASRA1LSL023	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	1.87E-09
	EAOAASRA2LSL023	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
510)	EAOAAFRA1OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.79E-09

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	EAOAAFRA3OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA2LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
511)	EAOAAFRA2OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.79E-09
	EAOAAFRA3OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA1LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
512)	EAOAAFRA1OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.79E-09
	EAOAAFRA2OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA3LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
513)	AAOAAFRA1LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	1.00E-01	1.70E-09
	AAOAAFRA2LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	1.00E-01	
	AAOAAFRA3LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	1.00E-01	
	ANOAALKA1CLLK20	COMMON CAUSE LEAK; APU/HYD HYDRAZINE	1.70E-06	
	ANOAALKA1LZLK20	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
514)	EAOAASRA2ISL011	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	1.68E-09
	EAOAASRA3ISL011	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULL011	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	
	ENOAALKA1LUL011	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
515)	EAOAASRA1ISL011	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	1.68E-09
	EAOAASRA3ISL011	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULL011	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	
	ENOAALKA1LUL011	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
516)	EAOAASRA1ISL011	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	1.68E-09
	EAOAASRA2ISL011	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULL011	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	
	ENOAALKA1LUL011	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
517)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.68E-09
	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	
518)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	1.68E-09
	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Bacic Event Probability	Cutset Probability
519)	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.68E-09
	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	
520)	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	1.68E-09
	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	
521)	ACRCARPL1BSRB	CABLE (REPLACEABLE) FAILURE SSSW - FWD PIC L FWD	4.10E-05	1.68E-09
	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	
522)	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.68E-09
	ACRCARPRSFASRB	CABLE R SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	
523)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	1.68E-09
	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	
524)	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.68E-09
	ACRCARPRSFASRB	CABLE R SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	
525)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.68E-09
	ACRCARPLSFBSRB	CABLE L SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	
526)	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	1.68E-09
	ACRCARPRSFASRB	CABLE R SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	
527)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.68E-09
	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	
528)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.68E-09
	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
529)	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	1.68E-09
	ACRCARPLSFBSRB	CABLE L SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	
530)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	1.68E-09
	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	
531)	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.68E-09
	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	
532)	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	1.68E-09
	ACRCARPLSFASRB	CABLE L SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	
533)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.68E-09
	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	
534)	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.68E-09
	ACRCARPLSFASRB	CABLE L SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	
535)	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	1.68E-09
	ACRCARPRSFBSRB	CABLE R SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	
536)	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.68E-09
	ACRCARPLSFASRB	CABLE L SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	
537)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.68E-09
	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
538)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	1.68E-09
	ACRCARPRSFBSRB	CABLE R SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	
539)	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	1.68E-09
	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	
540)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.68E-09
	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
541)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.68E-09
	ACRCARPRSFBSRB	CABLE R SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	
542)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.68E-09
	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	
543)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.68E-09
	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	
544)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.68E-09
	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	
545)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.68E-09
	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	
546)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	1.68E-09
	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	
547)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.68E-09
	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	
548)	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.68E-09
	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	
549)	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.68E-09
	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	
550)	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	1.68E-09
	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	
551)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.68E-09
	ACRCARPRSFBSRB	CABLE R SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	
552)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	1.68E-09
	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
553)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	1.68E-09
	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
554)	ACRCARPL1BSRB	CABLE (REPLACEABLE) FAILURE SSSW - FWD PIC L FWD	4.10E-05	1.68E-09
	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
555)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.68E-09
	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
556)	ACRCARPLSFASRB	CABLE L SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	1.68E-09
	ACRCARPLSFBSRB	CABLE L SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
557)	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	1.68E-09
	ACRCARPRSFASRB	CABLE R SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	
558)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.68E-09
	ACRCARPLSFBSRB	CABLE L SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	
559)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.68E-09
	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
560)	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.68E-09
	ACRCARPLSFASRB	CABLE L SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	
561)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.68E-09
	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
562)	ACRCARPRSFASRB	CABLE R SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	1.68E-09
	ACRCARPRSFBSRB	CABLE R SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	
563)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	1.68E-09
	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	
564)	ACRCARPL1BSRB	CABLE (REPLACEABLE) FAILURE SSSW - FWD PIC L FWD	4.10E-05	1.68E-09
	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	
565)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.68E-09
	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
566)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	1.68E-09
	ACRCARPLSFBSRB	CABLE L SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	
567)	ACRCARPL1BSRB	CABLE (REPLACEABLE) FAILURE SSSW - FWD PIC L FWD	4.10E-05	1.68E-09
	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
568)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.68E-09
	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	
569)	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.68E-09
	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	
570)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	1.68E-09
	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	
571)	EAOAAFRA1ULL016	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	1.61E-09
	EAOAAFRA2OSL016	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA1LSL016	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL016	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL016	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
572)	EAOAAFRA1OSL016	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.61E-09
	EAOAAFRA1ULL016	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	
	EAOAASRA2LSL016	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL016	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ENOAALKA1LAL016	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
573)	EAOAAFRA1OSL016	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.61E-09
	EAOAAFRA1ULL016	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	
	EAOAASRA3LSL016	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL016	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL016	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
574)	EAOAAFRA1ULL016	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	1.61E-09
	EAOAAFRA3OSL016	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA1LSL016	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL016	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL016	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
575)	EAOAAFRA1ULL018	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL;	1.00E-01	1.60E-09
	EAOAAFRA2OSL018	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAAL0A1SRL018	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 1	9.94E-01	
	EAOAASRA3LSL018	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL018	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL018	LEAKS DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
576)	EAOAAFRA1ULL018	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL;	1.00E-01	1.60E-09
	EAOAAFRA3OSL018	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAAL0A1SRL018	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 1	9.94E-01	
	EAOAASRA2LSL018	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL018	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL018	LEAKS DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
577)	EAOAASRA1ISL007	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	1.52E-09
	EAOAASRA2LSL007	LEAKAGE INDUCED FAILURE START OR RUN;	7.00E-02	
	EAOAASRA3LSL007	LEAKAGE INDUCED FAILURE START OR RUN;	7.00E-02	
	ENOAALKA1LDL007	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
578)	APMAVFPPRPMBYPAS	BY-PASS VALVE FAILS TO CHANGE ITS POSITION	2.32E-06<	1.45E-09
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
579)	EAOAAFRA1OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.39E-09
	EAOAAFRA2OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA3ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	

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	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
580)	EAOAAFRA2OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.39E-09
	EAOAAFRA3OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA1ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
581)	EAOAAFRA1OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.39E-09
	EAOAAFRA3OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA2ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
582)	EAOAASRA1CSOK24	COMMON CAUSE FAILURE TO START OR RUN;	3.43E-04	1.34E-09
	ENOAALKA1LAOK24	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	ENOAALKA1LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA2LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
583)	EAOAASRA1LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	1.31E-09
	EAOAASRA2LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA3LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	ILO	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
584)	EAOAASRA1CSL024	COMMON CAUSE FAILURE TO START OR RUN;	3.43E-04	1.31E-09
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	ILO	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
585)	EAOAAFRA1ULOK21	SINGLE APU/HYD RTL UNSUCCESSFUL; OK STATE	1.00E-01	1.28E-09
	EAOAAFRA3OSOK21	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA1ISOK21	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LAOK21	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	ENOAALKA1LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA2LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
586)	EAOAAFRA1OSOK21	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.28E-09
	EAOAAFRA1ULOK21	SINGLE APU/HYD RTL UNSUCCESSFUL; OK STATE	1.00E-01	

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	EAOAASRA3ISOK21	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LAOK21	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	ENOAALKA1LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA2LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
587)	EAOAAFRA1OSOK21	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.28E-09
	EAOAAFRA1ULOK21	SINGLE APU/HYD RTL UNSUCCESSFUL; OK STATE	1.00E-01	
	EAOAASRA2ISOK21	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LAOK21	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	ENOAALKA1LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA2LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
588)	EAOAAFRA1ULOK21	SINGLE APU/HYD RTL UNSUCCESSFUL; OK STATE	1.00E-01	1.28E-09
	EAOAAFRA2OSOK21	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA1ISOK21	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LAOK21	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	ENOAALKA1LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA2LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
589)	EAOAAFRA1ULOK23	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK	1.00E-01	1.27E-09
	EAOAAFRA2OSOK23	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAAOKA1SROK23	RESTART/RUN SUCCESSFUL; OK STATE DURING	9.94E-01	
	EAOAASRA3ISOK23	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LAOK23	LEAKS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	ENOAALKA1LKOK23	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA2LKOK23	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK23	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
590)	EAOAAFRA1ULOK23	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK	1.00E-01	1.27E-09
	EAOAAFRA3OSOK23	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAAOKA1SROK23	RESTART/RUN SUCCESSFUL; OK STATE DURING	9.94E-01	
	EAOAASRA2ISOK23	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LAOK23	LEAKS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	ENOAALKA1LKOK23	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA2LKOK23	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	

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	ENOAALKA3LKOK23	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
591)	EAOAAFRA1ULL006	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	1.25E-09
	EAOAAL0A1SRL006	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 1	9.94E-01	
	EAOAASRA1CSL006	COMMON CAUSE FAILURE TO START OR RUN;	4.44E-04	
	ENOAALKA1LDL006	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
592)	EAOAAFRA1OSL023	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.25E-09
	EAOAASRA3ISL023	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
593)	EAOAAFRA3OSL023	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.25E-09
	EAOAASRA1ISL023	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
594)	EAOAAFRA3OSL023	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.25E-09
	EAOAASRA2ISL023	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
595)	EAOAAFRA2OSL023	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.25E-09
	EAOAASRA3ISL023	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
596)	EAOAAFRA1OSL023	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.25E-09
	EAOAASRA2ISL023	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
597)	EAOAAFRA2OSL023	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.25E-09

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	EAOAASRA1ISL023	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
598)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09
	ACRNPFDLS2BSRB	NSI PRESSURE CARTRIDGE LS2B FAILS TO DETONATE	3.00E-05	
599)	ACRCARPL1BSRB	CABLE (REPLACEABLE) FAILURE SSSW - FWD PIC L FWD	4.10E-05	1.23E-09
	ACRNDFDLFWASRB	NSD L FWD A FAILS TO DETONATE	3.00E-05	
600)	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09
	ACRNDFDLFWASRB	NSD L FWD A FAILS TO DETONATE	3.00E-05	
601)	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	1.23E-09
	ACRNPFDLS2ASRB	NSI PRESSURE CARTRIDGE LS2A FAILS TO DETONATE	3.00E-05	
602)	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	1.23E-09
	ACRNDFDLFWASRB	NSD L FWD A FAILS TO DETONATE	3.00E-05	
603)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09
	ACRNDFDLFWBSRB	NSD L FWD B FAILS TO DETONATE	3.00E-05	
604)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	1.23E-09
	ACRNPFDLSFBSRB	NSI PRESSURE CARTRIDGE LSFB FAILS TO DETONATE	3.00E-05	
605)	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	1.23E-09
	ACRNPFDRS2BSRB	NSI PRESSURE CARTRIDGE RS2B FAILS TO DETONATE	3.00E-05	
606)	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	1.23E-09
	ACRNDFDRAFBSRB	NSD R AFT B FAILS TO DETONATE	3.00E-05	
607)	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.23E-09
	ACRNPFDRS3ASRB	NSI PRESSURE CARTRIDGE RS3A FAILS TO DETONATE	3.00E-05	
608)	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.23E-09
	ACRNPFDRSFASRB	NSI PRESSURE CARTRIDGE RSFA FAILS TO DETONATE	3.00E-05	
609)	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	1.23E-09
	ACRNPFDLSFASRB	NSI PRESSURE CARTRIDGE LSFA FAILS TO DETONATE	3.00E-05	
610)	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.23E-09
	ACRNDFDRFWASRB	NSD R FWD A FAILS TO DETONATE	3.00E-05	
611)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	1.23E-09
	ACRNPFDLS1BSRB	NSI PRESSURE CARTRIDGE LS1B FAILS TO DETONATE	3.00E-05	
612)	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09
	ACRNPFDLS3ASRB	NSI PRESSURE CARTRIDGE LS3A FAILS TO DETONATE	3.00E-05	
613)	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	1.23E-09
	ACRNPFDRS2ASRB	NSI PRESSURE CARTRIDGE RS2A FAILS TO DETONATE	3.00E-05	
614)	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	1.23E-09

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRNPFDRSFASRB	NSI PRESSURE CARTRIDGE RSFA FAILS TO DETONATE	3.00E-05	
615)	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09
	ACRNDFDLFWASRB	NSD L FWD A FAILS TO DETONATE	3.00E-05	
616)	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09
	ACRNPFDLS3ASRB	NSI PRESSURE CARTRIDGE LS3A FAILS TO DETONATE	3.00E-05	
617)	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	1.23E-09
	ACRNPFDLSFBSRB	NSI PRESSURE CARTRIDGE LSFB FAILS TO DETONATE	3.00E-05	
618)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	1.23E-09
	ACRNPFDRS1BSRB	NSI PRESSURE CARTRIDGE RS1B FAILS TO DETONATE	3.00E-05	
619)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	1.23E-09
	ACRNDFDLFWBSRB	NSD L FWD B FAILS TO DETONATE	3.00E-05	
620)	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.23E-09
	ACRNDFDRFWASRB	NSD R FWD A FAILS TO DETONATE	3.00E-05	
621)	ACRCARPRSFASRB	CABLE R SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	1.23E-09
	ACRNPFDRSFBSRB	NSI PRESSURE CARTRIDGE RSFB FAILS TO DETONATE	3.00E-05	
622)	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09
	ACRNPFDLS2ASRB	NSI PRESSURE CARTRIDGE LS2A FAILS TO DETONATE	3.00E-05	
623)	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	1.23E-09
	ACRNDFDRFWASRB	NSD R FWD A FAILS TO DETONATE	3.00E-05	
624)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	1.23E-09
	ACRNPFDLS3BSRB	NSI PRESSURE CARTRIDGE LS3B FAILS TO DETONATE	3.00E-05	
625)	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09
	ACRNPFDLS1ASRB	NSI PRESSURE CARTRIDGE LS1A FAILS TO DETONATE	3.00E-05	
626)	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	1.23E-09
	ACRNPFDLS1BSRB	NSI PRESSURE CARTRIDGE LS1B FAILS TO DETONATE	3.00E-05	
627)	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.23E-09
	ACRNPFDRSFASRB	NSI PRESSURE CARTRIDGE RSFA FAILS TO DETONATE	3.00E-05	
628)	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.23E-09
	ACRNPFDRS1ASRB	NSI PRESSURE CARTRIDGE RS1A FAILS TO DETONATE	3.00E-05	
629)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.23E-09
	ACRNPFDRS2BSRB	NSI PRESSURE CARTRIDGE RS2B FAILS TO DETONATE	3.00E-05	
630)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.23E-09
	ACRNPFDRS1BSRB	NSI PRESSURE CARTRIDGE RS1B FAILS TO DETONATE	3.00E-05	
631)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09
	ACRNPFDLS3BSRB	NSI PRESSURE CARTRIDGE LS3B FAILS TO DETONATE	3.00E-05	
632)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.23E-09
	ACRNDFDRAFBSRB	NSD R AFT B FAILS TO DETONATE	3.00E-05	
633)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRNPFDLSFBSRB	NSI PRESSURE CARTRIDGE LSFB FAILS TO DETONATE	3.00E-05	
634)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	1.23E-09
	ACRNDFDRAFBSRB	NSD R AFT B FAILS TO DETONATE	3.00E-05	
635)	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	1.23E-09
	ACRNPFDRS3ASRB	NSI PRESSURE CARTRIDGE RS3A FAILS TO DETONATE	3.00E-05	
636)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	1.23E-09
	ACRNPFDRS3BSRB	NSI PRESSURE CARTRIDGE RS3B FAILS TO DETONATE	3.00E-05	
637)	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	1.23E-09
	ACRNDFDRAFASRB	NSD R AFT A FAILS TO DETONATE	3.00E-05	
638)	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.23E-09
	ACRNDFDRAFASRB	NSD R AFT A FAILS TO DETONATE	3.00E-05	
639)	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09
	ACRNPFDLSFASRB	NSI PRESSURE CARTRIDGE LSFA FAILS TO DETONATE	3.00E-05	
640)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	1.23E-09
	ACRNPFDRSFBSRB	NSI PRESSURE CARTRIDGE RSFB FAILS TO DETONATE	3.00E-05	
641)	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09
	ACRNPFDLS2ASRB	NSI PRESSURE CARTRIDGE LS2A FAILS TO DETONATE	3.00E-05	
642)	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09
	ACRNPFDLS2ASRB	NSI PRESSURE CARTRIDGE LS2A FAILS TO DETONATE	3.00E-05	
643)	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09
	ACRNDFDLFWASRB	NSD L FWD A FAILS TO DETONATE	3.00E-05	
644)	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	1.23E-09
	ACRNDFDRFWBSRB	NSD R FWD B FAILS TO DETONATE	3.00E-05	
645)	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.23E-09
	ACRNPFDRS3ASRB	NSI PRESSURE CARTRIDGE RS3A FAILS TO DETONATE	3.00E-05	
646)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09
	ACRNPFDLSFBSRB	NSI PRESSURE CARTRIDGE LSFB FAILS TO DETONATE	3.00E-05	
647)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.23E-09
	ACRNDFDRFWBSRB	NSD R FWD B FAILS TO DETONATE	3.00E-05	
648)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09
	ACRNPFDLS1BSRB	NSI PRESSURE CARTRIDGE LS1B FAILS TO DETONATE	3.00E-05	
649)	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	1.23E-09
	ACRNPFDLS3BSRB	NSI PRESSURE CARTRIDGE LS3B FAILS TO DETONATE	3.00E-05	
650)	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09
	ACRNPFDLS1ASRB	NSI PRESSURE CARTRIDGE LS1A FAILS TO DETONATE	3.00E-05	
651)	ACRCARPLSFASRB	CABLE L SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	1.23E-09
	ACRNPFDLSFBSRB	NSI PRESSURE CARTRIDGE LSFB FAILS TO DETONATE	3.00E-05	
652)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.23E-09

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRNDFDRAFBSRB	NSD R AFT B FAILS TO DETONATE	3.00E-05	
653)	ACRCARPLSFBSRB	CABLE L SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	1.23E-09
	ACRNPFDLSFASRB	NSI PRESSURE CARTRIDGE LSFA FAILS TO DETONATE	3.00E-05	
654)	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09
	ACRNPFDLSFASRB	NSI PRESSURE CARTRIDGE LSFA FAILS TO DETONATE	3.00E-05	
655)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	1.23E-09
	ACRNPFDRS2BSRB	NSI PRESSURE CARTRIDGE RS2B FAILS TO DETONATE	3.00E-05	
656)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	1.23E-09
	ACRNPFDLS2BSRB	NSI PRESSURE CARTRIDGE LS2B FAILS TO DETONATE	3.00E-05	
657)	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	1.23E-09
	ACRNPFDRS3ASRB	NSI PRESSURE CARTRIDGE RS3A FAILS TO DETONATE	3.00E-05	
658)	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	1.23E-09
	ACRNPFDRS1ASRB	NSI PRESSURE CARTRIDGE RS1A FAILS TO DETONATE	3.00E-05	
659)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09
	ACRNPFDLS1BSRB	NSI PRESSURE CARTRIDGE LS1B FAILS TO DETONATE	3.00E-05	
660)	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	1.23E-09
	ACRNDFDRFWASRB	NSD R FWD A FAILS TO DETONATE	3.00E-05	
661)	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	1.23E-09
	ACRNPFDRS1ASRB	NSI PRESSURE CARTRIDGE RS1A FAILS TO DETONATE	3.00E-05	
662)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09
	ACRNPFDLS3BSRB	NSI PRESSURE CARTRIDGE LS3B FAILS TO DETONATE	3.00E-05	
663)	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	1.23E-09
	ACRNPFDLS1ASRB	NSI PRESSURE CARTRIDGE LS1A FAILS TO DETONATE	3.00E-05	
664)	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	1.23E-09
	ACRNPFDLS2BSRB	NSI PRESSURE CARTRIDGE LS2B FAILS TO DETONATE	3.00E-05	
665)	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	1.23E-09
	ACRNPFDRSFBSRB	NSI PRESSURE CARTRIDGE RSFB FAILS TO DETONATE	3.00E-05	
666)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09
	ACRNPFDLS2BSRB	NSI PRESSURE CARTRIDGE LS2B FAILS TO DETONATE	3.00E-05	
667)	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	1.23E-09
	ACRNDFDLFWBSRB	NSD L FWD B FAILS TO DETONATE	3.00E-05	
668)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.23E-09
	ACRNPFDRS2BSRB	NSI PRESSURE CARTRIDGE RS2B FAILS TO DETONATE	3.00E-05	
669)	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	1.23E-09
	ACRNPFDRS1BSRB	NSI PRESSURE CARTRIDGE RS1B FAILS TO DETONATE	3.00E-05	
670)	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	1.23E-09
	ACRNPFDLS3ASRB	NSI PRESSURE CARTRIDGE LS3A FAILS TO DETONATE	3.00E-05	
671)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	1.23E-09

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRNDFDRFWBSRB	NSD R FWD B FAILS TO DETONATE	3.00E-05	
672)	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09
	ACRNPFDLS1ASRB	NSI PRESSURE CARTRIDGE LS1A FAILS TO DETONATE	3.00E-05	
673)	ACRCARPRSFBSRB	CABLE R SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	1.23E-09
	ACRNPFDRSFASRB	NSI PRESSURE CARTRIDGE RSFA FAILS TO DETONATE	3.00E-05	
674)	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	1.23E-09
	ACRNPFDRS3BSRB	NSI PRESSURE CARTRIDGE RS3B FAILS TO DETONATE	3.00E-05	
675)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.23E-09
	ACRNPFDRS1BSRB	NSI PRESSURE CARTRIDGE RS1B FAILS TO DETONATE	3.00E-05	
676)	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09
	ACRNPFDLSFASRB	NSI PRESSURE CARTRIDGE LSFA FAILS TO DETONATE	3.00E-05	
677)	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.23E-09
	ACRNPFDRS1ASRB	NSI PRESSURE CARTRIDGE RS1A FAILS TO DETONATE	3.00E-05	
678)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.23E-09
	ACRNPFDRS3BSRB	NSI PRESSURE CARTRIDGE RS3B FAILS TO DETONATE	3.00E-05	
679)	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	1.23E-09
	ACRNPFDRS2ASRB	NSI PRESSURE CARTRIDGE RS2A FAILS TO DETONATE	3.00E-05	
680)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.23E-09
	ACRNPFDRSFBSRB	NSI PRESSURE CARTRIDGE RSFB FAILS TO DETONATE	3.00E-05	
681)	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.23E-09
	ACRNPFDRS2ASRB	NSI PRESSURE CARTRIDGE RS2A FAILS TO DETONATE	3.00E-05	
682)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.23E-09
	ACRNPFDRS3BSRB	NSI PRESSURE CARTRIDGE RS3B FAILS TO DETONATE	3.00E-05	
683)	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.23E-09
	ACRNPFDRS2ASRB	NSI PRESSURE CARTRIDGE RS2A FAILS TO DETONATE	3.00E-05	
684)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.23E-09
	ACRNDFDRFWBSRB	NSD R FWD B FAILS TO DETONATE	3.00E-05	
685)	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09
	ACRNPFDLS3ASRB	NSI PRESSURE CARTRIDGE LS3A FAILS TO DETONATE	3.00E-05	
686)	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	1.23E-09
	ACRNPFDRSFASRB	NSI PRESSURE CARTRIDGE RSFA FAILS TO DETONATE	3.00E-05	
687)	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	1.23E-09
	ACRNDFDRAFASRB	NSD R AFT A FAILS TO DETONATE	3.00E-05	
688)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.23E-09
	ACRNDFDLFWBSRB	NSD L FWD B FAILS TO DETONATE	3.00E-05	
689)	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.23E-09
	ACRNDFDRAFASRB	NSD R AFT A FAILS TO DETONATE	3.00E-05	
690)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.23E-09

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRNPFDRSFBSRB	NSI PRESSURE CARTRIDGE RSFB FAILS TO DETONATE	3.00E-05	
691)	ASMPAFPMPPRPB1	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 1)	7.76E-08	1.21E-09
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
692)	EAOAASRA1ISL012	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	1.18E-09
	EAOAASRA2LSL012	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	EAOAASRA3ISL012	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LUL012	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
693)	EAOAASRA1ISL012	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	1.18E-09
	EAOAASRA2ISL012	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSL012	LEAKAGE INDUCED FAILURE TO START OR RUN;	7.00E-02	
	ENOAALKA1LUL012	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
694)	EAOAAFRA2OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.13E-09
	EAOAASRA1LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA3LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
695)	EAOAAFRA3OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.13E-09
	EAOAASRA1LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA2LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
696)	EAOAAFRA1OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.13E-09
	EAOAASRA2LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA3LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
697)	AAOAAFRA1LFLK12	LEAKAGE INDUCED FAILURE; APU/HYD	1.00E-01	1.09E-09
	AAOAAFRA2LOLK12	LEAKAGE INDUCED FAILURE; APU/HYD	8.00E-03	
	AAOAAFRA3LOLK12	LEAKAGE INDUCED FAILURE; APU/HYD	8.00E-03	
	ANOAALKA1LKLK12	APU/HYD UNIT 1 LEAK; APU/HYD HYDRAZINE	1.70E-04	
	ANOAALKA1LULK12	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
698)	EAOAASRA1ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	1.03E-09
	EAOAASRA2ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	EAOAASRA3ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1CLOK29	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LZOK29	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
699)	APMHVFCPRPMOPO1	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 1)	8.10E-07	1.01E-09
	SMEFH	INITIATING EVENT LOSS OF GROSS H2 FLOW	1.25E-03	
700)	EAOAAFRA1OSL007	LEAKAGE INDUCED FAILURE START OR RUN;	3.00E-01	1.01E-09
	EAOAASRA2ISL007	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISL007	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LDL007	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
701)-	OPOVCOMLCREL	OPOV COMMAND LIMIT ENGAGED	9.98E-01	1.00E-09
	APMTSCCPRPMODTAB	CCF OF CHANNEL A CHANNEL B HPOTP DT SENSORS	5.00E-05	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
702)	ACRNPFDLSFASRB	NSI PRESSURE CARTRIDGE LSFA FAILS TO DETONATE	3.00E-05	9.00E-10
	ACRNPFDLSFBSRB	NSI PRESSURE CARTRIDGE LSFB FAILS TO DETONATE	3.00E-05	
703)	ACRNDFDRFWASRB	NSD R FWD A FAILS TO DETONATE	3.00E-05	9.00E-10
	ACRNDFDRFWBSRB	NSD R FWD B FAILS TO DETONATE	3.00E-05	
704)	ACRNPFDHD6ASRB	NSI PRESSURE / BOOST CRTRG HD6A FAILS TO DETONATE	3.00E-05	9.00E-10
	ACRNPFDHD6BSRB	NSI PRESSURE / BOOST CRTRG HD6B FAILS TO DETONATE	3.00E-05	
705)	ACRNPFDLS2ASRB	NSI PRESSURE CARTRIDGE LS2A FAILS TO DETONATE	3.00E-05	9.00E-10
	ACRNPFDLS2BSRB	NSI PRESSURE CARTRIDGE LS2B FAILS TO DETONATE	3.00E-05	
706)	ACRNPFDRSFASRB	NSI PRESSURE CARTRIDGE RSFA FAILS TO DETONATE	3.00E-05	9.00E-10
	ACRNPFDRSFBSRB	NSI PRESSURE CARTRIDGE RSFB FAILS TO DETONATE	3.00E-05	
707)	ACRNPFDHD8ASRB	NSI PRESSURE / BOOST CRTRG HD8A FAILS TO DETONATE	3.00E-05	9.00E-10
	ACRNPFDHD8BSRB	NSI PRESSURE / BOOST CRTRG HD8B FAILS TO DETONATE	3.00E-05	
708)	ACRNPFDRS3ASRB	NSI PRESSURE CARTRIDGE RS3A FAILS TO DETONATE	3.00E-05	9.00E-10
	ACRNPFDRS3BSRB	NSI PRESSURE CARTRIDGE RS3B FAILS TO DETONATE	3.00E-05	
709)	ACRNPFDHD4ASRB	NSI PRESSURE / BOOST CRTRG HD4A FAILS TO DETONATE	3.00E-05	9.00E-10
	ACRNPFDHD4BSRB	NSI PRESSURE / BOOST CRTRG HD4B FAILS TO DETONATE	3.00E-05	
710)	ACRNPFDHD3ASRB	NSI PRESSURE / BOOST CRTRG HD3A FAILS TO DETONATE	3.00E-05	9.00E-10
	ACRNPFDHD3BSRB	NSI PRESSURE / BOOST CRTRG HD3B FAILS TO DETONATE	3.00E-05	
711)	ACRNDFDRAFASRB	NSD R AFT A FAILS TO DETONATE	3.00E-05	9.00E-10
	ACRNDFDRAFBSRB	NSD R AFT B FAILS TO DETONATE	3.00E-05	
712)	ACRNPFDRS2ASRB	NSI PRESSURE CARTRIDGE RS2A FAILS TO DETONATE	3.00E-05	9.00E-10
	ACRNPFDRS2BSRB	NSI PRESSURE CARTRIDGE RS2B FAILS TO DETONATE	3.00E-05	
713)	ACRNPFDLS3ASRB	NSI PRESSURE CARTRIDGE LS3A FAILS TO DETONATE	3.00E-05	9.00E-10
	ACRNPFDLS3BSRB	NSI PRESSURE CARTRIDGE LS3B FAILS TO DETONATE	3.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
714)	ACRNPFDHD5ASRB	NSI PRESSURE / BOOST CRTRG HD5A FAILS TO DETONATE	3.00E-05	9.00E-10
	ACRNPFDHD5BSRB	NSI PRESSURE / BOOST CRTRG HD5B FAILS TO DETONATE	3.00E-05	
715)	ACRNPFDHD1ASRB	NSI PRESSURE / BOOST CRTRG HD1A FAILS TO DETONATE	3.00E-05	9.00E-10
	ACRNPFDHD1BSRB	NSI PRESSURE / BOOST CRTRG HD1B FAILS TO DETONATE	3.00E-05	
716)	ACRNPFDRS1ASRB	NSI PRESSURE CARTRIDGE RS1A FAILS TO DETONATE	3.00E-05	9.00E-10
	ACRNPFDRS1BSRB	NSI PRESSURE CARTRIDGE RS1B FAILS TO DETONATE	3.00E-05	
717)	ACRNPFDHD2ASRB	NSI PRESSURE / BOOST CRTRG HD2A FAILS TO DETONATE	3.00E-05	9.00E-10
	ACRNPFDHD2BSRB	NSI PRESSURE / BOOST CRTRG HD2B FAILS TO DETONATE	3.00E-05	
718)	ACRNPFDHD7ASRB	NSI PRESSURE / BOOST CRTRG HD7A FAILS TO DETONATE	3.00E-05	9.00E-10
	ACRNPFDHD7BSRB	NSI PRESSURE / BOOST CRTRG HD7B FAILS TO DETONATE	3.00E-05	
719)	ACRNDFDLFWASRB	NSD L FWD A FAILS TO DETONATE	3.00E-05	9.00E-10
	ACRNDFDLFWBSRB	NSD L FWD B FAILS TO DETONATE	3.00E-05	
720)	ACRNPFDLS1ASRB	NSI PRESSURE CARTRIDGE LS1A FAILS TO DETONATE	3.00E-05	9.00E-10
	ACRNPFDLS1BSRB	NSI PRESSURE CARTRIDGE LS1B FAILS TO DETONATE	3.00E-05	
721)	EAOAAFRA2OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	8.75E-10
	EAOAASRA1LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA3ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
722)	EAOAAFRA3OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	8.75E-10
	EAOAASRA1LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA2ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
723)	EAOAAFRA1OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	8.75E-10
	EAOAASRA2LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA3ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
724)	EAOAAFRA1OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	8.75E-10
	EAOAASRA2ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
725)	EAOAAFRA2OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	8.75E-10
	EAOAASRA1ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
726)	EAOAAFRA3OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	8.75E-10
	EAOAASRA1ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA2LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
727)	AAOAAFRA1LFLK12	LEAKAGE INDUCED FAILURE; APU/HYD	1.00E-01	8.47E-10
	AAOAAFRA2IFLK12	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	
	AAOAAFRA3LOLK12	LEAKAGE INDUCED FAILURE; APU/HYD	8.00E-03	
	ANOAALKA1LKLK12	APU/HYD UNIT 1 LEAK; APU/HYD HYDRAZINE	1.70E-04	
	ANOAALKA1LULK12	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
728)	AAOAAFRA1LFLK12	LEAKAGE INDUCED FAILURE; APU/HYD	1.00E-01	8.47E-10
	AAOAAFRA2LOLK12	LEAKAGE INDUCED FAILURE; APU/HYD	8.00E-03	
	AAOAAFRA3IFLK12	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	
	ANOAALKA1LKLK12	APU/HYD UNIT 1 LEAK; APU/HYD HYDRAZINE	1.70E-04	
	ANOAALKA1LULK12	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
729)	APMHVFCPRPMOPO1	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 1)	8.10E-07	8.10E-10
	SMELO	INITIATING EVENT COOLANT LINER OVERPRESSURE	1.00E-03	
730)	ASMPAFPMPPRPB1	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 1)	7.76E-08	7.76E-10
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
731)	EAOAAFRA2OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	7.52E-10
	EAOAAFRA3OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA1ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
732)	EAOAAFRA1OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	7.52E-10
	EAOAAFRA3OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA2ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
733)	EAOAAFRA1OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	7.52E-10
	EAOAAFRA2OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA3ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
734)	EAOAAFRA2OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	6.95E-10
	EAOAASRA1ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA1LZOK29	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	ENOAALKA2LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
735)	EAOAAFRA3OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	6.95E-10
	EAOAASRA1ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA2ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA1LZOK29	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	ENOAALKA2LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
736)	EAOAAFRA1OSOK29	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	6.95E-10
	EAOAASRA2ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA1LZOK29	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	ENOAALKA2LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
737)	EAOAASRA1LSLT11	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	6.94E-10
	EAOAASRA2LSLT11	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
738)	EAOAASRA1LSLT11	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	6.94E-10
	EAOAASRA3LSLT11	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
739)	EAOAASRA2LSLT11	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	6.94E-10
	EAOAASRA3LSLT11	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
740)	AAOAAFRA1LFLK12	LEAKAGE INDUCED FAILURE; APU/HYD	1.00E-01	6.60E-10
	AAOAAFRA2IFLK12	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	
	AAOAAFRA3IFLK12	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	
	ANOAALKA1LKLK12	APU/HYD UNIT 1 LEAK; APU/HYD HYDRAZINE	1.70E-04	
	ANOAALKA1LULK12	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
741)	APMHVFCPRPMOPO1	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 1)	8.10E-07	6.48E-10
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	
742)	EAOAAFRA1ULLT04	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	5.96E-10
	EAOAAFRA2OSLT04	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA1LSLT04	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT04	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
743)	EAOAAFRA1OSLT04	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	5.96E-10
	EAOAAFRA1ULLT04	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	
	EAOAASRA3LSLT04	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT04	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
744)	EAOAAFRA1OSLT04	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	5.96E-10
	EAOAAFRA1ULLT04	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	
	EAOAASRA2LSLT04	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT04	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
745)	EAOAAFRA1ULLT04	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	5.96E-10
	EAOAAFRA3OSLT04	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA1LSLT04	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT04	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
746)	EAOAAFRA1ULLT06	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL;	1.00E-01	5.93E-10
	EAOAAFRA2OSLT06	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAALTA1SRLT06	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 3	9.94E-01	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	EAOAASRA3LSLT06	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT06	LEAKS DETECTED/CONFIRMED; INITIAL LEAK IN 3	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
747)	EAOAAFRA1ULLT06	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL;	1.00E-01	5.93E-10
	EAOAAFRA3OSLT06	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAALTA1SRLT06	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 3	9.94E-01	
	EAOAASRA2LSLT06	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT06	LEAKS DETECTED/CONFIRMED; INITIAL LEAK IN 3	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
748)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	5.24E-10
	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
749)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	5.24E-10
	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
750)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	5.24E-10
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
751)	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	5.24E-10
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
752)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	5.24E-10
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
753)	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	5.24E-10
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
754)	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	5.24E-10
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
755)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	5.24E-10
	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
756)	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	5.24E-10
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
757)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	5.24E-10
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
758)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	5.24E-10
	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
759)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	5.24E-10
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
760)	EAOAASRA1CSL023	COMMON CAUSE FAILURE TO START OR RUN;	1.33E-03	5.09E-10
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
761)	APMHVFCPRPMOPO1	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 1)	8.10E-07	5.08E-10
	SMEMF	INITIATING EVENT HIGH MIXTURE RATIO IN FUEL PREBURNER	6.27E-04	
762)	APMHVFCPRPMOPO1	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 1)	8.10E-07	5.08E-10
	SMEMO	INITIATING EVENT HIGH MIXTURE RATIO IN OXIDIZER PREBURNERS	6.27E-04	
763)	APMHVFCPRPMOPO1	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 1)	8.10E-07	4.90E-10
	SMEPG	INITIATING EVENT FAILURE TO PRECHARGE POGO ACC	6.05E-04	
764)	EAOAASRA1LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	4.86E-10
	EAOAASRA2LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA3LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
765)	EAOAASRA1CSLT12	COMMON CAUSE FAILURE TO START OR RUN;	3.43E-04	4.86E-10
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
766)	EAOAAFRA2OSLT11	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	4.63E-10
	EAOAASRA1ISLT11	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
767)	EAOAAFRA3OSLT11	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	4.63E-10
	EAOAASRA2ISLT11	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
768)	EAOAAFRA1OSLT11	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	4.63E-10
	EAOAASRA2ISLT11	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
769)	EAOAAFRA2OSLT11	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	4.63E-10
	EAOAASRA3ISLT11	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
770)	EAOAAFRA3OSLT11	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	4.63E-10
	EAOAASRA1ISLT11	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
771)	EAOAAFRA1OSLT11	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	4.63E-10
	EAOAASRA3ISLT11	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
772)	EAOAAFRA3OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	4.17E-10
	EAOAASRA1LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA2LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
773)	EAOAAFRA1OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	4.17E-10
	EAOAASRA2LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA3LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
774)	EAOAAFRA2OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	4.17E-10
	EAOAASRA1LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA3LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
775)	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACREXFDL2ASRB	EXPLOSIVE DEVICE FAILS TO DETONATE L AFT	1.00E-05	
776)	ACRCARPL1BSRB	CABLE (REPLACEABLE) FAILURE SSSW - FWD PIC L FWD	4.10E-05	4.10E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
777)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRPCFARS3BSRB	PIC R SEP BOLT 3B FAILS TO ARM	1.00E-05	
778)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	4.10E-10
	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
779)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	4.10E-10
	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	
780)	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRPCFARS2ASRB	PIC R SEP BOLT 2A FAILS TO ARM	1.00E-05	
781)	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFFRS2ASRB	PIC R SEP BOLT 2A FAILS TO FIRE	1.00E-05	
782)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACREXFDL2BSRB	EXPLOSIVE DEVICE FAILS TO DETONATE L AFT	1.00E-05	
783)	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRPCFFLS1BSRB	PIC L SEP BOLT 1B FAILS TO FIRE	1.00E-05	
784)	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRPCFFRFBBSRB	PIC R FWD BSM B FAILS TO FIRE	1.00E-05	
785)	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACREXFDL2ASRB	EXPLOSIVE DEVICE FAILS TO DETONATE L AFT	1.00E-05	
786)	ACRCADHR2ASRB	LOCAL WIRE FAILURE(CM)	1.00E-05	4.10E-10
	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	
787)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFARS1BSRB	PIC R SEP BOLT 1B FAILS TO ARM	1.00E-05	
788)	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRPCFFLFBASRB	PIC L FWD BSM A FAILS TO FIRE	1.00E-05	
789)	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
790)	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALFBASRB	PIC L FWD BSM A FAILS TO ARM	1.00E-05	
791)	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRPCFFLSFBSRB	PIC L SEP BOLT FWD B FAILS TO FIRE	1.00E-05	
792)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	4.10E-10
	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	
793)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	4.10E-10
	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	
794)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	4.10E-10
	ACRCARPRSFBSRB	CABLE R SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	
795)	ACRCARPLSFASRB	CABLE L SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	4.10E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
796)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	4.10E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
797)	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
798)	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALS1ASRB	PIC L SEP BOLT 1A FAILS TO ARM	1.00E-05	
799)	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRPCFFRS2BSRB	PIC R SEP BOLT 2B FAILS TO FIRE	1.00E-05	
800)	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALABASRB	PIC L AFT BSM A FAILS TO ARM	1.00E-05	
801)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALSFBSRB	PIC L SEP BOLT FWD B FAILS TO ARM	1.00E-05	
802)	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRPCFALS3BSRB	PIC L SEP BOLT 3B FAILS TO ARM	1.00E-05	
803)	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLS2ASRB	PIC L SEP BOLT 2A FAILS TO FIRE	1.00E-05	
804)	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
805)	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLABASRB	PIC L AFT BSM A FAILS TO FIRE	1.00E-05	
806)	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
807)	ACRCARPRSFBSRB	CABLE R SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	4.10E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
808)	ACRCARPLSFASRB	CABLE L SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	4.10E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
809)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	4.10E-10
	ACRPCFFLFBBSRB	PIC L FWD BSM B FAILS TO FIRE	1.00E-05	
810)	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRPCFFRSFBSRB	PIC R SEP BOLT FWD B FAILS TO FIRE	1.00E-05	
811)	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLFBASRB	PIC L FWD BSM A FAILS TO FIRE	1.00E-05	
812)	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
813)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALABBSRB	PIC L AFT BSM B FAILS TO ARM	1.00E-05	
814)	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRPCFARSFASRB	PIC R SEP BOLT FWD A FAILS TO ARM	1.00E-05	
815)	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFARSFASRB	PIC R SEP BOLT FWD A FAILS TO ARM	1.00E-05	
816)	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACREXFDL2BSRB	EXPLOSIVE DEVICE FAILS TO DETONATE L AFT	1.00E-05	
817)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFFRSFBSRB	PIC R SEP BOLT FWD B FAILS TO FIRE	1.00E-05	
818)	ACRCARPLSFBSRB	CABLE L SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	4.10E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
819)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLS2BSRB	PIC L SEP BOLT 2B FAILS TO FIRE	1.00E-05	
820)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	4.10E-10
	ACRPCFALS1BSRB	PIC L SEP BOLT 1B FAILS TO ARM	1.00E-05	
821)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
822)	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRPCFARFBBSRB	PIC R FWD BSM B FAILS TO ARM	1.00E-05	
823)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFFRABBSRB	PIC R AFT BSM B FAILS TO FIRE	1.00E-05	
824)	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
825)	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRPCFALS2ASRB	PIC L SEP BOLT 2A FAILS TO ARM	1.00E-05	
826)	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFFRSFASRB	PIC R SEP BOLT FWD A FAILS TO FIRE	1.00E-05	
827)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	4.10E-10
	ACRCARPL1BSRB	CABLE (REPLACEABLE) FAILURE SSSW - FWD PIC L FWD	4.10E-05	
828)	ACRCARPRSFASRB	CABLE R SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	4.10E-10
	ACRPCFARSFBSRB	PIC R SEP BOLT FWD B FAILS TO ARM	1.00E-05	
829)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLABBSRB	PIC L AFT BSM B FAILS TO FIRE	1.00E-05	
830)	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRPCFARSFASRB	PIC R SEP BOLT FWD A FAILS TO ARM	1.00E-05	
831)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLS3BSRB	PIC L SEP BOLT 3B FAILS TO FIRE	1.00E-05	
832)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	4.10E-10
	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
833)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFARSFBSRB	PIC R SEP BOLT FWD B FAILS TO ARM	1.00E-05	
834)	ACRCARPL1BSRB	CABLE (REPLACEABLE) FAILURE SSSW - FWD PIC L FWD	4.10E-05	4.10E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
835)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFARABBSRB	PIC R AFT BSM B FAILS TO ARM	1.00E-05	
836)	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLABASRB	PIC L AFT BSM A FAILS TO FIRE	1.00E-05	
837)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	4.10E-10
	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	
838)	ACRCARPRSFASRB	CABLE R SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	4.10E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
839)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	4.10E-10
	ACRPCFFLABBSRB	PIC L AFT BSM B FAILS TO FIRE	1.00E-05	
840)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRPCFARFBBSRB	PIC R FWD BSM B FAILS TO ARM	1.00E-05	
841)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFARS2BSRB	PIC R SEP BOLT 2B FAILS TO ARM	1.00E-05	
842)	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
843)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLSFBSRB	PIC L SEP BOLT FWD B FAILS TO FIRE	1.00E-05	
844)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	4.10E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
845)	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFARFBASRB	PIC R FWD BSM A FAILS TO ARM	1.00E-05	
846)	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALFBASRB	PIC L FWD BSM A FAILS TO ARM	1.00E-05	
847)	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
848)	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRPCFALFBBSRB	PIC L FWD BSM B FAILS TO ARM	1.00E-05	
849)	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALSFASRB	PIC L SEP BOLT FWD A FAILS TO ARM	1.00E-05	
850)	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRPCFARFBASRB	PIC R FWD BSM A FAILS TO ARM	1.00E-05	
851)	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
852)	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALS2ASRB	PIC L SEP BOLT 2A FAILS TO ARM	1.00E-05	
853)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	4.10E-10
	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	
854)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLS3BSRB	PIC L SEP BOLT 3B FAILS TO FIRE	1.00E-05	
855)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	4.10E-10
	ACRPCFALS3BSRB	PIC L SEP BOLT 3B FAILS TO ARM	1.00E-05	
856)	ACRCADHR2BSRB	LOCAL WIRE FAILURE(CM)	1.00E-05	4.10E-10
	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	
857)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRPCFFRS2BSRB	PIC R SEP BOLT 2B FAILS TO FIRE	1.00E-05	
858)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	4.10E-10
	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
859)	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRPCFFRSFASRB	PIC R SEP BOLT FWD A FAILS TO FIRE	1.00E-05	
860)	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRPCFALSFASRB	PIC L SEP BOLT FWD A FAILS TO ARM	1.00E-05	
861)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFFRS2BSRB	PIC R SEP BOLT 2B FAILS TO FIRE	1.00E-05	
862)	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRPCFALS1ASRB	PIC L SEP BOLT 1A FAILS TO ARM	1.00E-05	
863)	ACRCARPL1BSRB	CABLE (REPLACEABLE) FAILURE SSSW - FWD PIC L FWD	4.10E-05	4.10E-10
	ACRPCFFLFBASRB	PIC L FWD BSM A FAILS TO FIRE	1.00E-05	
864)	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
865)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	4.10E-10
	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	
866)	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLS1ASRB	PIC L SEP BOLT 1A FAILS TO FIRE	1.00E-05	
867)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	4.10E-10
	ACRPCFALSFBSRB	PIC L SEP BOLT FWD B FAILS TO ARM	1.00E-05	
868)	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
869)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	4.10E-10
	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	
870)	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFFRS3ASRB	PIC R SEP BOLT 3A FAILS TO FIRE	1.00E-05	
871)	ACRCARPRSFBSRB	CABLE R SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	4.10E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
872)	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
873)	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRPCFFRS1ASRB	PIC R SEP BOLT 1A FAILS TO FIRE	1.00E-05	
874)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALS2BSRB	PIC L SEP BOLT 2B FAILS TO ARM	1.00E-05	
875)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	4.10E-10
	ACRPCFFLS3BSRB	PIC L SEP BOLT 3B FAILS TO FIRE	1.00E-05	
876)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
877)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRPCFFRFBBSRB	PIC R FWD BSM B FAILS TO FIRE	1.00E-05	
878)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRPCFARS2BSRB	PIC R SEP BOLT 2B FAILS TO ARM	1.00E-05	
879)	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFARS3ASRB	PIC R SEP BOLT 3A FAILS TO ARM	1.00E-05	
880)	ACRCARPLSFBSRB	CABLE L SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	4.10E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
881)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	4.10E-10
	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	
882)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	4.10E-10
	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
883)	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFFRS2ASRB	PIC R SEP BOLT 2A FAILS TO FIRE	1.00E-05	
884)	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALFBASRB	PIC L FWD BSM A FAILS TO ARM	1.00E-05	
885)	ACRCARPRSFASRB	CABLE R SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	4.10E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
886)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFFRS1BSRB	PIC R SEP BOLT 1B FAILS TO FIRE	1.00E-05	
887)	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
888)	ACRCADHR2BSRB	LOCAL WIRE FAILURE(CM)	1.00E-05	4.10E-10
	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	
889)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	4.10E-10
	ACRCARPRSFASRB	CABLE R SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	
890)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLSFBSRB	PIC L SEP BOLT FWD B FAILS TO FIRE	1.00E-05	
891)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	4.10E-10
	ACRPCFALABBSRB	PIC L AFT BSM B FAILS TO ARM	1.00E-05	
892)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLFBBSRB	PIC L FWD BSM B FAILS TO FIRE	1.00E-05	
893)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	4.10E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
894)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFFRFBBSRB	PIC R FWD BSM B FAILS TO FIRE	1.00E-05	
895)	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRPCFFRABBSRB	PIC R AFT BSM B FAILS TO FIRE	1.00E-05	
896)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFFRS2BSRB	PIC R SEP BOLT 2B FAILS TO FIRE	1.00E-05	
897)	ACRCARPLSFASRB	CABLE L SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	4.10E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
898)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRPCFFRABBSRB	PIC R AFT BSM B FAILS TO FIRE	1.00E-05	
899)	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
900)	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
901)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	4.10E-10
	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	
902)	ACRCARPRSFBSRB	CABLE R SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	4.10E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
903)	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRPCFFRABASRB	PIC R AFT BSM A FAILS TO FIRE	1.00E-05	
904)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	4.10E-10
	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	
905)	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRPCFARABASRB	PIC R AFT BSM A FAILS TO ARM	1.00E-05	
906)	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRPCFARS1ASRB	PIC R SEP BOLT 1A FAILS TO ARM	1.00E-05	
907)	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRPCFFRS1BSRB	PIC R SEP BOLT 1B FAILS TO FIRE	1.00E-05	
908)	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRPCFALS1BSRB	PIC L SEP BOLT 1B FAILS TO ARM	1.00E-05	
909)	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFFRS3ASRB	PIC R SEP BOLT 3A FAILS TO FIRE	1.00E-05	
910)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	4.10E-10
	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	
911)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	4.10E-10
	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
912)	ACRCARPRSFBSRB	CABLE R SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	4.10E-10
	ACRPCFARSFASRB	PIC R SEP BOLT FWD A FAILS TO ARM	1.00E-05	
913)	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRPCFFLS2BSRB	PIC L SEP BOLT 2B FAILS TO FIRE	1.00E-05	
914)	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALS3ASRB	PIC L SEP BOLT 3A FAILS TO ARM	1.00E-05	
915)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	4.10E-10
	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
916)	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRPCFFLS3ASRB	PIC L SEP BOLT 3A FAILS TO FIRE	1.00E-05	
917)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	4.10E-10
	ACRCARPLSFASRB	CABLE L SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	
918)	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFFRSFASRB	PIC R SEP BOLT FWD A FAILS TO FIRE	1.00E-05	
919)	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRPCFFRS1ASRB	PIC R SEP BOLT 1A FAILS TO FIRE	1.00E-05	
920)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	4.10E-10
	ACRCARPRSFBSRB	CABLE R SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	
921)	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACREXFDL2ASRB	EXPLOSIVE DEVICE FAILS TO DETONATE L AFT	1.00E-05	
922)	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRPCFALABBSRB	PIC L AFT BSM B FAILS TO ARM	1.00E-05	
923)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFARFBBSRB	PIC R FWD BSM B FAILS TO ARM	1.00E-05	
924)	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFARS2ASRB	PIC R SEP BOLT 2A FAILS TO ARM	1.00E-05	
925)	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRPCFFRSFASRB	PIC R SEP BOLT FWD A FAILS TO FIRE	1.00E-05	
926)	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFARS1ASRB	PIC R SEP BOLT 1A FAILS TO ARM	1.00E-05	
927)	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFARS2ASRB	PIC R SEP BOLT 2A FAILS TO ARM	1.00E-05	
928)	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLS2ASRB	PIC L SEP BOLT 2A FAILS TO FIRE	1.00E-05	
929)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFARSFBSRB	PIC R SEP BOLT FWD B FAILS TO ARM	1.00E-05	
930)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	4.10E-10
	ACRCARPRSFBSRB	CABLE R SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	
931)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	4.10E-10
	ACRCARPLSFBSRB	CABLE L SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	
932)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	4.10E-10
	ACRCARPRSFASRB	CABLE R SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	
933)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLS1BSRB	PIC L SEP BOLT 1B FAILS TO FIRE	1.00E-05	
934)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALS2BSRB	PIC L SEP BOLT 2B FAILS TO ARM	1.00E-05	
935)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	4.10E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	
936)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALFBBSRB	PIC L FWD BSM B FAILS TO ARM	1.00E-05	
937)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALFBBSRB	PIC L FWD BSM B FAILS TO ARM	1.00E-05	
938)	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
939)	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRPCFFLABASRB	PIC L AFT BSM A FAILS TO FIRE	1.00E-05	
940)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFFRABBSRB	PIC R AFT BSM B FAILS TO FIRE	1.00E-05	
941)	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRPCFALSFBSRB	PIC L SEP BOLT FWD B FAILS TO ARM	1.00E-05	
942)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	4.10E-10
	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	
943)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	4.10E-10
	ACRCARPLSFBSRB	CABLE L SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	
944)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	4.10E-10
	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	
945)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFFRS3BSRB	PIC R SEP BOLT 3B FAILS TO FIRE	1.00E-05	
946)	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALS2ASRB	PIC L SEP BOLT 2A FAILS TO ARM	1.00E-05	
947)	ACRCARPRSFASRB	CABLE R SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	4.10E-10
	ACRPCFFRSFBSRB	PIC R SEP BOLT FWD B FAILS TO FIRE	1.00E-05	
948)	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALS3ASRB	PIC L SEP BOLT 3A FAILS TO ARM	1.00E-05	
949)	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFFRFBASRB	PIC R FWD BSM A FAILS TO FIRE	1.00E-05	
950)	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRPCFFRS3ASRB	PIC R SEP BOLT 3A FAILS TO FIRE	1.00E-05	
951)	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRPCFFLSFASRB	PIC L SEP BOLT FWD A FAILS TO FIRE	1.00E-05	
952)	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRPCFALS3ASRB	PIC L SEP BOLT 3A FAILS TO ARM	1.00E-05	
953)	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRPCFARS3BSRB	PIC R SEP BOLT 3B FAILS TO ARM	1.00E-05	
954)	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRPCFFLS1ASRB	PIC L SEP BOLT 1A FAILS TO FIRE	1.00E-05	
955)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRPCFFRS3BSRB	PIC R SEP BOLT 3B FAILS TO FIRE	1.00E-05	
956)	ACRCADHR2BSRB	LOCAL WIRE FAILURE(CM)	1.00E-05	4.10E-10
	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	
957)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFARS3BSRB	PIC R SEP BOLT 3B FAILS TO ARM	1.00E-05	
958)	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLSFASRB	PIC L SEP BOLT FWD A FAILS TO FIRE	1.00E-05	
959)	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFFRS1ASRB	PIC R SEP BOLT 1A FAILS TO FIRE	1.00E-05	
960)	ACRCARPLSFBSRB	CABLE L SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	4.10E-10
	ACRPCFALSFASRB	PIC L SEP BOLT FWD A FAILS TO ARM	1.00E-05	
961)	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
962)	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRPCFFRS2ASRB	PIC R SEP BOLT 2A FAILS TO FIRE	1.00E-05	
963)	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRPCFARS2ASRB	PIC R SEP BOLT 2A FAILS TO ARM	1.00E-05	
964)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	4.10E-10
	ACRPCFFLS2BSRB	PIC L SEP BOLT 2B FAILS TO FIRE	1.00E-05	
965)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFARS2BSRB	PIC R SEP BOLT 2B FAILS TO ARM	1.00E-05	
966)	ACRCARPLSFASRB	CABLE L SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	4.10E-10
	ACRPCFFLSFBSRB	PIC L SEP BOLT FWD B FAILS TO FIRE	1.00E-05	
967)	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLS1ASRB	PIC L SEP BOLT 1A FAILS TO FIRE	1.00E-05	
968)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	4.10E-10
	ACRCARPL1BSRB	CABLE (REPLACEABLE) FAILURE SSSW - FWD PIC L FWD	4.10E-05	
969)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRPCFFRS1BSRB	PIC R SEP BOLT 1B FAILS TO FIRE	1.00E-05	
970)	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRPCFARS1BSRB	PIC R SEP BOLT 1B FAILS TO ARM	1.00E-05	
971)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	4.10E-10
	ACRCARPL1BSRB	CABLE (REPLACEABLE) FAILURE SSSW - FWD PIC L FWD	4.10E-05	
972)	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
973)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRPCFALS3BSRB	PIC L SEP BOLT 3B FAILS TO ARM	1.00E-05	
974)	ACRCADHR2BSRB	LOCAL WIRE FAILURE(CM)	1.00E-05	4.10E-10
	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	
975)	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRPCFARS1ASRB	PIC R SEP BOLT 1A FAILS TO ARM	1.00E-05	
976)	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
977)	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFFRABASRB	PIC R AFT BSM A FAILS TO FIRE	1.00E-05	
978)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	4.10E-10
	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
979)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLABBSRB	PIC L AFT BSM B FAILS TO FIRE	1.00E-05	
980)	ACRCARPRSFBSRB	CABLE R SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	4.10E-10
	ACRPCFFRSFASRB	PIC R SEP BOLT FWD A FAILS TO FIRE	1.00E-05	
981)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLS2BSRB	PIC L SEP BOLT 2B FAILS TO FIRE	1.00E-05	
982)	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRPCFARABASRB	PIC R AFT BSM A FAILS TO ARM	1.00E-05	
983)	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLS2ASRB	PIC L SEP BOLT 2A FAILS TO FIRE	1.00E-05	
984)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALS3BSRB	PIC L SEP BOLT 3B FAILS TO ARM	1.00E-05	
985)	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRPCFFRS3ASRB	PIC R SEP BOLT 3A FAILS TO FIRE	1.00E-05	
986)	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLS3ASRB	PIC L SEP BOLT 3A FAILS TO FIRE	1.00E-05	
987)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	4.10E-10
	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
988)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALABBSRB	PIC L AFT BSM B FAILS TO ARM	1.00E-05	
989)	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLS3ASRB	PIC L SEP BOLT 3A FAILS TO FIRE	1.00E-05	
990)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
991)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRPCFARSFBSRB	PIC R SEP BOLT FWD B FAILS TO ARM	1.00E-05	
992)	ACRCADHR2ASRB	LOCAL WIRE FAILURE(CM)	1.00E-05	4.10E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	
993)	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRPCFARS3ASRB	PIC R SEP BOLT 3A FAILS TO ARM	1.00E-05	
994)	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRPCFARFBASRB	PIC R FWD BSM A FAILS TO ARM	1.00E-05	
995)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	4.10E-10
	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	
996)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
997)	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALS2ASRB	PIC L SEP BOLT 2A FAILS TO ARM	1.00E-05	
998)	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALS3ASRB	PIC L SEP BOLT 3A FAILS TO ARM	1.00E-05	
999)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	4.10E-10
	ACRCARPRSFASRB	CABLE R SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	
1000)	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
1001)	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1002)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	4.10E-10
	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	
1003)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	4.10E-10
	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	
1004)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	4.10E-10
	ACRCARPLSFASRB	CABLE L SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	
1005)	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1006)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	4.10E-10
	ACRPCFFLS1BSRB	PIC L SEP BOLT 1B FAILS TO FIRE	1.00E-05	
1007)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	4.10E-10
	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	
1008)	ACRCARPLSFBSRB	CABLE L SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	4.10E-10
	ACRPCFFLSFASRB	PIC L SEP BOLT FWD A FAILS TO FIRE	1.00E-05	
1009)	ACRCADHR2ASRB	LOCAL WIRE FAILURE(CM)	1.00E-05	4.10E-10
	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	
1010)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	4.10E-10
	ACRPCFALFBBSRB	PIC L FWD BSM B FAILS TO ARM	1.00E-05	
1011)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	4.10E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACREXFDL2BSRB	EXPLOSIVE DEVICE FAILS TO DETONATE L AFT	1.00E-05	
1012)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	4.10E-10
	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
1013)	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRPCFARABBSRB	PIC R AFT BSM B FAILS TO ARM	1.00E-05	
1014)	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACREXFDL2ASRB	EXPLOSIVE DEVICE FAILS TO DETONATE L AFT	1.00E-05	
1015)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRPCFARABBSRB	PIC R AFT BSM B FAILS TO ARM	1.00E-05	
1016)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFARS1BSRB	PIC R SEP BOLT 1B FAILS TO ARM	1.00E-05	
1017)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	4.10E-10
	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	
1018)	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRPCFFLS3ASRB	PIC L SEP BOLT 3A FAILS TO FIRE	1.00E-05	
1019)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFFRFBBSRB	PIC R FWD BSM B FAILS TO FIRE	1.00E-05	
1020)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1021)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFFRS1BSRB	PIC R SEP BOLT 1B FAILS TO FIRE	1.00E-05	
1022)	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1023)	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRPCFARSFBSRB	PIC R SEP BOLT FWD B FAILS TO ARM	1.00E-05	
1024)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFARS3BSRB	PIC R SEP BOLT 3B FAILS TO ARM	1.00E-05	
1025)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLS1BSRB	PIC L SEP BOLT 1B FAILS TO FIRE	1.00E-05	
1026)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFARABBSRB	PIC R AFT BSM B FAILS TO ARM	1.00E-05	
1027)	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1028)	ACRCARPL1BSRB	CABLE (REPLACEABLE) FAILURE SSSW - FWD PIC L FWD	4.10E-05	4.10E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1029)	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLFBASRB	PIC L FWD BSM A FAILS TO FIRE	1.00E-05	
1030)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	4.10E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	
1031)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1032)	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLSFASRB	PIC L SEP BOLT FWD A FAILS TO FIRE	1.00E-05	
1033)	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLFBASRB	PIC L FWD BSM A FAILS TO FIRE	1.00E-05	
1034)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	4.10E-10
	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
1035)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	4.10E-10
	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	
1036)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	4.10E-10
	ACRPCFALS2BSRB	PIC L SEP BOLT 2B FAILS TO ARM	1.00E-05	
1037)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALSFBSRB	PIC L SEP BOLT FWD B FAILS TO ARM	1.00E-05	
1038)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALS1BSRB	PIC L SEP BOLT 1B FAILS TO ARM	1.00E-05	
1039)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	4.10E-10
	ACRPCFFLSFBSRB	PIC L SEP BOLT FWD B FAILS TO FIRE	1.00E-05	
1040)	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLS1ASRB	PIC L SEP BOLT 1A FAILS TO FIRE	1.00E-05	
1041)	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1042)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	4.10E-10
	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
1043)	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRPCFALFBASRB	PIC L FWD BSM A FAILS TO ARM	1.00E-05	
1044)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	4.10E-10
	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	
1045)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1046)	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1047)	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRPCFFRABASRB	PIC R AFT BSM A FAILS TO FIRE	1.00E-05	
1048)	ACRCARPLSFBSRB	CABLE L SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	4.10E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1049)	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRPCFALS1ASRB	PIC L SEP BOLT 1A FAILS TO ARM	1.00E-05	
1050)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1051)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	4.10E-10
	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	
1052)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	4.10E-10
	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	
1053)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	4.10E-10
	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	
1054)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRPCFARS1BSRB	PIC R SEP BOLT 1B FAILS TO ARM	1.00E-05	
1055)	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRPCFFRS3BSRB	PIC R SEP BOLT 3B FAILS TO FIRE	1.00E-05	
1056)	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFFRFBASRB	PIC R FWD BSM A FAILS TO FIRE	1.00E-05	
1057)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	4.10E-10
	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	
1058)	ACRCARPL1BSRB	CABLE (REPLACEABLE) FAILURE SSSW - FWD PIC L FWD	4.10E-05	4.10E-10
	ACRPCFALFBASRB	PIC L FWD BSM A FAILS TO ARM	1.00E-05	
1059)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	4.10E-10
	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
1060)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	4.10E-10
	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	
1061)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	4.10E-10
	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	
1062)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	4.10E-10
	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	
1063)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1064)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	4.10E-10
	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
1065)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
1066)	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1067)	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFARS1ASRB	PIC R SEP BOLT 1A FAILS TO ARM	1.00E-05	
1068)	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRPCFARS3ASRB	PIC R SEP BOLT 3A FAILS TO ARM	1.00E-05	
1069)	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALSFASRB	PIC L SEP BOLT FWD A FAILS TO ARM	1.00E-05	
1070)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	4.10E-10
	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	
1071)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRPCFFRSFBSRB	PIC R SEP BOLT FWD B FAILS TO FIRE	1.00E-05	
1072)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	4.10E-10
	ACRCARPLSFBSRB	CABLE L SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	
1073)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	4.10E-10
	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	
1074)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	4.10E-10
	ACRCARPLSFASRB	CABLE L SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	
1075)	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFFRABASRB	PIC R AFT BSM A FAILS TO FIRE	1.00E-05	
1076)	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFARFBASRB	PIC R FWD BSM A FAILS TO ARM	1.00E-05	
1077)	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRPCFFLS3BSRB	PIC L SEP BOLT 3B FAILS TO FIRE	1.00E-05	
1078)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFFRSFBSRB	PIC R SEP BOLT FWD B FAILS TO FIRE	1.00E-05	
1079)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
1080)	ACRCARPLSFASRB	CABLE L SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	4.10E-10
	ACRPCFALSFBSRB	PIC L SEP BOLT FWD B FAILS TO ARM	1.00E-05	
1081)	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRPCFARS3ASRB	PIC R SEP BOLT 3A FAILS TO ARM	1.00E-05	
1082)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	4.10E-10
	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	
1083)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1084)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	4.10E-10
	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
1085)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACREXFDL2BSRB	EXPLOSIVE DEVICE FAILS TO DETONATE L AFT	1.00E-05	
1086)	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALSFASRB	PIC L SEP BOLT FWD A FAILS TO ARM	1.00E-05	
1087)	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1088)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALS1BSRB	PIC L SEP BOLT 1B FAILS TO ARM	1.00E-05	
1089)	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALABASRB	PIC L AFT BSM A FAILS TO ARM	1.00E-05	
1090)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1091)	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRPCFFRS2ASRB	PIC R SEP BOLT 2A FAILS TO FIRE	1.00E-05	
1092)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLFBBSRB	PIC L FWD BSM B FAILS TO FIRE	1.00E-05	
1093)	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFARABASRB	PIC R AFT BSM A FAILS TO ARM	1.00E-05	
1094)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	4.10E-10
	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
1095)	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFARABASRB	PIC R AFT BSM A FAILS TO ARM	1.00E-05	
1096)	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRPCFARS2BSRB	PIC R SEP BOLT 2B FAILS TO ARM	1.00E-05	
1097)	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALS1ASRB	PIC L SEP BOLT 1A FAILS TO ARM	1.00E-05	
1098)	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFALABASRB	PIC L AFT BSM A FAILS TO ARM	1.00E-05	
1099)	ACRCARPRSFASRB	CABLE R SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	4.10E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1100)	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRPCFALS2BSRB	PIC L SEP BOLT 2B FAILS TO ARM	1.00E-05	
1101)	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRPCFFLABBSRB	PIC L AFT BSM B FAILS TO FIRE	1.00E-05	
1102)	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFFRS1ASRB	PIC R SEP BOLT 1A FAILS TO FIRE	1.00E-05	
1103)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFFRS3BSRB	PIC R SEP BOLT 3B FAILS TO FIRE	1.00E-05	
1104)	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRPCFFRFBASRB	PIC R FWD BSM A FAILS TO FIRE	1.00E-05	
1105)	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLABASRB	PIC L AFT BSM A FAILS TO FIRE	1.00E-05	
1106)	ACRCADHR2ASRB	LOCAL WIRE FAILURE(CM)	1.00E-05	4.10E-10

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	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	
1107)	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRPCFFLFBBSRB	PIC L FWD BSM B FAILS TO FIRE	1.00E-05	
1108)	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRPCFFLSFASRB	PIC L SEP BOLT FWD A FAILS TO FIRE	1.00E-05	
1109)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRPCFARFBBSRB	PIC R FWD BSM B FAILS TO ARM	1.00E-05	
1110)	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	4.10E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1111)	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRPCFALABASRB	PIC L AFT BSM A FAILS TO ARM	1.00E-05	
1112)	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1113)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1114)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	4.10E-10
	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	
1115)	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	4.10E-10
	ACRPCFFLS2ASRB	PIC L SEP BOLT 2A FAILS TO FIRE	1.00E-05	
1116)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	4.10E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1117)	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	4.10E-10
	ACRPCFFRFBASRB	PIC R FWD BSM A FAILS TO FIRE	1.00E-05	
1118)	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	4.10E-10
	ACRPCFARSFASRB	PIC R SEP BOLT FWD A FAILS TO ARM	1.00E-05	
1119)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	4.06E-10
	APMHVFCPRPMOPO1	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 1)	8.10E-07	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
1120)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	4.06E-10
	APMHVFCPRPMOPO2	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 2)	8.10E-07	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
1121)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	4.06E-10
	APMHVFCPRPMOPO3	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 3)	8.10E-07	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
1122)	ACRNIFDRIGASRM	NSI RIGHT IGNITER A FAILS TO DETONATE	2.00E-05	4.00E-10
	ACRNIFDRIGBSRM	NSI RIGHT IGNITER B FAILS TO DETONATE	2.00E-05	
1123)	ACRNIFDLIGASRM	NSI LEFT IGNITER A FAILS TO DETONATE	2.00E-05	4.00E-10
	ACRNIFDLIGBSRM	NSI LEFT IGNITER B FAILS TO DETONATE	2.00E-05	

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1124)	EAOAAFRA1ULL016	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	3.76E-10
	EAOAASRA1LSL016	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA3LSL016	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL016	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL016	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1125)	EAOAAFRA1ULL016	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	3.76E-10
	EAOAASRA1LSL016	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA2LSL016	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL016	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL016	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1126)	EAOAAFRA1ULL018	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL;	1.00E-01	3.73E-10
	EAOAAL0A1SRL018	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 1	9.94E-01	
	EAOAASRA2LSL018	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA3LSL018	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL018	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL018	LEAKS DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1127)	ANRCRSFLK0LASRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	3.72E-10
	ANRJSSFLK0LASRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRORCCLK0LASRM	FIELD JOINT CCF OF PRIMARY AND SECONARY O-RINGS	1.37E-04	
1128)	ANRCRSFLK0RASRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	3.72E-10
	ANRJSSFLK0RASRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRORCCLK0RASRM	FIELD JOINT CCF OF PRIMARY AND SECONARY O-RINGS	1.37E-04	
1129)	ANRCRSFLK0RMSRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	3.72E-10
	ANRJSSFLK0RMSRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRORCCLK0RMSRM	FIELD JOINT CCF OF PRIMARY AND SECONARY O-RINGS	1.37E-04	
1130)	ANRCRSFLK0LFSRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	3.72E-10
	ANRJSSFLK0LFSRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRORCCLK0LFSRM	FIELD JOINT CCF OF PRIMARY AND SECONARY O-RINGS	1.37E-04	
1131)	ANRCRSFLK0LMSRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	3.72E-10
	ANRJSSFLK0LMSRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRORCCLK0LMSRM	FIELD JOINT CCF OF PRIMARY AND SECONARY O-RINGS	1.37E-04	
1132)	ANRCRSFLK0RFSRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	3.72E-10
	ANRJSSFLK0RFSRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRORCCLK0RFSRM	FIELD JOINT CCF OF PRIMARY AND SECONARY O-RINGS	1.37E-04	
1133)	EAOAAFRA1ULOK21	SINGLE APU/HYD RTL UNSUCCESSFUL; OK STATE	1.00E-01	3.47E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	EAOAASRA1CSOK21	COMMON CAUSE FAILURE TO START OR RUN;	8.87E-04	
	ENOAALKA1LAOK21	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	ENOAALKA1LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA2LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
1134)	ASMHVCPPHFOSAB1	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B (ENGINE 1)	2.70E-07	3.38E-10
	SMEFH	INITIATING EVENT LOSS OF GROSS H2 FLOW	1.25E-03	
1135)	EAOAAFRA1ULL004	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	3.37E-10
	EAOAASRA1ISL004	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISL004	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LDL004	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1136)	EAOAAFRA1ULL004	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	3.37E-10
	EAOAASRA1ISL004	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA2ISL004	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LDL004	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1137)	EAOAAFRA1ULL006	SINGLE APU/HYD UNIT RTL IS UNSUCCESSFUL;	1.00E-01	3.35E-10
	EAOAAL0A1SRL006	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 1	9.94E-01	
	EAOAASRA2ISL006	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISL006	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LDL006	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1138)	AAOAAFRA1CFLK20	COMMON CAUSE FAILURE; APU/HYD	1.92E-04	3.26E-10
	ANOAALKA1CLLK20	COMMON CAUSE LEAK; APU/HYD HYDRAZINE	1.70E-06	
	ANOAALKA1LZLK20	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
1139)	EAOAAFRA1OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	3.24E-10
	EAOAASRA2ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1140)	EAOAAFRA3OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	3.24E-10
	EAOAASRA1ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA2LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1141)	EAOAAFRA2OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	3.24E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	EAOAASRA1ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1142)	EAOAAFRA3OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	3.24E-10
	EAOAASRA1LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA2ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1143)	EAOAAFRA1OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	3.24E-10
	EAOAASRA2LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA3ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1144)	EAOAAFRA2OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	3.24E-10
	EAOAASRA1LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA3ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1145)	APMHVFCPRPMOPO3	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 3)	8.10E-07	3.16E-10
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
1146)	APMHVFCPRPMOPO2	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 2)	8.10E-07	3.16E-10
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
1147)	APMHVFCPRPMOPO1	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 1)	8.10E-07	3.16E-10
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
1148)	ACRNPFDRS2ASRB	NSI PRESSURE CARTRIDGE RS2A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1149)	ACRNPFDRS1ASRB	NSI PRESSURE CARTRIDGE RS1A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1150)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDRS3ASRB	NSI PRESSURE CARTRIDGE RS3A FAILS TO DETONATE	3.00E-05	
1151)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.00E-10
	ACRNDFDLFWASRB	NSD L FWD A FAILS TO DETONATE	3.00E-05	
1152)	ACRNPFDLS1ASRB	NSI PRESSURE CARTRIDGE LS1A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFLS1BSRB	PIC L SEP BOLT 1B FAILS TO FIRE	1.00E-05	

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1153)	ACRNPFDHD7ASRB	NSI PRESSURE / BOOST CRTRG HD7A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFHD7BSRB	PIC HD7B FAILS TO FIRE	1.00E-05	
1154)	ACRNPFDRS2ASRB	NSI PRESSURE CARTRIDGE RS2A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFARS2BSRB	PIC R SEP BOLT 2B FAILS TO ARM	1.00E-05	
1155)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDRSFBSRB	NSI PRESSURE CARTRIDGE RSFB FAILS TO DETONATE	3.00E-05	
1156)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.00E-10
	ACRNDFDRAFASRB	NSD R AFT A FAILS TO DETONATE	3.00E-05	
1157)	ACRNPFDLS3ASRB	NSI PRESSURE CARTRIDGE LS3A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1158)	ACRNPFDRS3ASRB	NSI PRESSURE CARTRIDGE RS3A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1159)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.00E-10
	ACRNDFDRFWASRB	NSD R FWD A FAILS TO DETONATE	3.00E-05	
1160)	ACRNDFDRFWBSRB	NSD R FWD B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1161)	ACRNPFDLS2BSRB	NSI PRESSURE CARTRIDGE LS2B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1162)	ACRNPFDLS1ASRB	NSI PRESSURE CARTRIDGE LS1A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1163)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDRS1ASRB	NSI PRESSURE CARTRIDGE RS1A FAILS TO DETONATE	3.00E-05	
1164)	ACRNPFDHD4ASRB	NSI PRESSURE / BOOST CRTRG HD4A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFHD4BSRB	PIC HD4B FAILS TO FIRE	1.00E-05	
1165)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.00E-10
	ACRNDFDRFWASRB	NSD R FWD A FAILS TO DETONATE	3.00E-05	
1166)	ACRNPFDRS1ASRB	NSI PRESSURE CARTRIDGE RS1A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFARS1BSRB	PIC R SEP BOLT 1B FAILS TO ARM	1.00E-05	
1167)	ACRNPFDLS3BSRB	NSI PRESSURE CARTRIDGE LS3B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFLS3ASRB	PIC L SEP BOLT 3A FAILS TO FIRE	1.00E-05	
1168)	ACRNPFDRSFASRB	NSI PRESSURE CARTRIDGE RSFA FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFRSFBSRB	PIC R SEP BOLT FWD B FAILS TO FIRE	1.00E-05	
1169)	ACRNPFDLS3ASRB	NSI PRESSURE CARTRIDGE LS3A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFLS3BSRB	PIC L SEP BOLT 3B FAILS TO FIRE	1.00E-05	
1170)	ACRNPFDLS2ASRB	NSI PRESSURE CARTRIDGE LS2A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1171)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.00E-10
	ACRNPFDRSFASRB	NSI PRESSURE CARTRIDGE RSFA FAILS TO DETONATE	3.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
1172)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.00E-10
	ACRNPFDRS2ASRB	NSI PRESSURE CARTRIDGE RS2A FAILS TO DETONATE	3.00E-05	
1173)	ACRNPFDRSFASRB	NSI PRESSURE CARTRIDGE RSFA FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1174)	ACRNPFDLS1ASRB	NSI PRESSURE CARTRIDGE LS1A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1175)	ACRNDFDRAFASRB	NSD R AFT A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFRABBSRB	PIC R AFT BSM B FAILS TO FIRE	1.00E-05	
1176)	ACRNPFDLS3BSRB	NSI PRESSURE CARTRIDGE LS3B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1177)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.00E-10
	ACRNPFDRS1ASRB	NSI PRESSURE CARTRIDGE RS1A FAILS TO DETONATE	3.00E-05	
1178)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.00E-10
	ACRNDFDRFWBSRB	NSD R FWD B FAILS TO DETONATE	3.00E-05	
1179)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDLS3BSRB	NSI PRESSURE CARTRIDGE LS3B FAILS TO DETONATE	3.00E-05	
1180)	ACRNPFDLS3ASRB	NSI PRESSURE CARTRIDGE LS3A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
1181)	ACRNDFDRAFBSRB	NSD R AFT B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1182)	ACRNPFDLS3BSRB	NSI PRESSURE CARTRIDGE LS3B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
1183)	ACRNDFDRFWASRB	NSD R FWD A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1184)	ACRNPFDLS2BSRB	NSI PRESSURE CARTRIDGE LS2B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFALS2ASRB	PIC L SEP BOLT 2A FAILS TO ARM	1.00E-05	
1185)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDLS2ASRB	NSI PRESSURE CARTRIDGE LS2A FAILS TO DETONATE	3.00E-05	
1186)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.00E-10
	ACRNDFDRAFASRB	NSD R AFT A FAILS TO DETONATE	3.00E-05	
1187)	ACRNPFDLS1BSRB	NSI PRESSURE CARTRIDGE LS1B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1188)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDLS1BSRB	NSI PRESSURE CARTRIDGE LS1B FAILS TO DETONATE	3.00E-05	
1189)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDRSFASRB	NSI PRESSURE CARTRIDGE RSFA FAILS TO DETONATE	3.00E-05	
1190)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDLS2BSRB	NSI PRESSURE CARTRIDGE LS2B FAILS TO DETONATE	3.00E-05	

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1191)	ACRNPFDHD5BSRB	NSI PRESSURE / BOOST CRTRG HD5B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFHD5ASRB	PIC HD5A FAILS TO FIRE	1.00E-05	
1192)	ACRNDFDRFWASRB	NSD R FWD A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFRFBBSRB	PIC R FWD BSM B FAILS TO FIRE	1.00E-05	
1193)	ACRNPFDRS1BSRB	NSI PRESSURE CARTRIDGE RS1B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFARS1ASRB	PIC R SEP BOLT 1A FAILS TO ARM	1.00E-05	
1194)	ACRNPFDRS1BSRB	NSI PRESSURE CARTRIDGE RS1B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFRS1ASRB	PIC R SEP BOLT 1A FAILS TO FIRE	1.00E-05	
1195)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDLS3ASRB	NSI PRESSURE CARTRIDGE LS3A FAILS TO DETONATE	3.00E-05	
1196)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDLS3ASRB	NSI PRESSURE CARTRIDGE LS3A FAILS TO DETONATE	3.00E-05	
1197)	ACRNPFDRS2BSRB	NSI PRESSURE CARTRIDGE RS2B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1198)	ACRNPFDLS1ASRB	NSI PRESSURE CARTRIDGE LS1A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFALS1BSRB	PIC L SEP BOLT 1B FAILS TO ARM	1.00E-05	
1199)	ACRNDFDRFWBSRB	NSD R FWD B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFARFBASRB	PIC R FWD BSM A FAILS TO ARM	1.00E-05	
1200)	ACRNPFDLS1BSRB	NSI PRESSURE CARTRIDGE LS1B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
1201)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.00E-10
	ACRNDFDRAFASRB	NSD R AFT A FAILS TO DETONATE	3.00E-05	
1202)	ACRNPFDLS2ASRB	NSI PRESSURE CARTRIDGE LS2A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFLS2BSRB	PIC L SEP BOLT 2B FAILS TO FIRE	1.00E-05	
1203)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDLS1ASRB	NSI PRESSURE CARTRIDGE LS1A FAILS TO DETONATE	3.00E-05	
1204)	ACRNPFDLSFASRB	NSI PRESSURE CARTRIDGE LSFA FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1205)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDRS1ASRB	NSI PRESSURE CARTRIDGE RS1A FAILS TO DETONATE	3.00E-05	
1206)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDLS1ASRB	NSI PRESSURE CARTRIDGE LS1A FAILS TO DETONATE	3.00E-05	
1207)	ACRNPFDRSFBSRB	NSI PRESSURE CARTRIDGE RSFB FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1208)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.00E-10
	ACRNDFDLFWBSRB	NSD L FWD B FAILS TO DETONATE	3.00E-05	
1209)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.00E-10
	ACRNPFDRS1BSRB	NSI PRESSURE CARTRIDGE RS1B FAILS TO DETONATE	3.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
1210)	ACRNDFDLFWASRB	NSD L FWD A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1211)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.00E-10
	ACRNPFDLS1BSRB	NSI PRESSURE CARTRIDGE LS1B FAILS TO DETONATE	3.00E-05	
1212)	ACRNPFDHD3ASRB	NSI PRESSURE / BOOST CRTRG HD3A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFHD3BSRB	PIC HD3B FAILS TO FIRE	1.00E-05	
1213)	ACRNPFDRS1BSRB	NSI PRESSURE CARTRIDGE RS1B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1214)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDRS2ASRB	NSI PRESSURE CARTRIDGE RS2A FAILS TO DETONATE	3.00E-05	
1215)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDLSFASRB	NSI PRESSURE CARTRIDGE LSFA FAILS TO DETONATE	3.00E-05	
1216)	ACRNPFDLS2BSRB	NSI PRESSURE CARTRIDGE LS2B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
1217)	ACRNDFDRAFBSRB	NSD R AFT B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1218)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDLS2BSRB	NSI PRESSURE CARTRIDGE LS2B FAILS TO DETONATE	3.00E-05	
1219)	ACRNPFDRS2BSRB	NSI PRESSURE CARTRIDGE RS2B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1220)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDRS2BSRB	NSI PRESSURE CARTRIDGE RS2B FAILS TO DETONATE	3.00E-05	
1221)	ACRNPFDLSFASRB	NSI PRESSURE CARTRIDGE LSFA FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
1222)	ACRNPFDLSFASRB	NSI PRESSURE CARTRIDGE LSFA FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1223)	ACRNPFDLSFBSRB	NSI PRESSURE CARTRIDGE LSFB FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1224)	ACRNPFDHD1ASRB	NSI PRESSURE / BOOST CRTRG HD1A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFHD1BSRB	PIC HD1B FAILS TO FIRE	1.00E-05	
1225)	ACRNDFDLFWASRB	NSD L FWD A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFLFBBSRB	PIC L FWD BSM B FAILS TO FIRE	1.00E-05	
1226)	ACRNPFDLSFBSRB	NSI PRESSURE CARTRIDGE LSFB FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFALSFASRB	PIC L SEP BOLT FWD A FAILS TO ARM	1.00E-05	
1227)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.00E-10
	ACRNPFDLSFASRB	NSI PRESSURE CARTRIDGE LSFA FAILS TO DETONATE	3.00E-05	
1228)	ACRNDFDRAFASRB	NSD R AFT A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFARABBSRB	PIC R AFT BSM B FAILS TO ARM	1.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
1229)	ACRNPFDLSFBSRB	NSI PRESSURE CARTRIDGE LSFB FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFLSFASRB	PIC L SEP BOLT FWD A FAILS TO FIRE	1.00E-05	
1230)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDRS1BSRB	NSI PRESSURE CARTRIDGE RS1B FAILS TO DETONATE	3.00E-05	
1231)	ACRNPFDLSFASRB	NSI PRESSURE CARTRIDGE LSFA FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFALSFBSRB	PIC L SEP BOLT FWD B FAILS TO ARM	1.00E-05	
1232)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.00E-10
	ACRNPFDRSFBSRB	NSI PRESSURE CARTRIDGE RSFB FAILS TO DETONATE	3.00E-05	
1233)	ACRNDFDRAFASRB	NSD R AFT A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1234)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.00E-10
	ACRNPFDLSFBSRB	NSI PRESSURE CARTRIDGE LSFB FAILS TO DETONATE	3.00E-05	
1235)	ACRNDFDLFWASRB	NSD L FWD A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1236)	ACRNDFDRFWBSRB	NSD R FWD B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFRFBASRB	PIC R FWD BSM A FAILS TO FIRE	1.00E-05	
1237)	ACRNPFDLSFASRB	NSI PRESSURE CARTRIDGE LSFA FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFLSFBSRB	PIC L SEP BOLT FWD B FAILS TO FIRE	1.00E-05	
1238)	ACRNPFDLS1BSRB	NSI PRESSURE CARTRIDGE LS1B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFLS1ASRB	PIC L SEP BOLT 1A FAILS TO FIRE	1.00E-05	
1239)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.00E-10
	ACRNPFDLS1ASRB	NSI PRESSURE CARTRIDGE LS1A FAILS TO DETONATE	3.00E-05	
1240)	ACRNDFDRFWBSRB	NSD R FWD B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1241)	ACRNPFDHD7BSRB	NSI PRESSURE / BOOST CRTRG HD7B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFHD7ASRB	PIC HD7A FAILS TO FIRE	1.00E-05	
1242)	ACRNPFDRS2ASRB	NSI PRESSURE CARTRIDGE RS2A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1243)	ACRNPFDLS1BSRB	NSI PRESSURE CARTRIDGE LS1B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1244)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.00E-10
	ACRNPFDLS3BSRB	NSI PRESSURE CARTRIDGE LS3B FAILS TO DETONATE	3.00E-05	
1245)	ACRNDFDLFWBSRB	NSD L FWD B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1246)	ACRNPFDRS2BSRB	NSI PRESSURE CARTRIDGE RS2B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFARS2ASRB	PIC R SEP BOLT 2A FAILS TO ARM	1.00E-05	
1247)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.00E-10
	ACRNDFDRFWASRB	NSD R FWD A FAILS TO DETONATE	3.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
1248)	ACRNPFDHD1BSRB	NSI PRESSURE / BOOST CRTRG HD1B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFHD1ASRB	PIC HD1A FAILS TO FIRE	1.00E-05	
1249)	ACRNPFDRSFBSRB	NSI PRESSURE CARTRIDGE RSFB FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFRSFASRB	PIC R SEP BOLT FWD A FAILS TO FIRE	1.00E-05	
1250)	ACRNPFDRS3BSRB	NSI PRESSURE CARTRIDGE RS3B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1251)	ACRNPFDRS1BSRB	NSI PRESSURE CARTRIDGE RS1B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1252)	ACRNDFDRFWBSRB	NSD R FWD B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1253)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.00E-10
	ACRNDFDLFWASRB	NSD L FWD A FAILS TO DETONATE	3.00E-05	
1254)	ACRNDFDRFWASRB	NSD R FWD A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFARFBBSRB	PIC R FWD BSM B FAILS TO ARM	1.00E-05	
1255)	ACRNPFDLS2ASRB	NSI PRESSURE CARTRIDGE LS2A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFALS2BSRB	PIC L SEP BOLT 2B FAILS TO ARM	1.00E-05	
1256)	ACRNDFDRAFBSRB	NSD R AFT B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFRABASRB	PIC R AFT BSM A FAILS TO FIRE	1.00E-05	
1257)	ACRNPFDRS1BSRB	NSI PRESSURE CARTRIDGE RS1B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1258)	ACRNPFDLS2BSRB	NSI PRESSURE CARTRIDGE LS2B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1259)	ACRNPFDLSFBSRB	NSI PRESSURE CARTRIDGE LSFB FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
1260)	ACRNPFDRS3BSRB	NSI PRESSURE CARTRIDGE RS3B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1261)	ACRNPFDRS2ASRB	NSI PRESSURE CARTRIDGE RS2A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1262)	ACRNPFDLS1BSRB	NSI PRESSURE CARTRIDGE LS1B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFALS1ASRB	PIC L SEP BOLT 1A FAILS TO ARM	1.00E-05	
1263)	ACRNPFDLS3ASRB	NSI PRESSURE CARTRIDGE LS3A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFALS3BSRB	PIC L SEP BOLT 3B FAILS TO ARM	1.00E-05	
1264)	ACRNPFDRS1ASRB	NSI PRESSURE CARTRIDGE RS1A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1265)	ACRNDFDRAFBSRB	NSD R AFT B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFARABASRB	PIC R AFT BSM A FAILS TO ARM	1.00E-05	
1266)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.00E-10
	ACRNPFDLS2BSRB	NSI PRESSURE CARTRIDGE LS2B FAILS TO DETONATE	3.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
1267)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.00E-10
	ACRNDFDRAFBSRB	NSD R AFT B FAILS TO DETONATE	3.00E-05	
1268)	ACRNPFDRS3BSRB	NSI PRESSURE CARTRIDGE RS3B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFARS3ASRB	PIC R SEP BOLT 3A FAILS TO ARM	1.00E-05	
1269)	ACRNDFDRAFASRB	NSD R AFT A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1270)	ACRNDFDLFWBSRB	NSD L FWD B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1271)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.00E-10
	ACRNDFDRFWBSRB	NSD R FWD B FAILS TO DETONATE	3.00E-05	
1272)	ACRNPFDHD5ASRB	NSI PRESSURE / BOOST CRTRG HD5A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFHD5BSRB	PIC HD5B FAILS TO FIRE	1.00E-05	
1273)	ACRNPFDLS2BSRB	NSI PRESSURE CARTRIDGE LS2B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFLS2ASRB	PIC L SEP BOLT 2A FAILS TO FIRE	1.00E-05	
1274)	ACRNPFDRSFASRB	NSI PRESSURE CARTRIDGE RSFA FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1275)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDLS2ASRB	NSI PRESSURE CARTRIDGE LS2A FAILS TO DETONATE	3.00E-05	
1276)	ACRNPFDRS2ASRB	NSI PRESSURE CARTRIDGE RS2A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFRS2BSRB	PIC R SEP BOLT 2B FAILS TO FIRE	1.00E-05	
1277)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.00E-10
	ACRNDFDLFWASRB	NSD L FWD A FAILS TO DETONATE	3.00E-05	
1278)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDRS1BSRB	NSI PRESSURE CARTRIDGE RS1B FAILS TO DETONATE	3.00E-05	
1279)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDRS2BSRB	NSI PRESSURE CARTRIDGE RS2B FAILS TO DETONATE	3.00E-05	
1280)	ACRNDFDRAFASRB	NSD R AFT A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1281)	ACRNPFDRSFBSRB	NSI PRESSURE CARTRIDGE RSFB FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1282)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDRS3BSRB	NSI PRESSURE CARTRIDGE RS3B FAILS TO DETONATE	3.00E-05	
1283)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.00E-10
	ACRNPFDRS2BSRB	NSI PRESSURE CARTRIDGE RS2B FAILS TO DETONATE	3.00E-05	
1284)	ACRNPFDLS2ASRB	NSI PRESSURE CARTRIDGE LS2A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1285)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.00E-10
	ACRNDFDRAFBSRB	NSD R AFT B FAILS TO DETONATE	3.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
1286)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDRS3ASRB	NSI PRESSURE CARTRIDGE RS3A FAILS TO DETONATE	3.00E-05	
1287)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDLSFBSRB	NSI PRESSURE CARTRIDGE LSFB FAILS TO DETONATE	3.00E-05	
1288)	ACRNDFDRAFBSRB	NSD R AFT B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1289)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.00E-10
	ACRNDFDRAFBSRB	NSD R AFT B FAILS TO DETONATE	3.00E-05	
1290)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDRS2ASRB	NSI PRESSURE CARTRIDGE RS2A FAILS TO DETONATE	3.00E-05	
1291)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDLSFASRB	NSI PRESSURE CARTRIDGE LSFA FAILS TO DETONATE	3.00E-05	
1292)	ACRNPFDLS2ASRB	NSI PRESSURE CARTRIDGE LS2A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
1293)	ACRNPFDRS3ASRB	NSI PRESSURE CARTRIDGE RS3A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFARS3BSRB	PIC R SEP BOLT 3B FAILS TO ARM	1.00E-05	
1294)	ACRNDFDLFWBSRB	NSD L FWD B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFALFBASRB	PIC L FWD BSM A FAILS TO ARM	1.00E-05	
1295)	ACRNPFDHD8ASRB	NSI PRESSURE / BOOST CRTRG HD8A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFHD8BSRB	PIC HD8B FAILS TO FIRE	1.00E-05	
1296)	ACRNPFDRS1ASRB	NSI PRESSURE CARTRIDGE RS1A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1297)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.00E-10
	ACRNPFDLS3ASRB	NSI PRESSURE CARTRIDGE LS3A FAILS TO DETONATE	3.00E-05	
1298)	ACRNPFDLS3BSRB	NSI PRESSURE CARTRIDGE LS3B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFALS3ASRB	PIC L SEP BOLT 3A FAILS TO ARM	1.00E-05	
1299)	ACRNPFDHD6BSRB	NSI PRESSURE / BOOST CRTRG HD6B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFHD6ASRB	PIC HD6A FAILS TO FIRE	1.00E-05	
1300)	ACRNDFDRFWASRB	NSD R FWD A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1301)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.00E-10
	ACRNPFDLS2ASRB	NSI PRESSURE CARTRIDGE LS2A FAILS TO DETONATE	3.00E-05	
1302)	ACRNPFDRS2BSRB	NSI PRESSURE CARTRIDGE RS2B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1303)	ACRNPFDRSFASRB	NSI PRESSURE CARTRIDGE RSFA FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1304)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDRSFASRB	NSI PRESSURE CARTRIDGE RSFA FAILS TO DETONATE	3.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
1305)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.00E-10
	ACRNDFDLFWBSRB	NSD L FWD B FAILS TO DETONATE	3.00E-05	
1306)	ACRNPFDLS3ASRB	NSI PRESSURE CARTRIDGE LS3A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1307)	ACRCADHR2ASRB	LOCAL WIRE FAILURE(CM)	1.00E-05	3.00E-10
	ACRNDFDRAFBSRB	NSD R AFT B FAILS TO DETONATE	3.00E-05	
1308)	ACRNDFDLFWBSRB	NSD L FWD B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFLFBASRB	PIC L FWD BSM A FAILS TO FIRE	1.00E-05	
1309)	ACRNDFDLFWASRB	NSD L FWD A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
1310)	ACRNPFDRS2BSRB	NSI PRESSURE CARTRIDGE RS2B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFRS2ASRB	PIC R SEP BOLT 2A FAILS TO FIRE	1.00E-05	
1311)	ACRNDFDLFWASRB	NSD L FWD A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFALFBBSRB	PIC L FWD BSM B FAILS TO ARM	1.00E-05	
1312)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDRS3BSRB	NSI PRESSURE CARTRIDGE RS3B FAILS TO DETONATE	3.00E-05	
1313)	ACRNPFDLS1ASRB	NSI PRESSURE CARTRIDGE LS1A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
1314)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.00E-10
	ACRNPFDRS3ASRB	NSI PRESSURE CARTRIDGE RS3A FAILS TO DETONATE	3.00E-05	
1315)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.00E-10
	ACRNDFDLFWBSRB	NSD L FWD B FAILS TO DETONATE	3.00E-05	
1316)	ACRNPFDRS3BSRB	NSI PRESSURE CARTRIDGE RS3B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFRS3ASRB	PIC R SEP BOLT 3A FAILS TO FIRE	1.00E-05	
1317)	ACRNPFDRSFBSRB	NSI PRESSURE CARTRIDGE RSFB FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1318)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDRSFBSRB	NSI PRESSURE CARTRIDGE RSFB FAILS TO DETONATE	3.00E-05	
1319)	ACRNPFDRSFASRB	NSI PRESSURE CARTRIDGE RSFA FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFARSFBSRB	PIC R SEP BOLT FWD B FAILS TO ARM	1.00E-05	
1320)	ACRNPFDRSFBSRB	NSI PRESSURE CARTRIDGE RSFB FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFARSFASRB	PIC R SEP BOLT FWD A FAILS TO ARM	1.00E-05	
1321)	ACRNPFDHD8BSRB	NSI PRESSURE / BOOST CRTRG HD8B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFHD8ASRB	PIC HD8A FAILS TO FIRE	1.00E-05	
1322)	ACRNPFDRS3ASRB	NSI PRESSURE CARTRIDGE RS3A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFRS3BSRB	PIC R SEP BOLT 3B FAILS TO FIRE	1.00E-05	
1323)	ACRNPFDHD6ASRB	NSI PRESSURE / BOOST CRTRG HD6A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFHD6BSRB	PIC HD6B FAILS TO FIRE	1.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
1324)	ACRNPFDHD3BSRB	NSI PRESSURE / BOOST CRTRG HD3B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFHD3ASRB	PIC HD3A FAILS TO FIRE	1.00E-05	
1325)	ACRNPFDLSFBSRB	NSI PRESSURE CARTRIDGE LSFB FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1326)	ACRNPFDRS3ASRB	NSI PRESSURE CARTRIDGE RS3A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1327)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDLSFBSRB	NSI PRESSURE CARTRIDGE LSFB FAILS TO DETONATE	3.00E-05	
1328)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDLS1BSRB	NSI PRESSURE CARTRIDGE LS1B FAILS TO DETONATE	3.00E-05	
1329)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.00E-10
	ACRNPFDRS3BSRB	NSI PRESSURE CARTRIDGE RS3B FAILS TO DETONATE	3.00E-05	
1330)	ACRNPFDHD2ASRB	NSI PRESSURE / BOOST CRTRG HD2A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFHD2BSRB	PIC HD2B FAILS TO FIRE	1.00E-05	
1331)	ACRCADHR2BSRB	LOCAL WIRE FAILURE(CM)	1.00E-05	3.00E-10
	ACRNDFDRAFASRB	NSD R AFT A FAILS TO DETONATE	3.00E-05	
1332)	ACRNPFDRS1ASRB	NSI PRESSURE CARTRIDGE RS1A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFRS1BSRB	PIC R SEP BOLT 1B FAILS TO FIRE	1.00E-05	
1333)	ACRNDFDRFWASRB	NSD R FWD A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1334)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.00E-10
	ACRNPFDLS3BSRB	NSI PRESSURE CARTRIDGE LS3B FAILS TO DETONATE	3.00E-05	
1335)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.00E-10
	ACRNDFDRFWBSRB	NSD R FWD B FAILS TO DETONATE	3.00E-05	
1336)	ACRNPFDRS3BSRB	NSI PRESSURE CARTRIDGE RS3B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1337)	ACRNPFDHD4BSRB	NSI PRESSURE / BOOST CRTRG HD4B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFHD4ASRB	PIC HD4A FAILS TO FIRE	1.00E-05	
1338)	ACRNPFDHD2BSRB	NSI PRESSURE / BOOST CRTRG HD2B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRPCFFHD2ASRB	PIC HD2A FAILS TO FIRE	1.00E-05	
1339)	ACRNPFDLS3BSRB	NSI PRESSURE CARTRIDGE LS3B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1340)	ACRNPFDRS3ASRB	NSI PRESSURE CARTRIDGE RS3A FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1341)	ACRNDFDLFWBSRB	NSD L FWD B FAILS TO DETONATE	3.00E-05	3.00E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
1342)	EAOAASRA1LSL023	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	2.92E-10
	EAOAASRA3ISL023	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1343)	EAOAASRA2LSL023	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	2.92E-10
	EAOAASRA3ISL023	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1344)	EAOAASRA2ISL023	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	2.92E-10
	EAOAASRA3LSL023	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1345)	EAOAASRA1ISL023	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	2.92E-10
	EAOAASRA2LSL023	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1346)	EAOAASRA1LSL023	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	2.92E-10
	EAOAASRA2ISL023	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1347)	EAOAASRA1ISL023	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	2.92E-10
	EAOAASRA3LSL023	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1348)	EAOAAFRA1OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.79E-10
	EAOAAFRA2OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA3ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1349)	EAOAAFRA2OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.79E-10
	EAOAAFRA3OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA1ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1350)	EAOAAFRA1OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.79E-10
	EAOAAFRA3OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA2ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1351)	ASMHVCPPHFOSAB1	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B (ENGINE 1)	2.70E-07	2.70E-10
	SMELO	INITIATING EVENT COOLANT LINER OVERPRESSURE	1.00E-03	
1352)	EAOAASRA1CSL019	COMMON CAUSE FAILURE TO START OR RUN;	3.43E-04	2.63E-10
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1353)	EAOAASRA1LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	2.63E-10
	EAOAASRA2LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA3LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1354)	EAOAAFRA1OSL016	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.51E-10
	EAOAAFRA1ULL016	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	
	EAOAASRA3ISL016	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL016	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL016	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1355)	EAOAAFRA1OSL016	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.51E-10
	EAOAAFRA1ULL016	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	
	EAOAASRA2ISL016	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL016	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL016	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1356)	EAOAAFRA1ULL016	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	2.51E-10
	EAOAAFRA3OSL016	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA1ISL016	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ENOAALKA1CLL016	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL016	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1357)	EAOAAFRA1ULL016	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	2.51E-10
	EAOAAFRA2OSL016	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA1ISL016	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL016	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL016	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1358)	EAOAAFRA1ULL018	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL;	1.00E-01	2.49E-10
	EAOAAFRA2OSL018	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAAL0A1SRL018	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 1	9.94E-01	
	EAOAASRA3ISL018	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL018	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL018	LEAKS DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1359)	EAOAAFRA1ULL018	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL;	1.00E-01	2.49E-10
	EAOAAFRA3OSL018	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAAL0A1SRL018	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 1	9.94E-01	
	EAOAASRA2ISL018	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL018	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL018	LEAKS DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1360)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.48E-10
	ASMPAFPMPPRPB1	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 1)	7.76E-08	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
1361)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.48E-10
	ASMPAFPMPPRPB3	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 3)	7.76E-08	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
1362)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.48E-10
	ASMPAFPMPPRPB2	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 2)	7.76E-08	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
1363)	EAOAASRA1ISL007	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	2.36E-10
	EAOAASRA2LSL007	LEAKAGE INDUCED FAILURE START OR RUN;	7.00E-02	
	EAOAASRA3ISL007	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LDL007	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1364)	EAOAASRA1ISL007	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	2.36E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	EAOAASRA2ISL007	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSL007	LEAKAGE INDUCED FAILURE START OR RUN;	7.00E-02	
	ENOAALKA1LDL007	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1365)	EAOAASRA1ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	2.32E-10
	EAOAASRA2ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	ENOAALKA2LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
1366)	EAOAASRA2ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	2.32E-10
	EAOAASRA3ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	ENOAALKA2LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
1367)	EAOAASRA1ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	2.32E-10
	EAOAASRA3ISOK28	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAAFRA1ULOK28	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK STATE DURING RTL. SEQ 28	1.00E-01	
	ENOAALKA1LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA1LZOK28	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	ENOAALKA2LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK28	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
1368)-	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	2.07E-10
	APMHVFCPRPMOPO1	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 1)	8.10E-07	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
1369)	EAOAASRA1ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	2.07E-10
	EAOAASRA2ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1CLOK24	COMMON CAUSE LEAK; OK STATE DURING RTL;	9.57E-04	
	ENOAALKA1LAOK24	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
1370)	EAOAASRA1LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	2.04E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	EAOAASRA2ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1371)	EAOAASRA1ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	2.04E-10
	EAOAASRA2LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA3LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1372)	EAOAASRA1LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	2.04E-10
	EAOAASRA2LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA3ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1373)	ACRNIFDLIGBSRM	NSI LEFT IGNITER B FAILS TO DETONATE	2.00E-05	2.00E-10
	ACRPCFFLIGASRM	PIC LEFT IGNITER A FAILS TO FIRE	1.00E-05	
1374)	ACRNIFDRIGASRM	NSI RIGHT IGNITER A FAILS TO DETONATE	2.00E-05	2.00E-10
	ACRPCFARIGBSRM	PIC RIGHT IGNITER B FAILS TO ARM	1.00E-05	
1375)	ACRNIFDRIGBSRM	NSI RIGHT IGNITER B FAILS TO DETONATE	2.00E-05	2.00E-10
	ACRPCFFRIGASRM	PIC RIGHT IGNITER A FAILS TO FIRE	1.00E-05	
1376)	ACRNIFDLIGBSRM	NSI LEFT IGNITER B FAILS TO DETONATE	2.00E-05	2.00E-10
	ACRPCFALIGASRM	PIC LEFT IGNITER A FAILS TO ARM	1.00E-05	
1377)	ACRNIFDLIGASRM	NSI LEFT IGNITER A FAILS TO DETONATE	2.00E-05	2.00E-10
	ACRPCFALIGBSRM	PIC LEFT IGNITER B FAILS TO ARM	1.00E-05	
1378)	ACRNIFDRIGASRM	NSI RIGHT IGNITER A FAILS TO DETONATE	2.00E-05	2.00E-10
	ACRPCFFRIGBSRM	PIC RIGHT IGNITER B FAILS TO FIRE	1.00E-05	
1379)	ACRNIFDLIGASRM	NSI LEFT IGNITER A FAILS TO DETONATE	2.00E-05	2.00E-10
	ACRPCFFLIGBSRM	PIC LEFT IGNITER B FAILS TO FIRE	1.00E-05	
1380)	ACRNIFDRIGBSRM	NSI RIGHT IGNITER B FAILS TO DETONATE	2.00E-05	2.00E-10
	ACRPCFARIGASRM	PIC RIGHT IGNITER A FAILS TO ARM	1.00E-05	
1381)	EAOAASRA1CSLT11	COMMON CAUSE FAILURE TO START OR RUN;	1.33E-03	1.88E-10
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1382)	EAOAASRA1ISL012	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	1.83E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	EAOAASRA2ISL012	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISL012	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LUL012	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1383)	EAOAAFRA1OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.75E-10
	EAOAASRA2ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1384)	EAOAAFRA2OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.75E-10
	EAOAASRA1ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1385)	EAOAAFRA3OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.75E-10
	EAOAASRA1LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA2ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1386)	EAOAAFRA3OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.75E-10
	EAOAASRA1ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA2LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1387)	EAOAAFRA1OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.75E-10
	EAOAASRA2LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA3ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1388)	EAOAAFRA2OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.75E-10
	EAOAASRA1LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA3ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1389)	EAOAAFRA1ULOK23	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK	1.00E-01	1.72E-10
	EAOAAOKA1SROK23	RESTART/RUN SUCCESSFUL; OK STATE DURING	9.94E-01	
	EAOAASRA1CSOK23	COMMON CAUSE FAILURE TO START OR RUN;	4.44E-04	
	ENOAALKA1LAOK23	LEAKS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	ENOAALKA1LKOK23	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA2LKOK23	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK23	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
1390)	ASMHVCPPHFOSAB1	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B (ENGINE 1)	2.70E-07	1.69E-10
	SMEMO	INITIATING EVENT HIGH MIXTURE RATIO IN OXIDIZER PREBURNERS	6.27E-04	
1391)	ASMHVCPPHFOSAB1	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B (ENGINE 1)	2.70E-07	1.69E-10
	SMEMF	INITIATING EVENT HIGH MIXTURE RATIO IN FUEL PREBURNER	6.27E-04	
1392)	ASMHVCPPHFOSAB1	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B (ENGINE 1)	2.70E-07	1.63E-10
	SMEPG	INITIATING EVENT FAILURE TO PRECHARGE POGO ACC	6.05E-04	
1393)	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	1.57E-10
	ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
1394)	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	1.57E-10
	ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
1395)	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	1.57E-10
	ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
1396)	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	1.56E-10
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
1397)	EAOAAFRA2OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.39E-10
	EAOAASRA1ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LAOK24	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	ENOAALKA1LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ENOAALKA2LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
1398)	EAOAAFRA1OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.39E-10
	EAOAASRA2ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LAOK24	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	ENOAALKA1LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA2LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
1399)	EAOAAFRA3OSOK24	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.39E-10
	EAOAASRA1ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA2ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LAOK24	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	ENOAALKA1LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA2LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
1400)	EAOAAFRA1ULLT04	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	1.39E-10
	EAOAASRA1LSLT04	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA3LSLT04	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT04	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1401)	EAOAAFRA1ULLT04	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	1.39E-10
	EAOAASRA1LSLT04	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA2LSLT04	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT04	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1402)	EAOAAFRA1ULLT06	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL;	1.00E-01	1.38E-10
	EAOAALTA1SRLT06	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 3	9.94E-01	
	EAOAASRA2LSLT06	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA3LSLT06	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT06	LEAKS DETECTED/CONFIRMED; INITIAL LEAK IN 3	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1403)	EAOAAFRA3OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.36E-10
	EAOAASRA1ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA2ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1404)	EAOAAFRA2OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.36E-10
	EAOAASRA1ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1405)	EAOAAFRA1OSL024	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.36E-10
	EAOAASRA2ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1406)	ASMAVFOMPHBLE1	SSME-1 FUEL BLEED VALVE FAILS TO OPEN	8.45E-05	1.32E-10
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
1407)	ASMAVFOMPHBLE2	SSME-2 FUEL BLEED VALVE FAILS TO OPEN	8.45E-05	1.32E-10
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
1408)	ASMAVFOMPHBLE3	SSME-3 FUEL BLEED VALVE FAILS TO OPEN	8.45E-05	1.32E-10
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
1409)	EAOAASRA2ISLT11	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	1.08E-10
	EAOAASRA3LSLT11	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1410)	EAOAASRA1LSLT11	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	1.08E-10
	EAOAASRA3ISLT11	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1411)	EAOAASRA1LSLT11	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	1.08E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	EAOAASRA2ISLT11	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1412)	EAOAASRA2LSLT11	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	1.08E-10
	EAOAASRA3ISLT11	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1413)	EAOAASRA1ISLT11	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	1.08E-10
	EAOAASRA2LSLT11	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1414)	EAOAASRA1ISLT11	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	1.08E-10
	EAOAASRA3LSLT11	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1415)	AAOAAFRA1LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	1.00E-01	1.06E-10
	AAOAAFRA2IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	
	AAOAAFRA3LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	1.00E-01	
	ANOAALKA1CLLK20	COMMON CAUSE LEAK; APU/HYD HYDRAZINE	1.70E-06	
	ANOAALKA1LZLK20	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
1416)	AAOAAFRA1LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	1.00E-01	1.06E-10
	AAOAAFRA2LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	1.00E-01	
	AAOAAFRA3IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	
	ANOAALKA1CLLK20	COMMON CAUSE LEAK; APU/HYD HYDRAZINE	1.70E-06	
	ANOAALKA1LZLK20	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
1417)	AAOAAFRA1IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	1.06E-10
	AAOAAFRA2LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	1.00E-01	
	AAOAAFRA3LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	1.00E-01	
	ANOAALKA1CLLK20	COMMON CAUSE LEAK; APU/HYD HYDRAZINE	1.70E-06	
	ANOAALKA1LZLK20	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
1418)	APMHVFCPRPMOPO1	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 1)	8.10E-07	1.02E-10
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	
1419)	ACRPCFARFBBSRB	PIC R FWD BSM B FAILS TO ARM	1.00E-05	1.00E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description		Basic Event Probability	Cutset Probability
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1420)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFALS1ASRB	PIC L SEP BOLT 1A FAILS TO ARM		1.00E-05	
1421)	ACRPCFFLS2BSRB	PIC L SEP BOLT 2B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1422)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLS2ASRB	PIC L SEP BOLT 2A FAILS TO FIRE		1.00E-05	
1423)	ACRPCFFRS1BSRB	PIC R SEP BOLT 1B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1424)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLS2ASRB	PIC L SEP BOLT 2A FAILS TO FIRE		1.00E-05	
1425)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFRS1BSRB	PIC R SEP BOLT 1B FAILS TO FIRE		1.00E-05	
1426)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFARS1ASRB	PIC R SEP BOLT 1A FAILS TO ARM		1.00E-05	
1427)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFALS2BSRB	PIC L SEP BOLT 2B FAILS TO ARM		1.00E-05	
1428)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLS2BSRB	PIC L SEP BOLT 2B FAILS TO FIRE		1.00E-05	
1429)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFRS1ASRB	PIC R SEP BOLT 1A FAILS TO FIRE		1.00E-05	
1430)	ACRPCFARS1BSRB	PIC R SEP BOLT 1B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1431)	ACRPCFFLS2BSRB	PIC L SEP BOLT 2B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1432)	ACRPCFARS1BSRB	PIC R SEP BOLT 1B FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFFRS1ASRB	PIC R SEP BOLT 1A FAILS TO FIRE		1.00E-05	
1433)	ACRPCFARS1ASRB	PIC R SEP BOLT 1A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1434)	ACRPCFARS1BSRB	PIC R SEP BOLT 1B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1435)	ACRPCFFLSFASRB	PIC L SEP BOLT FWD A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1436)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFRS1ASRB	PIC R SEP BOLT 1A FAILS TO FIRE		1.00E-05	
1437)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFARS3BSRB	PIC R SEP BOLT 3B FAILS TO ARM		1.00E-05	
1438)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description		Basic Event Probability	Cutset Probability
	ACRPCFFRS3ASRB	PIC R SEP BOLT 3A FAILS TO FIRE		1.00E-05	
1439)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFALS3BSRB	PIC L SEP BOLT 3B FAILS TO ARM		1.00E-05	
1440)	ACRPCFALS2ASRB	PIC L SEP BOLT 2A FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFFLS2BSRB	PIC L SEP BOLT 2B FAILS TO FIRE		1.00E-05	
1441)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFARS1BSRB	PIC R SEP BOLT 1B FAILS TO ARM		1.00E-05	
1442)	ACRPCFARS1BSRB	PIC R SEP BOLT 1B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1443)	ACRPCFARS3ASRB	PIC R SEP BOLT 3A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1444)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLSFBSRB	PIC L SEP BOLT FWD B FAILS TO FIRE		1.00E-05	
1445)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFFRS1BSRB	PIC R SEP BOLT 1B FAILS TO FIRE		1.00E-05	
1446)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFARS1BSRB	PIC R SEP BOLT 1B FAILS TO ARM		1.00E-05	
1447)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFARS1ASRB	PIC R SEP BOLT 1A FAILS TO ARM		1.00E-05	
1448)	ACRPCFARS1ASRB	PIC R SEP BOLT 1A FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFFRS1BSRB	PIC R SEP BOLT 1B FAILS TO FIRE		1.00E-05	
1449)	ACRPCFFLS2ASRB	PIC L SEP BOLT 2A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRPCFFLS2BSRB	PIC L SEP BOLT 2B FAILS TO FIRE		1.00E-05	
1450)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFALS2ASRB	PIC L SEP BOLT 2A FAILS TO ARM		1.00E-05	
1451)	ACRPCFALSFASRB	PIC L SEP BOLT FWD A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1452)	ACRPCFFLSFBSRB	PIC L SEP BOLT FWD B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1453)	ACRPCFALSFBSRB	PIC L SEP BOLT FWD B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1454)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLSFASRB	PIC L SEP BOLT FWD A FAILS TO FIRE		1.00E-05	
1455)	ACRCADHR2ASRB	LOCAL WIRE FAILURE(CM)		1.00E-05	1.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1456)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACREXFDL2ASRB	EXPLOSIVE DEVICE FAILS TO DETONATE	L AFT	1.00E-05	
1457)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description		Basic Event Probability	Cutset Probability
	ACRPCFFLABBSRB	PIC L AFT BSM B FAILS TO FIRE		1.00E-05	
1458)	ACRPCFARABBSRB	PIC R AFT BSM B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1459)	ACRPCFFLABBSRB	PIC L AFT BSM B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1460)	ACRPCFARS3ASRB	PIC R SEP BOLT 3A FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFARS3BSRB	PIC R SEP BOLT 3B FAILS TO ARM		1.00E-05	
1461)	ACRCADHR2ASRB	LOCAL WIRE FAILURE(CM)		1.00E-05	1.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1462)	ACRPCFARS1ASRB	PIC R SEP BOLT 1A FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFARS1BSRB	PIC R SEP BOLT 1B FAILS TO ARM		1.00E-05	
1463)	ACREXFDL2ASRB	EXPLOSIVE DEVICE FAILS TO DETONATE	L AFT	1.00E-05	1.00E-10
	ACREXFDL2BSRB	EXPLOSIVE DEVICE FAILS TO DETONATE	L AFT	1.00E-05	
1464)	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	1.00E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1465)	ACRPCFARABASRB	PIC R AFT BSM A FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFFRABBSRB	PIC R AFT BSM B FAILS TO FIRE		1.00E-05	
1466)	ACRPCFARFBASRB	PIC R FWD BSM A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1467)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFALSFBSRB	PIC L SEP BOLT FWD B FAILS TO ARM		1.00E-05	
1468)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLSFBSRB	PIC L SEP BOLT FWD B FAILS TO FIRE		1.00E-05	
1469)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFFRFBASRB	PIC R FWD BSM A FAILS TO FIRE		1.00E-05	
1470)	ACRPCFFLSFASRB	PIC L SEP BOLT FWD A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1471)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFRS3BSRB	PIC R SEP BOLT 3B FAILS TO FIRE		1.00E-05	
1472)	ACRPCFFRS2BSRB	PIC R SEP BOLT 2B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1473)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFRS3BSRB	PIC R SEP BOLT 3B FAILS TO FIRE		1.00E-05	
1474)	ACRPCFFRS2BSRB	PIC R SEP BOLT 2B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1475)	ACRPCFARS3BSRB	PIC R SEP BOLT 3B FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFFRS3ASRB	PIC R SEP BOLT 3A FAILS TO FIRE		1.00E-05	
1476)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRPCFARFBASRB	PIC R FWD BSM A FAILS TO ARM	1.00E-05	
1477)	ACRPCFARIGASRM	PIC RIGHT IGNITER A FAILS TO ARM	1.00E-05	1.00E-10
	ACRPCFFRIGBSRM	PIC RIGHT IGNITER B FAILS TO FIRE	1.00E-05	
1478)	ACRPCFFRSFASRB	PIC R SEP BOLT FWD A FAILS TO FIRE	1.00E-05	1.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1479)	ACRPCFALS3ASRB	PIC L SEP BOLT 3A FAILS TO ARM	1.00E-05	1.00E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
1480)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	1.00E-10
	ACRPCFFLS3BSRB	PIC L SEP BOLT 3B FAILS TO FIRE	1.00E-05	
1481)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	1.00E-10
	ACRCADHR2BSRB	LOCAL WIRE FAILURE(CM)	1.00E-05	
1482)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	1.00E-10
	ACRPCFALSFASRB	PIC L SEP BOLT FWD A FAILS TO ARM	1.00E-05	
1483)	ACRPCFFLABBSRB	PIC L AFT BSM B FAILS TO FIRE	1.00E-05	1.00E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1484)	ACRPCFARSFASRB	PIC R SEP BOLT FWD A FAILS TO ARM	1.00E-05	1.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1485)	ACRPCFFRFBBSRB	PIC R FWD BSM B FAILS TO FIRE	1.00E-05	1.00E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1486)	ACRPCFFLABASRB	PIC L AFT BSM A FAILS TO FIRE	1.00E-05	1.00E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1487)	ACRCADHR2ASRB	LOCAL WIRE FAILURE(CM)	1.00E-05	1.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1488)	APMPSFPPRPMPCCHA	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL A	1.00E-02	1.00E-10
	APMPSFPPRPMPCCHB	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
1489)	ACRPCFFRS1ASRB	PIC R SEP BOLT 1A FAILS TO FIRE	1.00E-05	1.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1490)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	1.00E-10
	ACRPCFARABASRB	PIC R AFT BSM A FAILS TO ARM	1.00E-05	
1491)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	1.00E-10
	ACRPCFFRABASRB	PIC R AFT BSM A FAILS TO FIRE	1.00E-05	
1492)	ACRPCFARS2BSRB	PIC R SEP BOLT 2B FAILS TO ARM	1.00E-05	1.00E-10
	ACRPCFFRS2ASRB	PIC R SEP BOLT 2A FAILS TO FIRE	1.00E-05	
1493)	ACRPCFFHD8ASRB	PIC HD8A FAILS TO FIRE	1.00E-05	1.00E-10
	ACRPCFFHD8BSRB	PIC HD8B FAILS TO FIRE	1.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description		Basic Event Probability	Cutset Probability
1494)	ACRPCFFLSFASRB	PIC L SEP BOLT FWD A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRPCFFLSFBSRB	PIC L SEP BOLT FWD B FAILS TO FIRE		1.00E-05	
1495)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFARS2BSRB	PIC R SEP BOLT 2B FAILS TO ARM		1.00E-05	
1496)	ACRPCFFLS1BSRB	PIC L SEP BOLT 1B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1497)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLS2BSRB	PIC L SEP BOLT 2B FAILS TO FIRE		1.00E-05	
1498)	ACRPCFALFBASRB	PIC L FWD BSM A FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFALFBBSRB	PIC L FWD BSM B FAILS TO ARM		1.00E-05	
1499)	ACRPCFFRABASRB	PIC R AFT BSM A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRPCFFRABBSRB	PIC R AFT BSM B FAILS TO FIRE		1.00E-05	
1500)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1501)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1502)	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	1.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1503)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFRFBBSRB	PIC R FWD BSM B FAILS TO FIRE		1.00E-05	
1504)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFARFBBSRB	PIC R FWD BSM B FAILS TO ARM		1.00E-05	
1505)	ACRPCFFRSFBSRB	PIC R SEP BOLT FWD B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1506)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1507)	ACRPCFFRFBBSRB	PIC R FWD BSM B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1508)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFALFBASRB	PIC L FWD BSM A FAILS TO ARM		1.00E-05	
1509)	ACRPCFFLS2ASRB	PIC L SEP BOLT 2A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1510)	ACRPCFFHD4ASRB	PIC HD4A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRPCFFHD4BSRB	PIC HD4B FAILS TO FIRE		1.00E-05	
1511)	ACREXFDL2ASRB	EXPLOSIVE DEVICE FAILS TO DETONATE	L AFT	1.00E-05	1.00E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1512)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
1513)	ACRPCFALFBASRB	PIC L FWD BSM A FAILS TO ARM	1.00E-05	1.00E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1514)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	1.00E-10
	ACRPCFALFBASRB	PIC L FWD BSM A FAILS TO ARM	1.00E-05	
1515)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	1.00E-10
	ACRPCFFLFBASRB	PIC L FWD BSM A FAILS TO FIRE	1.00E-05	
1516)	ACRPCFALS1BSRB	PIC L SEP BOLT 1B FAILS TO ARM	1.00E-05	1.00E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1517)	ACRPCFFRSFBSRB	PIC R SEP BOLT FWD B FAILS TO FIRE	1.00E-05	1.00E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1518)	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	1.00E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
1519)	ACRPCFALIGASRM	PIC LEFT IGNITER A FAILS TO ARM	1.00E-05	1.00E-10
	ACRPCFFLIGBSRM	PIC LEFT IGNITER B FAILS TO FIRE	1.00E-05	
1520)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	1.00E-10
	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	
1521)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	1.00E-10
	ACRPCFARSFASRB	PIC R SEP BOLT FWD A FAILS TO ARM	1.00E-05	
1522)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	1.00E-10
	ACRPCFFRSFASRB	PIC R SEP BOLT FWD A FAILS TO FIRE	1.00E-05	
1523)	ACRPCFALS2BSRB	PIC L SEP BOLT 2B FAILS TO ARM	1.00E-05	1.00E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
1524)	ACRPCFFLFBASRB	PIC L FWD BSM A FAILS TO FIRE	1.00E-05	1.00E-10
	ACRPCFFLFBBSRB	PIC L FWD BSM B FAILS TO FIRE	1.00E-05	
1525)	ACRCADHR2ASRB	LOCAL WIRE FAILURE(CM)	1.00E-05	1.00E-10
	ACRCADHR2BSRB	LOCAL WIRE FAILURE(CM)	1.00E-05	
1526)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	1.00E-10
	ACREXFDL2ASRB	EXPLOSIVE DEVICE FAILS TO DETONATE L AFT	1.00E-05	
1527)	ACRPCFFLS1BSRB	PIC L SEP BOLT 1B FAILS TO FIRE	1.00E-05	1.00E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1528)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	1.00E-10
	ACRPCFFRABBSRB	PIC R AFT BSM B FAILS TO FIRE	1.00E-05	
1529)	ACRPCFALS1ASRB	PIC L SEP BOLT 1A FAILS TO ARM	1.00E-05	1.00E-10
	ACRPCFFLS1BSRB	PIC L SEP BOLT 1B FAILS TO FIRE	1.00E-05	
1530)	ACRPCFFRS1ASRB	PIC R SEP BOLT 1A FAILS TO FIRE	1.00E-05	1.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1531)	ACRPCFFRS1BSRB	PIC R SEP BOLT 1B FAILS TO FIRE	1.00E-05	1.00E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
1532)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	1.00E-10
	ACRPCFFLSFASRB	PIC L SEP BOLT FWD A FAILS TO FIRE	1.00E-05	
1533)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	1.00E-10
	ACRPCFFLSFBSRB	PIC L SEP BOLT FWD B FAILS TO FIRE	1.00E-05	
1534)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	1.00E-10
	ACRPCFALSFBSRB	PIC L SEP BOLT FWD B FAILS TO ARM	1.00E-05	
1535)	ACRPCFALSFASRB	PIC L SEP BOLT FWD A FAILS TO ARM	1.00E-05	1.00E-10
	ACRPCFFLSFBSRB	PIC L SEP BOLT FWD B FAILS TO FIRE	1.00E-05	
1536)	ACRPCFALS3ASRB	PIC L SEP BOLT 3A FAILS TO ARM	1.00E-05	1.00E-10
	ACRPCFFLS3BSRB	PIC L SEP BOLT 3B FAILS TO FIRE	1.00E-05	
1537)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	1.00E-10
	ACRPCFALSFBSRB	PIC L SEP BOLT FWD B FAILS TO ARM	1.00E-05	
1538)	ACRPCFFLSFBSRB	PIC L SEP BOLT FWD B FAILS TO FIRE	1.00E-05	1.00E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1539)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	1.00E-10
	ACRPCFARFBASRB	PIC R FWD BSM A FAILS TO ARM	1.00E-05	
1540)	ACRPCFARFBASRB	PIC R FWD BSM A FAILS TO ARM	1.00E-05	1.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1541)	ACRPCFFLS2BSRB	PIC L SEP BOLT 2B FAILS TO FIRE	1.00E-05	1.00E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
1542)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	1.00E-10
	ACRPCFFLABASRB	PIC L AFT BSM A FAILS TO FIRE	1.00E-05	
1543)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	1.00E-10
	ACRPCFFRFBASRB	PIC R FWD BSM A FAILS TO FIRE	1.00E-05	
1544)	ACRPCFFRS1ASRB	PIC R SEP BOLT 1A FAILS TO FIRE	1.00E-05	1.00E-10
	ACRPCFFRS1BSRB	PIC R SEP BOLT 1B FAILS TO FIRE	1.00E-05	
1545)	ACRPCFFRS2ASRB	PIC R SEP BOLT 2A FAILS TO FIRE	1.00E-05	1.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1546)	ACRPCFALSFASRB	PIC L SEP BOLT FWD A FAILS TO ARM	1.00E-05	1.00E-10
	ACRPCFALSFBSRB	PIC L SEP BOLT FWD B FAILS TO ARM	1.00E-05	
1547)	ACRPCFFRS2ASRB	PIC R SEP BOLT 2A FAILS TO FIRE	1.00E-05	1.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1548)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	1.00E-10
	ACRPCFALS2ASRB	PIC L SEP BOLT 2A FAILS TO ARM	1.00E-05	
1549)	ACRPCFALABBSRB	PIC L AFT BSM B FAILS TO ARM	1.00E-05	1.00E-10
	ACRPCFFLABASRB	PIC L AFT BSM A FAILS TO FIRE	1.00E-05	
1550)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	1.00E-10
	ACRPCFALSFASRB	PIC L SEP BOLT FWD A FAILS TO ARM	1.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description		Basic Event Probability	Cutset Probability
1551)	ACRPCFARS2ASRB	PIC R SEP BOLT 2A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1552)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFALS1ASRB	PIC L SEP BOLT 1A FAILS TO ARM		1.00E-05	
1553)	ACRPCFARS2ASRB	PIC R SEP BOLT 2A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1554)	ACRPCFARS2ASRB	PIC R SEP BOLT 2A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1555)	ACRPCFARFBASRB	PIC R FWD BSM A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1556)	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	1.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1557)	ACRPCFFRS2ASRB	PIC R SEP BOLT 2A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1558)	ACRPCFALSFASRB	PIC L SEP BOLT FWD A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1559)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLSFASRB	PIC L SEP BOLT FWD A FAILS TO FIRE		1.00E-05	
1560)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFFRS2ASRB	PIC R SEP BOLT 2A FAILS TO FIRE		1.00E-05	
1561)	ACRPCFFLSFASRB	PIC L SEP BOLT FWD A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1562)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLS3ASRB	PIC L SEP BOLT 3A FAILS TO FIRE		1.00E-05	
1563)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFARS2BSRB	PIC R SEP BOLT 2B FAILS TO ARM		1.00E-05	
1564)	ACRPCFALSFBSRB	PIC L SEP BOLT FWD B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1565)	ACRPCFFLS3ASRB	PIC L SEP BOLT 3A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1566)	ACRPCFALSFBSRB	PIC L SEP BOLT FWD B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1567)	ACRPCFARS2BSRB	PIC R SEP BOLT 2B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1568)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1569)	ACRPCFARS1ASRB	PIC R SEP BOLT 1A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description		Basic Event Probability	Cutset Probability
1570)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFARS2ASRB	PIC R SEP BOLT 2A FAILS TO ARM		1.00E-05	
1571)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFARS2ASRB	PIC R SEP BOLT 2A FAILS TO ARM		1.00E-05	
1572)	ACRPCFFRS1ASRB	PIC R SEP BOLT 1A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1573)	ACRPCFALSFASRB	PIC L SEP BOLT FWD A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1574)	ACRPCFFRS1BSRB	PIC R SEP BOLT 1B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1575)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFARABASRB	PIC R AFT BSM A FAILS TO ARM		1.00E-05	
1576)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFALSFASRB	PIC L SEP BOLT FWD A FAILS TO ARM		1.00E-05	
1577)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFRS2ASRB	PIC R SEP BOLT 2A FAILS TO FIRE		1.00E-05	
1578)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFARFBASRB	PIC R FWD BSM A FAILS TO ARM		1.00E-05	
1579)	ACRPCFFRS2ASRB	PIC R SEP BOLT 2A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRPCFFRS2BSRB	PIC R SEP BOLT 2B FAILS TO FIRE		1.00E-05	
1580)	ACRPCFFLSFBSRB	PIC L SEP BOLT FWD B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1581)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1582)	ACRPCFARS2BSRB	PIC R SEP BOLT 2B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1583)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFARS2ASRB	PIC R SEP BOLT 2A FAILS TO ARM		1.00E-05	
1584)	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	1.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1585)	ACRPCFFLS2ASRB	PIC L SEP BOLT 2A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1586)	ACRPCFARS2ASRB	PIC R SEP BOLT 2A FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFFRS2BSRB	PIC R SEP BOLT 2B FAILS TO FIRE		1.00E-05	
1587)	ACRPCFFRFBASRB	PIC R FWD BSM A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1588)	ACRPCFARSFASRB	PIC R SEP BOLT FWD A FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFFRSFBSRB	PIC R SEP BOLT FWD B FAILS TO FIRE		1.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description		Basic Event Probability	Cutset Probability
1589)	ACRPCFALS1BSRB	PIC L SEP BOLT 1B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1590)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1591)	ACRPCFARABASRB	PIC R AFT BSM A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1592)	ACRPCFALS1ASRB	PIC L SEP BOLT 1A FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFALS1BSRB	PIC L SEP BOLT 1B FAILS TO ARM		1.00E-05	
1593)	ACRPCFFRS3ASRB	PIC R SEP BOLT 3A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1594)	ACRPCFARSFASRB	PIC R SEP BOLT FWD A FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFARSFBSRB	PIC R SEP BOLT FWD B FAILS TO ARM		1.00E-05	
1595)	ACRPCFFRS3ASRB	PIC R SEP BOLT 3A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1596)	ACRPCFFLS1ASRB	PIC L SEP BOLT 1A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1597)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFARABBSRB	PIC R AFT BSM B FAILS TO ARM		1.00E-05	
1598)	ACRPCFARS2ASRB	PIC R SEP BOLT 2A FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFARS2BSRB	PIC R SEP BOLT 2B FAILS TO ARM		1.00E-05	
1599)	ACRPCFFHD6ASRB	PIC HD6A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRPCFFHD6BSRB	PIC HD6B FAILS TO FIRE		1.00E-05	
1600)	ACRPCFARS3ASRB	PIC R SEP BOLT 3A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1601)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFRSFASRB	PIC R SEP BOLT FWD A FAILS TO FIRE		1.00E-05	
1602)	ACRPCFFRABASRB	PIC R AFT BSM A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1603)	ACRPCFALS2BSRB	PIC L SEP BOLT 2B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1604)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFARSFASRB	PIC R SEP BOLT FWD A FAILS TO ARM		1.00E-05	
1605)	ACRPCFFRS3ASRB	PIC R SEP BOLT 3A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1606)	ACRPCFARS3BSRB	PIC R SEP BOLT 3B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1607)	ACRPCFFRFBBSRB	PIC R FWD BSM B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
1608)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	1.00E-10
	ACRPCFALS1BSRB	PIC L SEP BOLT 1B FAILS TO ARM	1.00E-05	
1609)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	1.00E-10
	ACRPCFFRS3ASRB	PIC R SEP BOLT 3A FAILS TO FIRE	1.00E-05	
1610)	ACRPCFFLS1ASRB	PIC L SEP BOLT 1A FAILS TO FIRE	1.00E-05	1.00E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1611)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	1.00E-10
	ACRPCFARS2BSRB	PIC R SEP BOLT 2B FAILS TO ARM	1.00E-05	
1612)	ACRPCFFRIGASRM	PIC RIGHT IGNITER A FAILS TO FIRE	1.00E-05	1.00E-10
	ACRPCFFRIGBSRM	PIC RIGHT IGNITER B FAILS TO FIRE	1.00E-05	
1613)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	1.00E-10
	ACRPCFFRS3ASRB	PIC R SEP BOLT 3A FAILS TO FIRE	1.00E-05	
1614)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	1.00E-10
	ACRPCFFRS2ASRB	PIC R SEP BOLT 2A FAILS TO FIRE	1.00E-05	
1615)	ACRPCFALS3BSRB	PIC L SEP BOLT 3B FAILS TO ARM	1.00E-05	1.00E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
1616)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	1.00E-10
	ACRPCFFRS1ASRB	PIC R SEP BOLT 1A FAILS TO FIRE	1.00E-05	
1617)	ACRPCFARS2BSRB	PIC R SEP BOLT 2B FAILS TO ARM	1.00E-05	1.00E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1618)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	1.00E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1619)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	1.00E-10
	ACRPCFALS2BSRB	PIC L SEP BOLT 2B FAILS TO ARM	1.00E-05	
1620)	ACRPCFALS2ASRB	PIC L SEP BOLT 2A FAILS TO ARM	1.00E-05	1.00E-10
	ACRPCFALS2BSRB	PIC L SEP BOLT 2B FAILS TO ARM	1.00E-05	
1621)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	1.00E-10
	ACRPCFFRSFBSRB	PIC R SEP BOLT FWD B FAILS TO FIRE	1.00E-05	
1622)	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	1.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1623)	ACRPCFFLS1BSRB	PIC L SEP BOLT 1B FAILS TO FIRE	1.00E-05	1.00E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1624)	ACRCADHR2BSRB	LOCAL WIRE FAILURE(CM)	1.00E-05	1.00E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1625)	ACRCADHR2BSRB	LOCAL WIRE FAILURE(CM)	1.00E-05	1.00E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1626)	ACRPCFFHD5ASRB	PIC HD5A FAILS TO FIRE	1.00E-05	1.00E-10
	ACRPCFFHD5BSRB	PIC HD5B FAILS TO FIRE	1.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description		Basic Event Probability	Cutset Probability
1627)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1628)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	
1629)	ACRPCFARS3ASRB	PIC R SEP BOLT 3A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1630)	ACRPCFARIGBSRM	PIC RIGHT IGNITER B FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFFRIGASRM	PIC RIGHT IGNITER A FAILS TO FIRE		1.00E-05	
1631)	ACRPCFFRFBASRB	PIC R FWD BSM A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRPCFFRFBBSRB	PIC R FWD BSM B FAILS TO FIRE		1.00E-05	
1632)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1633)	ACRPCFARS3ASRB	PIC R SEP BOLT 3A FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFFRS3BSRB	PIC R SEP BOLT 3B FAILS TO FIRE		1.00E-05	
1634)	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	1.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1635)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFRS2BSRB	PIC R SEP BOLT 2B FAILS TO FIRE		1.00E-05	
1636)	ACRPCFARS3BSRB	PIC R SEP BOLT 3B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1637)	ACRPCFALS1ASRB	PIC L SEP BOLT 1A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1638)	ACRPCFALS1ASRB	PIC L SEP BOLT 1A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1639)	ACRPCFALIGASRM	PIC LEFT IGNITER A FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFALIGBSRM	PIC LEFT IGNITER B FAILS TO ARM		1.00E-05	
1640)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFARS3BSRB	PIC R SEP BOLT 3B FAILS TO ARM		1.00E-05	
1641)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1642)	ACRCADHR2ASRB	LOCAL WIRE FAILURE(CM)		1.00E-05	1.00E-10
	ACRPCFFRABBSRB	PIC R AFT BSM B FAILS TO FIRE		1.00E-05	
1643)	ACRCADHR2BSRB	LOCAL WIRE FAILURE(CM)		1.00E-05	1.00E-10
	ACRPCFFRABASRB	PIC R AFT BSM A FAILS TO FIRE		1.00E-05	
1644)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFALABASRB	PIC L AFT BSM A FAILS TO ARM		1.00E-05	
1645)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFARS3ASRB	PIC R SEP BOLT 3A FAILS TO ARM		1.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description		Basic Event Probability	Cutset Probability
1646)	ACRCADHR2BSRB	LOCAL WIRE FAILURE(CM)		1.00E-05	1.00E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1647)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1648)	ACRPCFFLIGASRM	PIC LEFT IGNITER A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRPCFFLIGBSRM	PIC LEFT IGNITER B FAILS TO FIRE		1.00E-05	
1649)	ACRPCFALFBASRB	PIC L FWD BSM A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1650)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFARS3BSRB	PIC R SEP BOLT 3B FAILS TO ARM		1.00E-05	
1651)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFARFBBSRB	PIC R FWD BSM B FAILS TO ARM		1.00E-05	
1652)	ACRPCFFRS3ASRB	PIC R SEP BOLT 3A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRPCFFRS3BSRB	PIC R SEP BOLT 3B FAILS TO FIRE		1.00E-05	
1653)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1654)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLFBBSRB	PIC L FWD BSM B FAILS TO FIRE		1.00E-05	
1655)	ACRPCFFLS1ASRB	PIC L SEP BOLT 1A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1656)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFFRS3BSRB	PIC R SEP BOLT 3B FAILS TO FIRE		1.00E-05	
1657)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1658)	ACRPCFFLFBBSRB	PIC L FWD BSM B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1659)	ACRPCFALFBBSRB	PIC L FWD BSM B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1660)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1661)	ACRPCFARABASRB	PIC R AFT BSM A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1662)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLFBASRB	PIC L FWD BSM A FAILS TO FIRE		1.00E-05	
1663)	ACRPCFFLABBSRB	PIC L AFT BSM B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1664)	ACRPCFALS1ASRB	PIC L SEP BOLT 1A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description		Basic Event Probability	Cutset Probability
1665)	ACRPCFARIGASRM	PIC RIGHT IGNITER A FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFARIGBSRM	PIC RIGHT IGNITER B FAILS TO ARM		1.00E-05	
1666)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLS2ASRB	PIC L SEP BOLT 2A FAILS TO FIRE		1.00E-05	
1667)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLFBASRB	PIC L FWD BSM A FAILS TO FIRE		1.00E-05	
1668)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFALFBASRB	PIC L FWD BSM A FAILS TO ARM		1.00E-05	
1669)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLS1BSRB	PIC L SEP BOLT 1B FAILS TO FIRE		1.00E-05	
1670)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFALFBBSRB	PIC L FWD BSM B FAILS TO ARM		1.00E-05	
1671)	ACRPCFALFBBSRB	PIC L FWD BSM B FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFFLFBASRB	PIC L FWD BSM A FAILS TO FIRE		1.00E-05	
1672)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1673)	ACRPCFALIGBSRM	PIC LEFT IGNITER B FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFFLIGASRM	PIC LEFT IGNITER A FAILS TO FIRE		1.00E-05	
1674)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	
1675)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1676)	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	1.00E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1677)	ACREXFDL2ASRB	EXPLOSIVE DEVICE FAILS TO DETONATE	L AFT	1.00E-05	1.00E-10
	ACRPCFALABBSRB	PIC L AFT BSM B FAILS TO ARM		1.00E-05	
1678)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLS1ASRB	PIC L SEP BOLT 1A FAILS TO FIRE		1.00E-05	
1679)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1680)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1681)	ACRPCFFLFBBSRB	PIC L FWD BSM B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1682)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFARS3ASRB	PIC R SEP BOLT 3A FAILS TO ARM		1.00E-05	
1683)	ACRPCFALABASRB	PIC L AFT BSM A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description		Basic Event Probability	Cutset Probability
1684)	ACRPCFALFBBSRB	PIC L FWD BSM B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1685)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1686)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1687)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1688)	ACRPCFFHD3ASRB	PIC HD3A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRPCFFHD3BSRB	PIC HD3B FAILS TO FIRE		1.00E-05	
1689)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLS1ASRB	PIC L SEP BOLT 1A FAILS TO FIRE		1.00E-05	
1690)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFARFBBSRB	PIC R FWD BSM B FAILS TO ARM		1.00E-05	
1691)	ACRPCFALFBASRB	PIC L FWD BSM A FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFFLFBBSRB	PIC L FWD BSM B FAILS TO FIRE		1.00E-05	
1692)	ACRPCFFRS2BSRB	PIC R SEP BOLT 2B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1693)	ACRPCFFHD1ASRB	PIC HD1A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRPCFFHD1BSRB	PIC HD1B FAILS TO FIRE		1.00E-05	
1694)	ACRPCFFLS3BSRB	PIC L SEP BOLT 3B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1695)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLS1ASRB	PIC L SEP BOLT 1A FAILS TO FIRE		1.00E-05	
1696)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	
1697)	ACRPCFARSFASRB	PIC R SEP BOLT FWD A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1698)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1699)	ACRPCFARSFBSRB	PIC R SEP BOLT FWD B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1700)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFALABASRB	PIC L AFT BSM A FAILS TO ARM		1.00E-05	
1701)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFFRSFASRB	PIC R SEP BOLT FWD A FAILS TO FIRE		1.00E-05	
1702)	ACRPCFFHD7ASRB	PIC HD7A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRPCFFHD7BSRB	PIC HD7B FAILS TO FIRE		1.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description		Basic Event Probability	Cutset Probability
1703)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFRFBASRB	PIC R FWD BSM A FAILS TO FIRE		1.00E-05	
1704)	ACRPCFFHD2ASRB	PIC HD2A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRPCFFHD2BSRB	PIC HD2B FAILS TO FIRE		1.00E-05	
1705)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLFBBSRB	PIC L FWD BSM B FAILS TO FIRE		1.00E-05	
1706)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFFRS2BSRB	PIC R SEP BOLT 2B FAILS TO FIRE		1.00E-05	
1707)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1708)	ACRPCFFRFBASRB	PIC R FWD BSM A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1709)	ACRPCFFRFBASRB	PIC R FWD BSM A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1710)	ACRPCFARFBBSRB	PIC R FWD BSM B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1711)	ACRPCFFLFBASRB	PIC L FWD BSM A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1712)	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	1.00E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1713)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFARSFBSRB	PIC R SEP BOLT FWD B FAILS TO ARM		1.00E-05	
1714)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFRS2BSRB	PIC R SEP BOLT 2B FAILS TO FIRE		1.00E-05	
1715)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1716)	ACRPCFFLFBASRB	PIC L FWD BSM A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1717)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1718)	ACRPCFALFBBSRB	PIC L FWD BSM B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1719)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL		1.00E-05	
1720)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1721)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFARSFBSRB	PIC R SEP BOLT FWD B FAILS TO ARM		1.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
1722)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	1.00E-10
	ACRPCFFLS3BSRB	PIC L SEP BOLT 3B FAILS TO FIRE	1.00E-05	
1723)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	1.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1724)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	1.00E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1725)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	1.00E-10
	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	
1726)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	1.00E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1727)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	1.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1728)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	1.00E-10
	ACRPCFFRSFBSRB	PIC R SEP BOLT FWD B FAILS TO FIRE	1.00E-05	
1729)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	1.00E-10
	ACRPCFARSFBSRB	PIC R SEP BOLT FWD B FAILS TO ARM	1.00E-05	
1730)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	1.00E-10
	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	
1731)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	1.00E-10
	ACRPCFFLS1BSRB	PIC L SEP BOLT 1B FAILS TO FIRE	1.00E-05	
1732)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	1.00E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1733)	ACRPCFALS3ASRB	PIC L SEP BOLT 3A FAILS TO ARM	1.00E-05	1.00E-10
	ACRPCFALS3BSRB	PIC L SEP BOLT 3B FAILS TO ARM	1.00E-05	
1734)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	1.00E-10
	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	
1735)	ACRPCFFLS3ASRB	PIC L SEP BOLT 3A FAILS TO FIRE	1.00E-05	1.00E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
1736)	ACRPCFFRSFASRB	PIC R SEP BOLT FWD A FAILS TO FIRE	1.00E-05	1.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1737)	ACRPCFALS1BSRB	PIC L SEP BOLT 1B FAILS TO ARM	1.00E-05	1.00E-10
	ACRPCFFLS1ASRB	PIC L SEP BOLT 1A FAILS TO FIRE	1.00E-05	
1738)	ACRPCFARSFBSRB	PIC R SEP BOLT FWD B FAILS TO ARM	1.00E-05	1.00E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1739)	ACRPCFFRSFASRB	PIC R SEP BOLT FWD A FAILS TO FIRE	1.00E-05	1.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1740)	ACRPCFFRSFASRB	PIC R SEP BOLT FWD A FAILS TO FIRE	1.00E-05	1.00E-10
	ACRPCFFRSFBSRB	PIC R SEP BOLT FWD B FAILS TO FIRE	1.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description		Basic Event Probability	Cutset Probability
1741)	ACRPCFARABBSRB	PIC R AFT BSM B FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFFRABASRB	PIC R AFT BSM A FAILS TO FIRE		1.00E-05	
1742)	ACRPCFFRSFBSRB	PIC R SEP BOLT FWD B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1743)	ACRPCFALS3ASRB	PIC L SEP BOLT 3A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1744)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1745)	ACRPCFALS2ASRB	PIC L SEP BOLT 2A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1746)	ACRPCFARABASRB	PIC R AFT BSM A FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFARABBSRB	PIC R AFT BSM B FAILS TO ARM		1.00E-05	
1747)	ACRPCFFLS3BSRB	PIC L SEP BOLT 3B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1748)	ACRPCFALS3BSRB	PIC L SEP BOLT 3B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1749)	ACRPCFALS3ASRB	PIC L SEP BOLT 3A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1750)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLS3ASRB	PIC L SEP BOLT 3A FAILS TO FIRE		1.00E-05	
1751)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLS3ASRB	PIC L SEP BOLT 3A FAILS TO FIRE		1.00E-05	
1752)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFALS3ASRB	PIC L SEP BOLT 3A FAILS TO ARM		1.00E-05	
1753)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLS3BSRB	PIC L SEP BOLT 3B FAILS TO FIRE		1.00E-05	
1754)	ACRPCFALS3BSRB	PIC L SEP BOLT 3B FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFFLS3ASRB	PIC L SEP BOLT 3A FAILS TO FIRE		1.00E-05	
1755)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFALS3BSRB	PIC L SEP BOLT 3B FAILS TO ARM		1.00E-05	
1756)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	
1757)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1758)	ACRPCFALABASRB	PIC L AFT BSM A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1759)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFALS3BSRB	PIC L SEP BOLT 3B FAILS TO ARM		1.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description		Basic Event Probability	Cutset Probability
1760)	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	1.00E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1761)	ACREXFDL2BSRB	EXPLOSIVE DEVICE FAILS TO DETONATE	L AFT	1.00E-05	1.00E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1762)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFALS1BSRB	PIC L SEP BOLT 1B FAILS TO ARM		1.00E-05	
1763)	ACRPCFFLS3BSRB	PIC L SEP BOLT 3B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1764)	ACRPCFALS3BSRB	PIC L SEP BOLT 3B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1765)	ACRPCFFLFBASRB	PIC L FWD BSM A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1766)	ACRPCFALABBSRB	PIC L AFT BSM B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1767)	ACRPCFFLS3ASRB	PIC L SEP BOLT 3A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRPCFFLS3BSRB	PIC L SEP BOLT 3B FAILS TO FIRE		1.00E-05	
1768)	ACRPCFARFBBSRB	PIC R FWD BSM B FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFFRFBASRB	PIC R FWD BSM A FAILS TO FIRE		1.00E-05	
1769)	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	1.00E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1770)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLS1BSRB	PIC L SEP BOLT 1B FAILS TO FIRE		1.00E-05	
1771)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFALABBSRB	PIC L AFT BSM B FAILS TO ARM		1.00E-05	
1772)	ACREXFDL2BSRB	EXPLOSIVE DEVICE FAILS TO DETONATE	L AFT	1.00E-05	1.00E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1773)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFRABBSRB	PIC R AFT BSM B FAILS TO FIRE		1.00E-05	
1774)	ACRPCFALABASRB	PIC L AFT BSM A FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFFLABBSRB	PIC L AFT BSM B FAILS TO FIRE		1.00E-05	
1775)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFRSFBSRB	PIC R SEP BOLT FWD B FAILS TO FIRE		1.00E-05	
1776)	ACRPCFFLFBBSRB	PIC L FWD BSM B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1777)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFARSFASRB	PIC R SEP BOLT FWD A FAILS TO ARM		1.00E-05	
1778)	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	1.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description		Basic Event Probability	Cutset Probability
1779)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1780)	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	1.00E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1781)	ACREXFDL2BSRB	EXPLOSIVE DEVICE FAILS TO DETONATE	L AFT	1.00E-05	1.00E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1782)	ACRPCFARSFBSRB	PIC R SEP BOLT FWD B FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFFRSFASRB	PIC R SEP BOLT FWD A FAILS TO FIRE		1.00E-05	
1783)	ACRPCFARSFASRB	PIC R SEP BOLT FWD A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1784)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFALS3ASRB	PIC L SEP BOLT 3A FAILS TO ARM		1.00E-05	
1785)	ACREXFDL2ASRB	EXPLOSIVE DEVICE FAILS TO DETONATE	L AFT	1.00E-05	1.00E-10
	ACRPCFFLABBSRB	PIC L AFT BSM B FAILS TO FIRE		1.00E-05	
1786)	ACRPCFFRS3BSRB	PIC R SEP BOLT 3B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1787)	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	1.00E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1788)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLABBSRB	PIC L AFT BSM B FAILS TO FIRE		1.00E-05	
1789)	ACREXFDL2ASRB	EXPLOSIVE DEVICE FAILS TO DETONATE	L AFT	1.00E-05	1.00E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1790)	ACRPCFALSFBSRB	PIC L SEP BOLT FWD B FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFFLSFASRB	PIC L SEP BOLT FWD A FAILS TO FIRE		1.00E-05	
1791)	ACRPCFALABASRB	PIC L AFT BSM A FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFALABBSRB	PIC L AFT BSM B FAILS TO ARM		1.00E-05	
1792)	ACRPCFARFBASRB	PIC R FWD BSM A FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFARFBBSRB	PIC R FWD BSM B FAILS TO ARM		1.00E-05	
1793)	ACRPCFFLS1ASRB	PIC L SEP BOLT 1A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRPCFFLS1BSRB	PIC L SEP BOLT 1B FAILS TO FIRE		1.00E-05	
1794)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFALFBBSRB	PIC L FWD BSM B FAILS TO ARM		1.00E-05	
1795)	ACRPCFFRABASRB	PIC R AFT BSM A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1796)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFALABBSRB	PIC L AFT BSM B FAILS TO ARM		1.00E-05	
1797)	ACREXFDL2BSRB	EXPLOSIVE DEVICE FAILS TO DETONATE	L AFT	1.00E-05	1.00E-10
	ACRPCFFLABASRB	PIC L AFT BSM A FAILS TO FIRE		1.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description		Basic Event Probability	Cutset Probability
1798)	ACRPCFALABBSRB	PIC L AFT BSM B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1799)	ACRPCFFRS3BSRB	PIC R SEP BOLT 3B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1800)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFARS1ASRB	PIC R SEP BOLT 1A FAILS TO ARM		1.00E-05	
1801)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFALS3ASRB	PIC L SEP BOLT 3A FAILS TO ARM		1.00E-05	
1802)	ACRPCFFRABBSRB	PIC R AFT BSM B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1803)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFRS1BSRB	PIC R SEP BOLT 1B FAILS TO FIRE		1.00E-05	
1804)	ACRPCFARFBASRB	PIC R FWD BSM A FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFFRFBBSRB	PIC R FWD BSM B FAILS TO FIRE		1.00E-05	
1805)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACREXFDL2ASRB	EXPLOSIVE DEVICE FAILS TO DETONATE	L AFT	1.00E-05	
1806)	ACRPCFALS2BSRB	PIC L SEP BOLT 2B FAILS TO ARM		1.00E-05	1.00E-10
	ACRPCFFLS2ASRB	PIC L SEP BOLT 2A FAILS TO FIRE		1.00E-05	
1807)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLFBBSRB	PIC L FWD BSM B FAILS TO FIRE		1.00E-05	
1808)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRCADHR2ASRB	LOCAL WIRE FAILURE(CM)		1.00E-05	
1809)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFALABBSRB	PIC L AFT BSM B FAILS TO ARM		1.00E-05	
1810)	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	1.00E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1811)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACREXFDL2BSRB	EXPLOSIVE DEVICE FAILS TO DETONATE	L AFT	1.00E-05	
1812)	ACREXFDL2ASRB	EXPLOSIVE DEVICE FAILS TO DETONATE	L AFT	1.00E-05	1.00E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1813)	ACRPCFARS1ASRB	PIC R SEP BOLT 1A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1814)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACREXFDL2BSRB	EXPLOSIVE DEVICE FAILS TO DETONATE	L AFT	1.00E-05	
1815)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACREXFDL2BSRB	EXPLOSIVE DEVICE FAILS TO DETONATE	L AFT	1.00E-05	
1816)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFALS2BSRB	PIC L SEP BOLT 2B FAILS TO ARM		1.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description		Basic Event Probability	Cutset Probability
1817)	ACRPCFALS1BSRB	PIC L SEP BOLT 1B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1818)	ACRPCFFLABASRB	PIC L AFT BSM A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRPCFFLABBSRB	PIC L AFT BSM B FAILS TO FIRE		1.00E-05	
1819)	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	1.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1820)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLABBSRB	PIC L AFT BSM B FAILS TO FIRE		1.00E-05	
1821)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRCADHR2ASRB	LOCAL WIRE FAILURE(CM)		1.00E-05	
1822)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFALFBBSRB	PIC L FWD BSM B FAILS TO ARM		1.00E-05	
1823)	ACREXFDL2BSRB	EXPLOSIVE DEVICE FAILS TO DETONATE	L AFT	1.00E-05	1.00E-10
	ACRPCFALABASRB	PIC L AFT BSM A FAILS TO ARM		1.00E-05	
1824)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFALS1ASRB	PIC L SEP BOLT 1A FAILS TO ARM		1.00E-05	
1825)	ACRPCFALS2BSRB	PIC L SEP BOLT 2B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1826)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFFRABBSRB	PIC R AFT BSM B FAILS TO FIRE		1.00E-05	
1827)	ACRPCFFLS2ASRB	PIC L SEP BOLT 2A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1828)	ACRPCFALS2ASRB	PIC L SEP BOLT 2A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1829)	ACRPCFFLABASRB	PIC L AFT BSM A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1830)	ACRPCFALABBSRB	PIC L AFT BSM B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1831)	ACRPCFFRS3BSRB	PIC R SEP BOLT 3B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1832)	ACRPCFFRABASRB	PIC R AFT BSM A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1833)	ACRCADHR2ASRB	LOCAL WIRE FAILURE(CM)		1.00E-05	1.00E-10
	ACRPCFARABBSRB	PIC R AFT BSM B FAILS TO ARM		1.00E-05	
1834)	ACRPCFFLABASRB	PIC L AFT BSM A FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1835)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLABASRB	PIC L AFT BSM A FAILS TO FIRE		1.00E-05	

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1836)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFALABASRB	PIC L AFT BSM A FAILS TO ARM		1.00E-05	
1837)	ACRPCFALABASRB	PIC L AFT BSM A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SRB	1.00E-05	
1838)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFLABASRB	PIC L AFT BSM A FAILS TO FIRE		1.00E-05	
1839)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRPCFARS1BSRB	PIC R SEP BOLT 1B FAILS TO ARM		1.00E-05	
1840)	ACRPCFFRABBSRB	PIC R AFT BSM B FAILS TO FIRE		1.00E-05	1.00E-10
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1841)	ACRPCFARABASRB	PIC R AFT BSM A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1842)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFFRFBBSRB	PIC R FWD BSM B FAILS TO FIRE		1.00E-05	
1843)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFARABBSRB	PIC R AFT BSM B FAILS TO ARM		1.00E-05	
1844)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFALS1BSRB	PIC L SEP BOLT 1B FAILS TO ARM		1.00E-05	
1845)	ACRPCFALFBASRB	PIC L FWD BSM A FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	L SEP	1.00E-05	
1846)	ACRCADHR2BSRB	LOCAL WIRE FAILURE(CM)		1.00E-05	1.00E-10
	ACRPCFARABASRB	PIC R AFT BSM A FAILS TO ARM		1.00E-05	
1847)	ACRPCFARFBBSRB	PIC R FWD BSM B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1848)	ACRPCFARABBSRB	PIC R AFT BSM B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1849)	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	1.00E-10
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1850)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1851)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL		1.00E-05	1.00E-10
	ACRCADHR2BSRB	LOCAL WIRE FAILURE(CM)		1.00E-05	
1852)	ACRPCFARSFBSRB	PIC R SEP BOLT FWD B FAILS TO ARM		1.00E-05	1.00E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO)	R SRB	1.00E-05	
1853)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL		1.00E-05	1.00E-10
	ACRPCFFRABASRB	PIC R AFT BSM A FAILS TO FIRE		1.00E-05	
1854)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL		1.00E-05	1.00E-10
	ACRPCFARABASRB	PIC R AFT BSM A FAILS TO ARM		1.00E-05	

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1855)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	1.00E-10
	ACRPCFFRFBBSRB	PIC R FWD BSM B FAILS TO FIRE	1.00E-05	
1856)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	1.00E-10
	ACRPCFARS3ASRB	PIC R SEP BOLT 3A FAILS TO ARM	1.00E-05	
1857)	ACRPCFARS3BSRB	PIC R SEP BOLT 3B FAILS TO ARM	1.00E-05	1.00E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1858)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	1.00E-10
	ACRPCFFRABASRB	PIC R AFT BSM A FAILS TO FIRE	1.00E-05	
1859)	ACRPCFFLS3ASRB	PIC L SEP BOLT 3A FAILS TO FIRE	1.00E-05	1.00E-10
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1860)	ACRPCFFRABBSRB	PIC R AFT BSM B FAILS TO FIRE	1.00E-05	1.00E-10
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1861)	ACRPCFALS2ASRB	PIC L SEP BOLT 2A FAILS TO ARM	1.00E-05	1.00E-10
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
1862)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	1.00E-10
	ACRCADHR2ASRB	LOCAL WIRE FAILURE(CM)	1.00E-05	
1863)	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	1.00E-10
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1864)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	1.00E-10
	ACRCADHR2BSRB	LOCAL WIRE FAILURE(CM)	1.00E-05	
1865)	ACRPCFARABBSRB	PIC R AFT BSM B FAILS TO ARM	1.00E-05	1.00E-10
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
1866)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	1.00E-10
	ACRPCFARABBSRB	PIC R AFT BSM B FAILS TO ARM	1.00E-05	
1867)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	1.00E-10
	ACRPCFALS2ASRB	PIC L SEP BOLT 2A FAILS TO ARM	1.00E-05	
1868)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	1.00E-10
	ACRPCFFLS2BSRB	PIC L SEP BOLT 2B FAILS TO FIRE	1.00E-05	
1869)	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	9.96E-11
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
1870)	ASMAVFOMPHRPR1	SSME LH2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.36E-05	9.96E-11
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
1871)	ASMAVFOMPHRPR2	SSME LH2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	9.96E-11
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	

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	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
1872)	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	9.86E-11
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
1873)	EAOAASRA1LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	9.74E-11
	EAOAASRA2LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA3LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1874)	EAOAASRA1CSLT07	COMMON CAUSE FAILURE TO START OR RUN;	3.43E-04	9.74E-11
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1875)	ASMPAFPMPPRPB1	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 1)	7.76E-08	9.70E-11
	SMEFH	INITIATING EVENT LOSS OF GROSS H2 FLOW	1.25E-03	
1876)	EAOAAFRA1ULLT04	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	9.28E-11
	EAOAAFRA2OSLT04	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA1ISLT04	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LALT04	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1877)	EAOAAFRA1OSLT04	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	9.28E-11
	EAOAAFRA1ULLT04	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	
	EAOAASRA2ISLT04	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LALT04	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1878)	EAOAAFRA1ULLT04	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	9.28E-11
	EAOAAFRA3OSLT04	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAASRA1ISLT04	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LALT04	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1879)	EAOAAFRA1OSLT04	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	9.28E-11
	EAOAAFRA1ULLT04	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	
	EAOAASRA3ISLT04	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LALT04	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1880)	EAOAAFRA1ULLT06	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL;	1.00E-01	9.23E-11
	EAOAAFRA2OSLT06	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	

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	EAOAALTA1SRLT06	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 3	9.94E-01	
	EAOAASRA3ISLT06	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LALT06	LEAKS DETECTED/CONFIRMED; INITIAL LEAK IN 3	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1881)	EAOAAFRA1ULLT06	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL;	1.00E-01	9.23E-11
	EAOAAFRA3OSLT06	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	
	EAOAALTA1SRLT06	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 3	9.94E-01	
	EAOAASRA2ISLT06	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LALT06	LEAKS DETECTED/CONFIRMED; INITIAL LEAK IN 3	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1882)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRRBS8SRB	ROCKET MOTOR RBS8 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1883)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRRBS1SRB	ROCKET MOTOR R BSM 1 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1884)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRLBS5SRB	ROCKET MOTOR L BSM 5 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1885)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRLBS8SRB	ROCKET MOTOR L BSM 8 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1886)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRRBS2SRB	ROCKET MOTOR RBS2 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1887)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRRBS6SRB	ROCKET MOTOR RBS6 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1888)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRRBS7SRB	ROCKET MOTOR RBS7 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Bacic Event Probability	Cutset Probability
1889)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRRBS5SRB	ROCKET MOTOR RBS5 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1890)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRLBS5SRB	ROCKET MOTOR L BSM 5 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1891)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRLBS3SRB	ROCKET MOTOR L BSM 3 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1892)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRRBS2SRB	ROCKET MOTOR RBS2 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1893)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRLBS1SRB	ROCKET MOTOR L BSM 1 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1894)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRRBS6SRB	ROCKET MOTOR RBS6 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1895)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRLBS7SRB	ROCKET MOTOR L BSM 7 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1896)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRRBS1SRB	ROCKET MOTOR R BSM 1 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1897)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRLBS3SRB	ROCKET MOTOR L BSM 3 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1898)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRRBS5SRB	ROCKET MOTOR RBS5 BURN THRU OR RUPTURE	1.00E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1899)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRLBS2SRB	ROCKET MOTOR L BSM 2 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1900)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRLBS2SRB	ROCKET MOTOR L BSM 2 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1901)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRLBS6SRB	ROCKET MOTOR L BSM 6 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1902)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRRBS3SRB	ROCKET MOTOR RBS3 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1903)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRRBS8SRB	ROCKET MOTOR RBS8 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1904)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRRBS3SRB	ROCKET MOTOR RBS3 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1905)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRLBS4SRB	ROCKET MOTOR L BSM 4 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1906)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRLBS8SRB	ROCKET MOTOR L BSM 8 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1907)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRRBS4SRB	ROCKET MOTOR RBS4 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	

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1908)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRLBS7SRB	ROCKET MOTOR L BSM 7 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1909)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRRBS7SRB	ROCKET MOTOR RBS7 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1910)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRRBS4SRB	ROCKET MOTOR RBS4 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1911)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRLBS4SRB	ROCKET MOTOR L BSM 4 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1912)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRLBS1SRB	ROCKET MOTOR L BSM 1 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1913)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	9.00E-11
	ACRRMBRLBS6SRB	ROCKET MOTOR L BSM 6 BURN THRU OR RUPTURE	1.00E-04	
	COLBSMDMG	ADJACENT BSM(S) DESTROYED BY BT/R DURING FIRST SEC OF BURN	1.00E-01	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1914)	APMTSCCPRPMODTAB	CCF OF CHANNEL A CHANNEL B HPOTP DT SENSORS	5.00E-05	7.80E-11
	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
1915)	APMTSCCPRPMFDTAB	CCF OF CHANNEL A AND CHANNEL B HPFTP DT SENSORS	5.00E-05	7.80E-11
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
1916)	ASMPAFPMPPRPB1	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 1)	7.76E-08	7.76E-11
	SMELO	INITIATING EVENT COOLANT LINER OVERPRESSURE	1.00E-03	
1917)	EAOAASRA1ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	7.56E-11
	EAOAASRA2LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA3LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1918)	EAOAASRA1LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	7.56E-11
	EAOAASRA2LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA3ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1919)	EAOAASRA1LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	7.56E-11
	EAOAASRA2ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1920)-	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	6.91E-11
	ASMHVCPPHFSVA&B	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	2.70E-07	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
1921)	EAOAAFRA1ULL016	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	6.80E-11
	EAOAASRA1CSL016	COMMON CAUSE FAILURE TO START OR RUN;	8.87E-04	
	ENOAALKA1CLL016	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL016	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1922)	AAOAAFRA1IFLK12	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	6.78E-11
	AAOAAFRA2LOLK12	LEAKAGE INDUCED FAILURE; APU/HYD	8.00E-03	
	AAOAAFRA3LOLK12	LEAKAGE INDUCED FAILURE; APU/HYD	8.00E-03	
	ANOAALKA1LKLK12	APU/HYD UNIT 1 LEAK; APU/HYD HYDRAZINE	1.70E-04	
	ANOAALKA1LULK12	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
1923)	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	6.51E-11
	ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
1924)	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	6.51E-11
	ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
1925)	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	6.51E-11
	ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
1926)	EAOAAFRA3OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	6.50E-11
	EAOAASRA1ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	EAOAASRA2LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1927)	EAOAAFRA1OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	6.50E-11
	EAOAASRA2ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1928)	EAOAAFRA1OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	6.50E-11
	EAOAASRA2LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA3ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1929)	EAOAAFRA2OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	6.50E-11
	EAOAASRA1ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1930)	EAOAAFRA2OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	6.50E-11
	EAOAASRA1LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA3ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1931)	EAOAAFRA3OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	6.50E-11
	EAOAASRA1LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA2ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1932)	ASMPAFPMPPRPB1	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 1)	7.76E-08	6.21E-11
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	
1933)	EAOAAFRA1ULL016	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	5.85E-11
	EAOAASRA1LSL016	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA2ISL016	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL016	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL016	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILO	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1934)	EAOAAFRA1ULL016	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	5.85E-11

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	EAOAASRA1ISL016	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSL016	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL016	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL016	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1935)	EAOAAFRA1ULL016	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	5.85E-11
	EAOAASRA1LSL016	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA3ISL016	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL016	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL016	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1936)	EAOAAFRA1ULL016	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	5.85E-11
	EAOAASRA1ISL016	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA2LSL016	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL016	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL016	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1937)	EAOAAFRA1ULL018	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL;	1.00E-01	5.81E-11
	EAOAAL0A1SRL018	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 1	9.94E-01	
	EAOAASRA2ISL018	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSL018	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL018	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL018	LEAKS DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1938)	EAOAAFRA1ULL018	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL;	1.00E-01	5.81E-11
	EAOAAL0A1SRL018	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 1	9.94E-01	
	EAOAASRA2LSL018	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA3ISL018	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL018	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL018	LEAKS DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1939)	ASMAVFOMPHBLE1	SSME-1 FUEL BLEED VALVE FAILS TO OPEN	8.45E-05	5.50E-11
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
1940)	ASMAVFOMPHBLE2	SSME-2 FUEL BLEED VALVE FAILS TO OPEN	8.45E-05	5.50E-11
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Bacic Event Probability	Cutset Probability
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
1941)	ASMAVFOMPHBLE3	SSME-3 FUEL BLEED VALVE FAILS TO OPEN	8.45E-05	5.50E-11
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
1942)	AAOAAFRA1IFLK12	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	5.28E-11
	AAOAAFRA2IFLK12	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	
	AAOAAFRA3LOLK12	LEAKAGE INDUCED FAILURE; APU/HYD	8.00E-03	
	ANOAALKA1LKLK12	APU/HYD UNIT 1 LEAK; APU/HYD HYDRAZINE	1.70E-04	
	ANOAALKA1LULK12	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
1943)	AAOAAFRA1IFLK12	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	5.28E-11
	AAOAAFRA2LOLK12	LEAKAGE INDUCED FAILURE; APU/HYD	8.00E-03	
	AAOAAFRA3IFLK12	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	
	ANOAALKA1LKLK12	APU/HYD UNIT 1 LEAK; APU/HYD HYDRAZINE	1.70E-04	
	ANOAALKA1LULK12	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
1944)	EAOAAFRA1OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	5.05E-11
	EAOAASRA2ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1945)	EAOAAFRA3OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	5.05E-11
	EAOAASRA1ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA2ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1946)	EAOAAFRA2OSLT12	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	5.05E-11
	EAOAASRA1ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
1947)	APMPSCCPRPMPCCAB	CCF OF CHANNEL A AND CHANNEL B PRESSURE DROP SENSORS	5.00E-05	5.00E-11
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
1948)	APMPSFPPRPMPCCHA	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL A	1.00E-02	5.00E-11
	APMPSFPPRPMPCCHB	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL B	1.00E-02	
	APMTSCCPRPMODTAB	CCF OF CHANNEL A CHANNEL B HPOTP DT SENSORS	5.00E-05	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
1949)	ANROGISFLKLICJ	IGNITER TO CASE JOINT OUTER GASKET/INNER SEAL PATH	1.81E-03	4.91E-11
	ANROGOSFLKLICJ	IGNITER TO CASE JOINT OUTER GASKET/OUTER SEAL FAILURE	1.06E-06	
	ANROJSFLKLICJ	IGNITER TO CASE JOINT OUTER J-LEG SEAL FAILURE	2.56E-02	
1950)	ANROGISFLKRICJ	IGNITER TO CASE JOINT OUTER GASKET/INNER SEAL PATH	1.81E-03	4.91E-11
	ANROGOSFLKRICJ	IGNITER TO CASE JOINT OUTER GASKET/OUTER SEAL FAILURE	1.06E-06	
	ANROJSFLKRICJ	IGNITER TO CASE JOINT OUTER J-LEG SEAL FAILURE	2.56E-02	
1951)	ASMPAFPMPPRPB1	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 1)	7.76E-08	4.87E-11
	SMEMF	INITIATING EVENT HIGH MIXTURE RATIO IN FUEL PREBURNER	6.27E-04	
1952)	ASMPAFPMPPRPB1	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 1)	7.76E-08	4.87E-11
	SMEMO	INITIATING EVENT HIGH MIXTURE RATIO IN OXIDIZER PREBURNERS	6.27E-04	
1953)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	4.77E-11
	ASMAVFOMPHTOG3	SSME-3 FUEL TOPPING VALVE FAILS TO OPEN	8.98E-05	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
1954)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	4.77E-11
	ASMAVFOMPHTOG2	SSME-2 FUEL TOPPING VALVE FAILS TO OPEN	8.98E-05	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
1955)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	4.77E-11
	ASMAVFOMPHTOG1	SSME-1 FUEL TOPPING VALVE FAILS TO OPEN	8.98E-05	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
1956)	ASMPAFPMPPRPB1	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 1)	7.76E-08	4.69E-11
	SMEPG	INITIATING EVENT FAILURE TO PRECHARGE POGO ACC	6.05E-04	
1957)	EAOAAFRA1ULOK21	SINGLE APU/HYD RTL UNSUCCESSFUL; OK STATE	1.00E-01	4.64E-11
	EAOAASRA1ISOK21	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA2ISOK21	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LAOK21	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	ENOAALKA1LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA2LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
1958)	EAOAAFRA1ULOK21	SINGLE APU/HYD RTL UNSUCCESSFUL; OK STATE	1.00E-01	4.64E-11
	EAOAASRA1ISOK21	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3ISOK21	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LAOK21	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	ENOAALKA1LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA2LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ENOAALKA3LKOK21	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
1959)	EAOAAFRA1ULOK23	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; OK	1.00E-01	4.61E-11
	EAOAAOKA1SROK23	RESTART/RUN SUCCESSFUL; OK STATE DURING	9.94E-01	
	EAOAASRA2ISOK23	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3ISOK23	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LAOK23	LEAKS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	ENOAALKA1LKOK23	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA2LKOK23	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK23	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
1960)	EAOAASRA2ISL023	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	4.54E-11
	EAOAASRA3ISL023	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1961)	EAOAASRA1ISL023	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	4.54E-11
	EAOAASRA2ISL023	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1962)	EAOAASRA1ISL023	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	4.54E-11
	EAOAASRA3ISL023	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULL023	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL LEAK IN 1 APU; SEQ 23	1.00E-01	
	ENOAALKA1CLL023	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL023	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
1963)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRLBS5SRB	ROCKET MOTOR L BSM 5 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1964)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRLBS1SRB	ROCKET MOTOR L BSM 1 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1965)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	4.50E-11

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	ACRRMBRRBS8SRB	ROCKET MOTOR RBS8 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1966)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRLBS2SRB	ROCKET MOTOR L BSM 2 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1967)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRRBS6SRB	ROCKET MOTOR RBS6 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1968)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRRBS4SRB	ROCKET MOTOR RBS4 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1969)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRRBS4SRB	ROCKET MOTOR RBS4 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1970)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRLBS2SRB	ROCKET MOTOR L BSM 2 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1971)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRLBS4SRB	ROCKET MOTOR L BSM 4 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1972)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRLBS7SRB	ROCKET MOTOR L BSM 7 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1973)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRLBS6SRB	ROCKET MOTOR L BSM 6 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1974)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRRBS2SRB	ROCKET MOTOR RBS2 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	

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	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1975)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRLBS8SRB	ROCKET MOTOR L BSM 8 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1976)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRRBS1SRB	ROCKET MOTOR R BSM 1 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1977)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRLBS3SRB	ROCKET MOTOR L BSM 3 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1978)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRRBS6SRB	ROCKET MOTOR RBS6 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1979)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRRBS8SRB	ROCKET MOTOR RBS8 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1980)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRRBS5SRB	ROCKET MOTOR RBS5 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1981)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRLBS3SRB	ROCKET MOTOR L BSM 3 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1982)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRRBS2SRB	ROCKET MOTOR RBS2 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1983)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRRBS1SRB	ROCKET MOTOR R BSM 1 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1984)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	4.50E-11

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Bacic Event Probability	Cutset Probability
	ACRRMBRRBS7SRB	ROCKET MOTOR RBS7 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1985)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRLBS7SRB	ROCKET MOTOR L BSM 7 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1986)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRLBS1SRB	ROCKET MOTOR L BSM 1 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1987)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRRBS3SRB	ROCKET MOTOR RBS3 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1988)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRLBS4SRB	ROCKET MOTOR L BSM 4 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1989)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRLBS5SRB	ROCKET MOTOR L BSM 5 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1990)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRLBS6SRB	ROCKET MOTOR L BSM 6 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1991)	ACRINSFLABMSRB	INSULATION LOSS / STRUCTURAL FAILURE L AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRLBS8SRB	ROCKET MOTOR L BSM 8 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1992)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRRBS5SRB	ROCKET MOTOR RBS5 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1993)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRRBS3SRB	ROCKET MOTOR RBS3 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1994)	ACRINSFRABMSRB	INSULATION LOSS / STRUCTURAL FAILURE R AFT BSM MODULE	1.00E-05	4.50E-11
	ACRRMBRRBS7SRB	ROCKET MOTOR RBS7 BURN THRU OR RUPTURE	1.00E-04	
	BSMDEBRIS	DEBRIS FROM BSM BURNTHRU / RUPTURE PENETRATES OV OR ET	5.00E-02	
	MULTBSM_INS	MULTIPLE BSMS DESTROYED GIVEN LOSS OF INSULATION	9.00E-01	
1995)	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	4.14E-11
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
1996)	ASMAVFOMPHRPR1	SSME LH2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.36E-05	4.14E-11
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
1997)	ASMAVFOMPHRPR2	SSME LH2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	4.14E-11
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
1998)	AAOAAFRA1IFLK12	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	4.11E-11
	AAOAAFRA2IFLK12	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	
	AAOAAFRA3IFLK12	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	
	ANOAALKA1LKLK12	APU/HYD UNIT 1 LEAK; APU/HYD HYDRAZINE	1.70E-04	
	ANOAALKA1LULK12	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
1999)	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	4.10E-11
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2000)	EAOAASRA1ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	4.09E-11
	EAOAASRA2LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA3LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
2001)	EAOAASRA1LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	4.09E-11
	EAOAASRA2ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
2002)	EAOAASRA1LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	4.09E-11
	EAOAASRA2LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA3ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
2003)	APMTSCCPRPMFDTAB	CCF OF CHANNEL A AND CHANNEL B HPFTP DT SENSORS	5.00E-05	3.90E-11
	APMTSCCPRPMODTAB	CCF OF CHANNEL A CHANNEL B HPOTP DT SENSORS	5.00E-05	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
2004)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.89E-11
	ASMPAFPMPPRPB2	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 2)	7.76E-08	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2005)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.89E-11
	ASMPAFPMPPRPB3	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 3)	7.76E-08	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2006)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.89E-11
	ASMPAFPMPPRPB1	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 1)	7.76E-08	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2007)	EAOAASRA1ISL007	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	3.68E-11
	EAOAASRA2ISL007	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISL007	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LDL007	LEAK DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
2008)	ASMHVCPPHFOSAB2	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	2.70E-07	3.56E-11
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2009)	ASMHVCPPHFOSAB3	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	2.70E-07	3.56E-11
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2010)	ASMHVCPPHFOSAB1	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B (ENGINE 1)	2.70E-07	3.56E-11
	ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2011)	EAOAAFRA1ULL018	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL;	1.00E-01	3.38E-11
	EAOAAL0A1SRL018	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 1	9.94E-01	
	EAOAASRA1CSL018	COMMON CAUSE FAILURE TO START OR RUN;	4.44E-04	
	ENOAALKA1CLL018	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL018	LEAKS DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
2012)	EAOAASRA1ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	3.18E-11
	EAOAASRA2LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA3ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
2013)	EAOAASRA1LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	3.18E-11
	EAOAASRA2ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
2014)	EAOAASRA1ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	3.18E-11
	EAOAASRA2ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSL024	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
2015)	ASMPAFPMPPRPB1	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 1)	7.76E-08	3.03E-11
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2016)	ASMPAFPMPPRPB2	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 2)	7.76E-08	3.03E-11
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2017)	ASMPAFPMPPRPB3	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 3)	7.76E-08	3.03E-11
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2018)	EAOAAFRA2OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.73E-11
	EAOAASRA1ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
2019)	EAOAAFRA3OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.73E-11
	EAOAASRA1ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA2ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
2020)	EAOAAFRA1OSL019	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	2.73E-11
	EAOAASRA2ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
2021)	ANRCRSFLK0LFSRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	2.66E-11
	ANRCVSFLK0LFSRM	FIELD JOINT CLOSURE VPP SEAL FAILURE	1.53E-03	
	ANRJSSFLK0LFSRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRPVSFLK0LFSRM	FIELD JOINT VPP PRIMARY O-RING SEAL FAILURE	6.40E-03	
2022)	ANRCRSFLK0RFSRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	2.66E-11
	ANRCVSFLK0RFSRM	FIELD JOINT CLOSURE VPP SEAL FAILURE	1.53E-03	
	ANRJSSFLK0RFSRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRPVSFLK0RFSRM	FIELD JOINT VPP PRIMARY O-RING SEAL FAILURE	6.40E-03	
2023)	ANRCRSFLK0RMSRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	2.66E-11
	ANRCVSFLK0RMSRM	FIELD JOINT CLOSURE VPP SEAL FAILURE	1.53E-03	
	ANRJSSFLK0RMSRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRPVSFLK0RMSRM	FIELD JOINT VPP PRIMARY O-RING SEAL FAILURE	6.40E-03	
2024)	ANRCRSFLK0LMSRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	2.66E-11
	ANRCVSFLK0LMSRM	FIELD JOINT CLOSURE VPP SEAL FAILURE	1.53E-03	
	ANRJSSFLK0LMSRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRPVSFLK0LMSRM	FIELD JOINT VPP PRIMARY O-RING SEAL FAILURE	6.40E-03	
2025)	ANRCRSFLK0LASRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	2.66E-11
	ANRCVSFLK0LASRM	FIELD JOINT CLOSURE VPP SEAL FAILURE	1.53E-03	
	ANRJSSFLK0LASRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRPVSFLK0LASRM	FIELD JOINT VPP PRIMARY O-RING SEAL FAILURE	6.40E-03	
2026)	ANRCRSFLK0RASRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	2.66E-11
	ANRCVSFLK0RASRM	FIELD JOINT CLOSURE VPP SEAL FAILURE	1.53E-03	
	ANRJSSFLK0RASRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRPVSFLK0RASRM	FIELD JOINT VPP PRIMARY O-RING SEAL FAILURE	6.40E-03	
2027)	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	2.56E-11
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2028)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	2.56E-11
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2029)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	2.56E-11
	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2030)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	2.56E-11

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2031)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	2.56E-11
	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2032)	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	2.56E-11
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2033)	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	2.56E-11
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2034)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	2.56E-11
	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2035)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	2.56E-11
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2036)	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	2.56E-11
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2037)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	2.56E-11
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2038)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	2.56E-11
	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2039)	EAOAASRA1ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	2.52E-11
	EAOAASRA2ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3ISOK29	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA1LZOK29	LEAK UNDETECTED; OK STATE DURING RTL; SEQ.	8.33E-01	
	ENOAALKA2LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK29	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
2040)	EAOAAFRA1ULLT04	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	2.52E-11
	EAOAASRA1CSLT04	COMMON CAUSE FAILURE TO START OR RUN;	8.87E-04	
	ENOAALKA1LALT04	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2041)	APMPSCCPRPMPCCAB	CCF OF CHANNEL A AND CHANNEL B PRESSURE DROP SENSORS	5.00E-05	2.50E-11
	APMTSCCPRPMODTAB	CCF OF CHANNEL A CHANNEL B HPOTP DT SENSORS	5.00E-05	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
2042)	EAOAAFRA1ULLT04	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	2.17E-11
	EAOAASRA1ISLT04	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA2LSLT04	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT04	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2043)	EAOAAFRA1ULLT04	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	2.17E-11

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	EAOAASRA1LSLT04	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA3ISLT04	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LALT04	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2044)	EAOAAFRA1ULLT04	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	2.17E-11
	EAOAASRA1LSLT04	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA2ISLT04	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LALT04	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2045)	EAOAAFRA1ULLT04	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	2.17E-11
	EAOAASRA1ISLT04	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSLT04	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT04	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2046)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.16E-11
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	ASMSVFOMPOPRV3	SSME-3 LO2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2047)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.16E-11
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	ASMSVFOMPHPRV2	SSME-2 LH2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2048)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.16E-11
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	ASMSVFOMPOPRV2	SSME-2 LO2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2049)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.16E-11
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	ASMSVFOMPOPRV1	SSME-1 LO2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2050)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.16E-11
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	ASMSVFOMPHPRV1	SSME-1 LH2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2051)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.16E-11
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	ASMSVFOMPHPRV3	SSME-3 LH2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
2052)	EAOAAFRA1ULLT06	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL;	1.00E-01	2.15E-11
	EAOAALTA1SRLT06	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 3	9.94E-01	
	EAOAASRA2ISLT06	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSLT06	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT06	LEAKS DETECTED/CONFIRMED; INITIAL LEAK IN 3	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2053)	EAOAAFRA1ULLT06	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL;	1.00E-01	2.15E-11
	EAOAALTA1SRLT06	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 3	9.94E-01	
	EAOAASRA2LSLT06	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA3ISLT06	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LALT06	LEAKS DETECTED/CONFIRMED; INITIAL LEAK IN 3	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2054)-	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	1.99E-11
	ASMPAFPMPPRPB1	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 1)	7.76E-08	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
2055)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.98E-11
	ASMAVFOMPHTOG1	SSME-1 FUEL TOPPING VALVE FAILS TO OPEN	8.98E-05	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2056)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.98E-11
	ASMAVFOMPHTOG2	SSME-2 FUEL TOPPING VALVE FAILS TO OPEN	8.98E-05	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2057)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.98E-11
	ASMAVFOMPHTOG3	SSME-3 FUEL TOPPING VALVE FAILS TO OPEN	8.98E-05	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2058)	ANRCRSFLK0RMSRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	1.77E-11
	ANRJSSFLK0RMSRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRPVSFLK0RMSRM	FIELD JOINT VPP PRIMARY O-RING SEAL FAILURE	6.40E-03	
	ANRSVSFLK0RMSRM	FIELD JOINT VPP SECONDARY O-RING SEAL FAILURE	1.02E-03	
2059)	ANRCRSFLK0LFSRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	1.77E-11
	ANRJSSFLK0LFSRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRPVSFLK0LFSRM	FIELD JOINT VPP PRIMARY O-RING SEAL FAILURE	6.40E-03	
	ANRSVSFLK0LFSRM	FIELD JOINT VPP SECONDARY O-RING SEAL FAILURE	1.02E-03	
2060)	ANRCRSFLK0LMSRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	1.77E-11
	ANRJSSFLK0LMSRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRPVSFLK0LMSRM	FIELD JOINT VPP PRIMARY O-RING SEAL FAILURE	6.40E-03	

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	ANRSVSFLK0LMSRM	FIELD JOINT VPP SECONDARY O-RING SEAL FAILURE	1.02E-03	
2061)	ANRCRSFLK0LASRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	1.77E-11
	ANRJSSFLK0LASRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRPVSFLK0LASRM	FIELD JOINT VPP PRIMARY O-RING SEAL FAILURE	6.40E-03	
	ANRSVSFLK0LASRM	FIELD JOINT VPP SECONDARY O-RING SEAL FAILURE	1.02E-03	
2062)	ANRCRSFLK0RFSRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	1.77E-11
	ANRJSSFLK0RFSRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRPVSFLK0RFSRM	FIELD JOINT VPP PRIMARY O-RING SEAL FAILURE	6.40E-03	
	ANRSVSFLK0RFSRM	FIELD JOINT VPP SECONDARY O-RING SEAL FAILURE	1.02E-03	
2063)	ANRCRSFLK0RASRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	1.77E-11
	ANRJSSFLK0RASRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRPVSFLK0RASRM	FIELD JOINT VPP PRIMARY O-RING SEAL FAILURE	6.40E-03	
	ANRSVSFLK0RASRM	FIELD JOINT VPP SECONDARY O-RING SEAL FAILURE	1.02E-03	
2064)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.76E-11
	ASMAVFOMPHIFD1	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 1)	3.31E-05	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2065)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.76E-11
	ASMAVFOMPHOFD2	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 2)	3.31E-05	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2066)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.76E-11
	ASMAVFOMPHIFD2	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 2)	3.31E-05	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2067)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.76E-11
	ASMAVFOMPHOFD3	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 3)	3.31E-05	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2068)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.76E-11
	ASMAVFOMPHOFD1	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 1)	3.31E-05	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2069)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.76E-11
	ASMAVFOMPHIFD3	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 3)	3.31E-05	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2070)	EAOAASRA1ISLT11	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	1.68E-11

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	EAOAASRA3ISLT11	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2071)	EAOAASRA2ISLT11	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	1.68E-11
	EAOAASRA3ISLT11	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2072)	EAOAASRA1ISLT11	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	1.68E-11
	EAOAASRA2ISLT11	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAAFRA1ULLT11	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL; INITIAL LEAK IN THREE APUs;	1.00E-01	
	ENOAALKA1LZLT11	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2073)	EAOAASRA1LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	1.52E-11
	EAOAASRA2ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2074)	EAOAASRA1ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	1.52E-11
	EAOAASRA2LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA3LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2075)	EAOAASRA1LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	1.52E-11
	EAOAASRA2LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA3ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2076)	ACRCARPRSFASRB	CABLE R SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	1.37E-11
	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	
2077)	ACRCADHL2ASRB	LOCAL WIRE FAILURE(CM) SSSW - PIC L AFT	3.33E-07	1.37E-11
	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
2078)	ACRCARPLSFBSRB	CABLE L SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	1.37E-11
	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	
2079)	ACRCARPLSFASRB	CABLE L SEP BOLT FWD A (REPLACEABLE) FAILURE	4.10E-05	1.37E-11
	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	
2080)	ACRCADHL2BSRB	LOCAL WIRE FAILURE(CM) L FWD	3.33E-07	1.37E-11

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	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	
2081)	ACRCARPLA2SRB	CABLE (REPLACEABLE) FAILURE L SRB	4.10E-05	1.37E-11
	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	
2082)	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	1.37E-11
	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	
2083)	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.37E-11
	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	
2084)	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.37E-11
	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	
2085)	ACRCARPL1BSRB	CABLE (REPLACEABLE) FAILURE SSSW - FWD PIC L FWD	4.10E-05	1.37E-11
	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	
2086)	ACRCARPRB2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.37E-11
	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	
2087)	ACRCARPRSFBSRB	CABLE R SEP BOLT FWD B (REPLACEABLE) FAILURE	4.10E-05	1.37E-11
	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	
2088)	ACRCADHL2BSRB	LOCAL WIRE FAILURE(CM) L FWD	3.33E-07	1.37E-11
	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
2089)	ACRCADHL2BSRB	LOCAL WIRE FAILURE(CM) L FWD	3.33E-07	1.37E-11
	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	
2090)	ACRCARPLB2SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.37E-11
	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	
2091)	ACRCADHL2ASRB	LOCAL WIRE FAILURE(CM) SSSW - PIC L AFT	3.33E-07	1.37E-11
	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
2092)	ACRCADHL2ASRB	LOCAL WIRE FAILURE(CM) SSSW - PIC L AFT	3.33E-07	1.37E-11
	ACRCARPLBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
2093)	ACRCARPLA1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.37E-11
	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	
2094)	ACRCARPRA2SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.37E-11
	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	
2095)	ACRCARPRPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	1.37E-11
	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	
2096)	ACRCARPRA1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.37E-11
	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	
2097)	ACRCARPRBASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	1.37E-11
	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	
2098)	ACRCARPRPASRB	CABLE (REPLACEABLE) FAILURE (POWER) R SRB	4.10E-05	1.37E-11
	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	
2099)	ACRCARPLB1SRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	1.37E-11

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	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	
2100)	ACRCADHL2ASRB	LOCAL WIRE FAILURE(CM) SSSW - PIC L AFT	3.33E-07	1.37E-11
	ACRCARPLPBSRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	
2101)	ACRCARPRB1SRB	CABLE (REPLACEABLE) FAILURE R SRB	4.10E-05	1.37E-11
	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	
2102)	ACRCADHL2BSRB	LOCAL WIRE FAILURE(CM) L FWD	3.33E-07	1.37E-11
	ACRCARPLAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) L SRB	4.10E-05	
2103)	ACRCARPLPASRB	CABLE (REPLACEABLE) FAILURE (POWER) L SRB	4.10E-05	1.37E-11
	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	
2104)	ACRCARPRAASRB	CABLE (REPLACEABLE) FAILURE MEC - IEA (SSSW) R SRB	4.10E-05	1.37E-11
	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	
2105)	EAOAAFRA1ULLT06	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL;	1.00E-01	1.25E-11
	EAOAALTA1SRLT06	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 3	9.94E-01	
	EAOAASRA1CSLT06	COMMON CAUSE FAILURE TO START OR RUN;	4.44E-04	
	ENOAALKA1LALT06	LEAKS DETECTED/CONFIRMED; INITIAL LEAK IN 3	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2106)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	1.24E-11
	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2107)	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	1.24E-11
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2108)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	1.24E-11
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2109)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.24E-11
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2110)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	1.24E-11
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2111)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.24E-11
	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2112)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.24E-11
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2113)	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	1.24E-11
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2114)	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	1.24E-11
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2115)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.24E-11
	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2116)	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	1.24E-11
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
2117)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	1.24E-11
	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2118)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	1.24E-11
	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2119)	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.24E-11
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2120)	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.24E-11
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2121)	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.24E-11
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2122)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.24E-11
	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2123)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.24E-11
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2124)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.24E-11
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2125)	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.24E-11
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2126)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	1.24E-11
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2127)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	1.24E-11
	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2128)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	1.24E-11
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2129)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.24E-11
	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2130)	EAOAASRA1ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	1.18E-11
	EAOAASRA2LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA3ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2131)	EAOAASRA1LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	1.18E-11
	EAOAASRA2ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2132)	EAOAASRA1ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	1.18E-11
	EAOAASRA2ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	

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	EAOAASRA3LSLT12	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2133)	ANMSVFCMPENG1	ISOLATION VALVE FAILS TO CLOSE	2.93E-06	1.14E-11
	ASMHUHSPHFEMESD	HUMAN ERROR TO INITIATE THE MANUAL EMERGENCY HYDRAULIC S/D	1.00E-02	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2134)	EAOAAFRA2OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.01E-11
	EAOAASRA1ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2135)	EAOAAFRA3OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.01E-11
	EAOAASRA1ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA2ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2136)	EAOAAFRA1OSLT07	OWN LEAK INDUCED FAILURE TO START OR RUN;	3.00E-01	1.01E-11
	EAOAASRA2ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2137)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	9.99E-12
	ACRNDFDRFWBSRB	NSD R FWD B FAILS TO DETONATE	3.00E-05	
2138)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	9.99E-12
	ACRNPFDRSFBSRB	NSI PRESSURE CARTRIDGE RSFB FAILS TO DETONATE	3.00E-05	
2139)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	9.99E-12
	ACRNPFDRSFASRB	NSI PRESSURE CARTRIDGE RSFA FAILS TO DETONATE	3.00E-05	
2140)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	9.99E-12
	ACRNDFDRFWASRB	NSD R FWD A FAILS TO DETONATE	3.00E-05	
2141)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	9.99E-12
	ACRNPFDRS2ASRB	NSI PRESSURE CARTRIDGE RS2A FAILS TO DETONATE	3.00E-05	
2142)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	9.99E-12
	ACRNPFDLS3BSRB	NSI PRESSURE CARTRIDGE LS3B FAILS TO DETONATE	3.00E-05	
2143)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	9.99E-12
	ACRNDFDRAFBSRB	NSD R AFT B FAILS TO DETONATE	3.00E-05	
2144)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	9.99E-12
	ACRNPFDRS1ASRB	NSI PRESSURE CARTRIDGE RS1A FAILS TO DETONATE	3.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Bacic Event Probability	Cutset Probability
2145)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	9.99E-12
	ACRNPFDRS1BSRB	NSI PRESSURE CARTRIDGE RS1B FAILS TO DETONATE	3.00E-05	
2146)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	9.99E-12
	ACRNPFDLS2ASRB	NSI PRESSURE CARTRIDGE LS2A FAILS TO DETONATE	3.00E-05	
2147)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	9.99E-12
	ACRNPFDLSFASRB	NSI PRESSURE CARTRIDGE LSFA FAILS TO DETONATE	3.00E-05	
2148)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	9.99E-12
	ACRNDFDRAFASRB	NSD R AFT A FAILS TO DETONATE	3.00E-05	
2149)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	9.99E-12
	ACRNDFDLFWASRB	NSD L FWD A FAILS TO DETONATE	3.00E-05	
2150)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	9.99E-12
	ACRNPFDLS1BSRB	NSI PRESSURE CARTRIDGE LS1B FAILS TO DETONATE	3.00E-05	
2151)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	9.99E-12
	ACRNPFDLS2BSRB	NSI PRESSURE CARTRIDGE LS2B FAILS TO DETONATE	3.00E-05	
2152)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	9.99E-12
	ACRNPFDRS3ASRB	NSI PRESSURE CARTRIDGE RS3A FAILS TO DETONATE	3.00E-05	
2153)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	9.99E-12
	ACRNPFDLSFBSRB	NSI PRESSURE CARTRIDGE LSFB FAILS TO DETONATE	3.00E-05	
2154)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	9.99E-12
	ACRNPFDLS1ASRB	NSI PRESSURE CARTRIDGE LS1A FAILS TO DETONATE	3.00E-05	
2155)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	9.99E-12
	ACRNDFDLFWBSRB	NSD L FWD B FAILS TO DETONATE	3.00E-05	
2156)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	9.99E-12
	ACRNPFDRS2BSRB	NSI PRESSURE CARTRIDGE RS2B FAILS TO DETONATE	3.00E-05	
2157)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	9.99E-12
	ACRNPFDLS3ASRB	NSI PRESSURE CARTRIDGE LS3A FAILS TO DETONATE	3.00E-05	
2158)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	9.99E-12
	ACRNPFDRS3BSRB	NSI PRESSURE CARTRIDGE RS3B FAILS TO DETONATE	3.00E-05	
2159)	ASMPAFPMPPRPB1	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 1)	7.76E-08	9.73E-12
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	
2160)	EAOAAFRA1ULL016	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	9.11E-12
	EAOAASRA1ISL016	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISL016	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL016	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL016	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
2161)	EAOAAFRA1ULL016	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	9.11E-12

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	EAOAASRA1ISL016	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA2ISL016	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL016	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL016	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1 70E-04	
2162)	EAOAAFRA1ULL018	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL;	1.00E-01	9.05E-12
	EAOAAL0A1SRL018	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 1	9.94E-01	
	EAOAASRA2ISL018	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISL018	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL018	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL018	LEAKS DETECTED/CONFIRMED; INITIAL LEAK IN 1	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
2163)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	8.99E-12
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	ASMSVFOMPHPRV2	SSME-2 LH2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2164)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	8.99E-12
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	ASMSVFOMPHPRV1	SSME-1 LH2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2165)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	8.99E-12
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	ASMSVFOMPOPRV2	SSME-2 LO2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2166)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	8.99E-12
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	ASMSVFOMPHPRV3	SSME-3 LH2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2167)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	8.99E-12
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	ASMSVFOMPOPRV3	SSME-3 LO2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2168)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	8.99E-12
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	ASMSVFOMPOPRV1	SSME-1 LO2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2169)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	7.48E-12
	ASMAVFOMPHTOG1	SSME-1 FUEL TOPPING VALVE FAILS TO OPEN	8.98E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2170)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	7.48E-12
	ASMAVFOMPHTOG3	SSME-3 FUEL TOPPING VALVE FAILS TO OPEN	8.98E-05	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2171)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	7.48E-12
	ASMAVFOMPHTOG2	SSME-2 FUEL TOPPING VALVE FAILS TO OPEN	8.98E-05	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2172)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	7.31E-12
	ASMAVFOMPHIFD1	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 1)	3.31E-05	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2173)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	7.31E-12
	ASMAVFOMPHIFD3	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 3)	3.31E-05	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2174)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	7.31E-12
	ASMAVFOMPHIFD2	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 2)	3.31E-05	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2175)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	7.31E-12
	ASMAVFOMPHOFD2	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 2)	3.31E-05	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2176)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	7.31E-12
	ASMAVFOMPHOFD1	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 1)	3.31E-05	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2177)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	7.31E-12
	ASMAVFOMPHOFD3	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 3)	3.31E-05	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2178)	AAOAAFRA1LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	1.00E-01	6.60E-12
	AAOAAFRA2IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	
	AAOAAFRA3IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	
	ANOAALKA1CLLK20	COMMON CAUSE LEAK; APU/HYD HYDRAZINE	1.70E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ANOAALKA1LZLK20	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
2179)	AAOAAFRA1IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	6.60E-12
	AAOAAFRA2LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	1.00E-01	
	AAOAAFRA3IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	
	ANOAALKA1CLLK20	COMMON CAUSE LEAK; APU/HYD HYDRAZINE	1.70E-06	
	ANOAALKA1LZLK20	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
2180)	AAOAAFRA1IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	6.60E-12
	AAOAAFRA2IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	
	AAOAAFRA3LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	1.00E-01	
	ANOAALKA1CLLK20	COMMON CAUSE LEAK; APU/HYD HYDRAZINE	1.70E-06	
	ANOAALKA1LZLK20	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
2181)	EAOAASRA1LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	6.38E-12
	EAOAASRA2ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
2182)	EAOAASRA1ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	6.38E-12
	EAOAASRA2LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	EAOAASRA3ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
2183)	EAOAASRA1ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	6.38E-12
	EAOAASRA2ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSL019	OTHER UNIT LEAK INDUCED FAILURE TO START OR	7.00E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
2184)	ASMAVFOMPHTOG2	SSME-2 FUEL TOPPING VALVE FAILS TO OPEN	8.98E-05	5.82E-12
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2185)	ASMAVFOMPHTOG1	SSME-1 FUEL TOPPING VALVE FAILS TO OPEN	8.98E-05	5.82E-12
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2186)	ASMAVFOMPHTOG3	SSME-3 FUEL TOPPING VALVE FAILS TO OPEN	8.98E-05	5.82E-12

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2187)	ANMHUHSMPISO	HUMAN ERROR TO ISOLATE THE LEAKAGE	5.00E-02	5.27E-12
	ASMHVCPPHFSVA&B	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	2.70E-07	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2188)	ANMHUHSMPCROSS	HUMAN ERROR TO OPEN THE CROSS LINES VALVES	5.00E-02	5.27E-12
	ASMHVCPPHFSVA&B	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	2.70E-07	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2189)	EAOAASRA1ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	5.06E-12
	EAOAASRA2ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	EAOAASRA3ISOK24	INDEPENDENT FAILURE TO START OR RUN; OK	1.09E-02	
	ENOAALKA1LAOK24	LEAK IS DETECTED/CONFIRMED; OK STATE	1.67E-01	
	ENOAALKA1LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA2LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	ENOAALKA3LKOK24	INDEPENDENT LEAK; OK STATE DURING RTL;	2.86E-02	
	OK	ASCENT AND ON-ORBIT PHASES SUCCESSFUL	1.00E+00	
2190)	ANRCRSFLK0RASRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	5.05E-12
	ANRJSSFLK0RASRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRPRSFLK0RASRM	FIELD JOINT PRIMARY O-RING SEAL FAILURE	1.34E-03	
	ANRSRSFLK0RASRM	FIELD JOINT SECONDARY O-RING SEAL FAILURE	1.39E-03	
2191)	ANRCRSFLK0RMSRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	5.05E-12
	ANRJSSFLK0RMSRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRPRSFLK0RMSRM	FIELD JOINT PRIMARY O-RING SEAL FAILURE	1.34E-03	
	ANRSRSFLK0RMSRM	FIELD JOINT SECONDARY O-RING SEAL FAILURE	1.39E-03	
2192)	ANRCRSFLK0LASRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	5.05E-12
	ANRJSSFLK0LASRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRPRSFLK0LASRM	FIELD JOINT PRIMARY O-RING SEAL FAILURE	1.34E-03	
	ANRSRSFLK0LASRM	FIELD JOINT SECONDARY O-RING SEAL FAILURE	1.39E-03	
2193)	ANRCRSFLK0LFSRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	5.05E-12
	ANRJSSFLK0LFSRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRPRSFLK0LFSRM	FIELD JOINT PRIMARY O-RING SEAL FAILURE	1.34E-03	
	ANRSRSFLK0LFSRM	FIELD JOINT SECONDARY O-RING SEAL FAILURE	1.39E-03	
2194)	ANRCRSFLK0LMSRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	5.05E-12
	ANRJSSFLK0LMSRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRPRSFLK0LMSRM	FIELD JOINT PRIMARY O-RING SEAL FAILURE	1.34E-03	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ANRSRSFLK0LMSRM	FIELD JOINT SECONDARY O-RING SEAL FAILURE	1.39E-03	
2195)	ANRCRSFLK0RFSRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	5.05E-12
	ANRJSSFLK0RFSRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRPRSFLK0RFSRM	FIELD JOINT PRIMARY O-RING SEAL FAILURE	1.34E-03	
	ANRSRSFLK0RFSRM	FIELD JOINT SECONDARY O-RING SEAL FAILURE	1.39E-03	
2196)	EAOAASRA1ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	4.95E-12
	EAOAASRA2ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISL024	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL024	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LZL024	LEAK UNDETECTED; INITIAL LEAK IN 1 APU; SEQ.	8.33E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
2197)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.39E-12
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	ASMSVFOMPHPRV3	SSME-3 LH2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2198)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.39E-12
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	ASMSVFOMPOPRV3	SSME-3 LO2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2199)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.39E-12
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	ASMSVFOMPOPRV2	SSME-2 LO2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2200)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.39E-12
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	ASMSVFOMPOPRV1	SSME-1 LO2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2201)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.39E-12
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	ASMSVFOMPHPRV1	SSME-1 LH2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2202)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.39E-12
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	ASMSVFOMPHPRV2	SSME-2 LH2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2203)	EAOAAFRA1ULLT04	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	3.37E-12
	EAOAASRA1ISLT04	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA2ISLT04	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	

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	ENOAALKA1LALT04	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2204)	EAOAAFRA1ULLT04	SINGLE APU/HYD RTL UNSUCCESSFUL; INITIAL	1.00E-01	3.37E-12
	EAOAASRA1ISLT04	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISLT04	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LALT04	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2205)	EAOAAFRA1ULLT06	SINGLE APU/HYD UNIT RTL UNSUCCESSFUL;	1.00E-01	3.35E-12
	EAOAALTA1SRLT06	RESTART/RUN SUCCESSFUL; INITIAL LEAK IN 3	9.94E-01	
	EAOAASRA2ISLT06	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISLT06	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LALT06	LEAKS DETECTED/CONFIRMED; INITIAL LEAK IN 3	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2206)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.33E-12
	ACRCADHL2ASRB	LOCAL WIRE FAILURE(CM) SSSW - PIC L AFT	3.33E-07	
2207)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.33E-12
	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	
2208)	ACRCADHL2ASRB	LOCAL WIRE FAILURE(CM) SSSW - PIC L AFT	3.33E-07	3.33E-12
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
2209)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRPCFARS2BSRB	PIC R SEP BOLT 2B FAILS TO ARM	1.00E-05	
2210)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRPCFFLS1BSRB	PIC L SEP BOLT 1B FAILS TO FIRE	1.00E-05	
2211)	ACRCADHL2BSRB	LOCAL WIRE FAILURE(CM) L FWD	3.33E-07	3.33E-12
	ACRPCFFLABASRB	PIC L AFT BSM A FAILS TO FIRE	1.00E-05	
2212)	ACOMCNC202STS	MEC 2 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.33E-12
	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	
2213)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRPCFFLS2ASRB	PIC L SEP BOLT 2A FAILS TO FIRE	1.00E-05	
2214)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRPCFFRFBASRB	PIC R FWD BSM A FAILS TO FIRE	1.00E-05	
2215)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRSSDORAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
2216)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRPCFFLABASRB	PIC L AFT BSM A FAILS TO FIRE	1.00E-05	
2217)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRPCFALS1ASRB	PIC L SEP BOLT 1A FAILS TO ARM	1.00E-05	
2218)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12

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	ACRPCFALFBASRB	PIC L FWD BSM A FAILS TO ARM	1.00E-05	
2219)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRSSDORB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
2220)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRPCFFRS2ASRB	PIC R SEP BOLT 2A FAILS TO FIRE	1.00E-05	
2221)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
2222)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRPCFARSFBSRB	PIC R SEP BOLT FWD B FAILS TO ARM	1.00E-05	
2223)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRPCFFRSFASRB	PIC R SEP BOLT FWD A FAILS TO FIRE	1.00E-05	
2224)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRSSDORBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
2225)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRPCFARFBASRB	PIC R FWD BSM A FAILS TO ARM	1.00E-05	
2226)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRPCFFRFBBSRB	PIC R FWD BSM B FAILS TO FIRE	1.00E-05	
2227)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRPCFALS3ASRB	PIC L SEP BOLT 3A FAILS TO ARM	1.00E-05	
2228)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRPCFFLSFBSRB	PIC L SEP BOLT FWD B FAILS TO FIRE	1.00E-05	
2229)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRPCFARSFASRB	PIC R SEP BOLT FWD A FAILS TO ARM	1.00E-05	
2230)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.33E-12
	ACRCADHL2BSRB	LOCAL WIRE FAILURE(CM) L FWD	3.33E-07	
2231)	ACOMCNC20ASTS	MEC 2 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.33E-12
	ACRCADHL2ASRB	LOCAL WIRE FAILURE(CM) SSSW - PIC L AFT	3.33E-07	
2232)	ACRCADHL2BSRB	LOCAL WIRE FAILURE(CM) L FWD	3.33E-07	3.33E-12
	ACRSSDOLA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
2233)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRPCFFLFBASRB	PIC L FWD BSM A FAILS TO FIRE	1.00E-05	
2234)	ACRCADHL2ASRB	LOCAL WIRE FAILURE(CM) SSSW - PIC L AFT	3.33E-07	3.33E-12
	ACRPCFFLABBSRB	PIC L AFT BSM B FAILS TO FIRE	1.00E-05	
2235)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRPCFFRABASRB	PIC R AFT BSM A FAILS TO FIRE	1.00E-05	
2236)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRPCFALS2ASRB	PIC L SEP BOLT 2A FAILS TO ARM	1.00E-05	
2237)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.33E-12

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Bacic Event Probability	Cutset Probability
	ACRCADHL2BSRB	LOCAL WIRE FAILURE(CM) L FWD	3.33E-07	
2238)	ACRCADHL2BSRB	LOCAL WIRE FAILURE(CM) L FWD	3.33E-07	3.33E-12
	ACRPCFALABASRB	PIC L AFT BSM A FAILS TO ARM	1.00E-05	
2239)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.33E-12
	ACRCADHL2BSRB	LOCAL WIRE FAILURE(CM) L FWD	3.33E-07	
2240)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
2241)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRSSDOLB2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
2242)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACREXFDL2ASRB	EXPLOSIVE DEVICE FAILS TO DETONATE L AFT	1.00E-05	
2243)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRPCFARS1ASRB	PIC R SEP BOLT 1A FAILS TO ARM	1.00E-05	
2244)	ACRCADHL2ASRB	LOCAL WIRE FAILURE(CM) SSSW - PIC L AFT	3.33E-07	3.33E-12
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
2245)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRPCFALS3BSRB	PIC L SEP BOLT 3B FAILS TO ARM	1.00E-05	
2246)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRPCFFLS3ASRB	PIC L SEP BOLT 3A FAILS TO FIRE	1.00E-05	
2247)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRPCFARABASRB	PIC R AFT BSM A FAILS TO ARM	1.00E-05	
2248)	ACRCADHL2BSRB	LOCAL WIRE FAILURE(CM) L FWD	3.33E-07	3.33E-12
	ACREXFDL2ASRB	EXPLOSIVE DEVICE FAILS TO DETONATE L AFT	1.00E-05	
2249)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRPCFALABBSRB	PIC L AFT BSM B FAILS TO ARM	1.00E-05	
2250)	ACRCADHR2ASRB	LOCAL WIRE FAILURE(CM)	1.00E-05	3.33E-12
	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	
2251)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRPCFARS3ASRB	PIC R SEP BOLT 3A FAILS TO ARM	1.00E-05	
2252)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRPCFARABBSRB	PIC R AFT BSM B FAILS TO ARM	1.00E-05	
2253)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRPCFALABASRB	PIC L AFT BSM A FAILS TO ARM	1.00E-05	
2254)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRPCFALS1BSRB	PIC L SEP BOLT 1B FAILS TO ARM	1.00E-05	
2255)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRPCFFLS1ASRB	PIC L SEP BOLT 1A FAILS TO FIRE	1.00E-05	
2256)	ACRCADHL2ASRB	LOCAL WIRE FAILURE(CM) SSSW - PIC L AFT	3.33E-07	3.33E-12

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
2257)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRPCFFRS1ASRB	PIC R SEP BOLT 1A FAILS TO FIRE	1.00E-05	
2258)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRSSDORA2SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
2259)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRPCFFRS1BSRB	PIC R SEP BOLT 1B FAILS TO FIRE	1.00E-05	
2260)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRSSDOLBASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
2261)	ACRCADHL2ASRB	LOCAL WIRE FAILURE(CM) SSSW - PIC L AFT	3.33E-07	3.33E-12
	ACREXFDL2BSRB	EXPLOSIVE DEVICE FAILS TO DETONATE L AFT	1.00E-05	
2262)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRSSDOLB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
2263)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRPCFFRSFBSRB	PIC R SEP BOLT FWD B FAILS TO FIRE	1.00E-05	
2264)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRPCFFLS2BSRB	PIC L SEP BOLT 2B FAILS TO FIRE	1.00E-05	
2265)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.33E-12
	ACRCADHL2ASRB	LOCAL WIRE FAILURE(CM) SSSW - PIC L AFT	3.33E-07	
2266)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRPCFALSFASRB	PIC L SEP BOLT FWD A FAILS TO ARM	1.00E-05	
2267)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRPCFALSFBSRB	PIC L SEP BOLT FWD B FAILS TO ARM	1.00E-05	
2268)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRPCFARS2ASRB	PIC R SEP BOLT 2A FAILS TO ARM	1.00E-05	
2269)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRPCFFRS2BSRB	PIC R SEP BOLT 2B FAILS TO FIRE	1.00E-05	
2270)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRPCFARS3BSRB	PIC R SEP BOLT 3B FAILS TO ARM	1.00E-05	
2271)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRPCFFRS3ASRB	PIC R SEP BOLT 3A FAILS TO FIRE	1.00E-05	
2272)	ACOMCNC101STS	MEC 1 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.33E-12
	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	
2273)	ACOMCNC201STS	MEC 2 FAILS TO GENERATE FIRE 1 SIGNAL	1.00E-05	3.33E-12
	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	
2274)	ACRCADHL2BSRB	LOCAL WIRE FAILURE(CM) L FWD	3.33E-07	3.33E-12
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
2275)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRPCFFRS3BSRB	PIC R SEP BOLT 3B FAILS TO FIRE	1.00E-05	
2276)	ACOMCNC102STS	MEC 1 FAILS TO GENERATE FIRE 2 SIGNAL	1.00E-05	3.33E-12
	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	
2277)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRSSDORA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
2278)	ACOMCNC10ASTS	MEC 1 FAILS TO GENERATE ARM SIGNAL	1.00E-05	3.33E-12
	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	
2279)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRPCFFLFBBSRB	PIC L FWD BSM B FAILS TO FIRE	1.00E-05	
2280)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRPCFFLABBSRB	PIC L AFT BSM B FAILS TO FIRE	1.00E-05	
2281)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRPCFARFBBSRB	PIC R FWD BSM B FAILS TO ARM	1.00E-05	
2282)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRSSDOLA1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SRB	1.00E-05	
2283)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRPCFALS2BSRB	PIC L SEP BOLT 2B FAILS TO ARM	1.00E-05	
2284)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRPCFARS1BSRB	PIC R SEP BOLT 1B FAILS TO ARM	1.00E-05	
2285)	ACRCADHL2ASRB	LOCAL WIRE FAILURE(CM) SSSW - PIC L AFT	3.33E-07	3.33E-12
	ACRPCFALABBSRB	PIC L AFT BSM B FAILS TO ARM	1.00E-05	
2286)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRSSDORB1SRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) R SRB	1.00E-05	
2287)	ACRCADHR2BSRB	LOCAL WIRE FAILURE(CM)	1.00E-05	3.33E-12
	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	
2288)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACREXFDL2BSRB	EXPLOSIVE DEVICE FAILS TO DETONATE L AFT	1.00E-05	
2289)	ACRCADHL2BSRB	LOCAL WIRE FAILURE(CM) L FWD	3.33E-07	3.33E-12
	ACRSSDOLAASRB	SOLID STATE SWITCH FAILS TO CLOSE (NO-FO) L SEP	1.00E-05	
2290)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRPCFFLS3BSRB	PIC L SEP BOLT 3B FAILS TO FIRE	1.00E-05	
2291)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRPCFALFBBSRB	PIC L FWD BSM B FAILS TO ARM	1.00E-05	
2292)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	3.33E-12
	ACRPCFFRABBSRB	PIC R AFT BSM B FAILS TO FIRE	1.00E-05	
2293)	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	3.33E-12
	ACRPCFFLSFASRB	PIC L SEP BOLT FWD A FAILS TO FIRE	1.00E-05	
2294)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.11E-12

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMAVFOMPHTOG1	SSME-1 FUEL TOPPING VALVE FAILS TO OPEN	8.98E-05	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2295)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.11E-12
	ASMAVFOMPHTOG2	SSME-2 FUEL TOPPING VALVE FAILS TO OPEN	8.98E-05	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2296)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.11E-12
	ASMAVFOMPHTOG3	SSME-3 FUEL TOPPING VALVE FAILS TO OPEN	8.98E-05	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2297)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.76E-12
	ASMAVFOMPHIFD1	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 1)	3.31E-05	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2298)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.76E-12
	ASMAVFOMPHOFD2	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 2)	3.31E-05	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2299)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.76E-12
	ASMAVFOMPHOFD1	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 1)	3.31E-05	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2300)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.76E-12
	ASMAVFOMPHIFD3	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 3)	3.31E-05	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2301)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.76E-12
	ASMAVFOMPHIFD2	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 2)	3.31E-05	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2302)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.76E-12
	ASMAVFOMPHOFD3	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 3)	3.31E-05	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2303)	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	2.64E-12
	ASMSVFOMPHPRV3	SSME-3 LH2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2304)	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	2.64E-12
	ASMSVFOMPHPRV1	SSME-1 LH2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2305)	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	2.64E-12
	ASMSVFOMPOPRV3	SSME-3 LO2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2306)	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	2.64E-12
	ASMSVFOMPHPRV2	SSME-2 LH2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2307)	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	2.64E-12
	ASMSVFOMPOPRV2	SSME-2 LO2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2308)	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	2.64E-12
	ASMSVFOMPOPRV1	SSME-1 LO2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2309)	ASMAVFOMPHTOG1	SSME-1 FUEL TOPPING VALVE FAILS TO OPEN	8.98E-05	2.42E-12
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2310)	ASMAVFOMPHTOG2	SSME-2 FUEL TOPPING VALVE FAILS TO OPEN	8.98E-05	2.42E-12
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2311)	ASMAVFOMPHTOG3	SSME-3 FUEL TOPPING VALVE FAILS TO OPEN	8.98E-05	2.42E-12
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2312)	EAOAASRA1ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	2.36E-12
	EAOAASRA2ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
2313)	EAOAASRA1ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	2.36E-12
	EAOAASRA2LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	
	EAOAASRA3ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2314)	EAOAASRA1LSLT07	OTHER UNIT LEAK INDUCED FAILURE TO START	7.00E-02	2.36E-12
	EAOAASRA2ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2315)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	2.29E-12
	RYFAILGENCOM	RIGHT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2316)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	2.29E-12
	LYFAILGENCOM	LEFT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2317)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	2.29E-12
	RPFAILGENCOM	RIGHT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2318)	CPFAILGENCOM	CENTER PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	2.29E-12
	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2319)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	2.29E-12
	LPFAILGENCOM	LEFT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2320)	CYFAILGENCOM	CENTER YAW FAILURE TO GENERATE A COMMAND	1.00E-07	2.29E-12
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2321)	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	2.29E-12
	RPFAILGENCOM	RIGHT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2322)	CPFAILGENCOM	CENTER PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	2.29E-12
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2323)	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	2.29E-12
	RYFAILGENCOM	RIGHT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2324)	CYFAILGENCOM	CENTER YAW FAILURE TO GENERATE A COMMAND	1.00E-07	2.29E-12
	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2325)	CYFAILGENCOM	CENTER YAW FAILURE TO GENERATE A COMMAND	1.00E-07	2.29E-12
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2326)	CPFAILGENCOM	CENTER PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	2.29E-12
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2327)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	2.29E-12
	RPFAILGENCOM	RIGHT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2328)	CYFAILGENCOM	CENTER YAW FAILURE TO GENERATE A COMMAND	1.00E-07	2.29E-12
	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
2329)	LYFAILGENCOM	LEFT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	2.29E-12
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2330)	LPFAILGENCOM	LEFT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	2.29E-12
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2331)	CPFAILGENCOM	CENTER PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	2.29E-12
	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2332)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	2.29E-12
	RYFAILGENCOM	RIGHT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2333)	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	2.29E-12
	RPFAILGENCOM	RIGHT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2334)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	2.29E-12
	LPFAILGENCOM	LEFT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2335)	LPFAILGENCOM	LEFT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	2.29E-12
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2336)	LYFAILGENCOM	LEFT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	2.29E-12
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2337)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	2.29E-12
	LYFAILGENCOM	LEFT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2338)	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	2.29E-12
	RYFAILGENCOM	RIGHT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2339)	ANRCPSFLK0LASRM	FIELD JOINT LEAK CHECK PORT PLUG SEAL FAILURE	6.10E-04	2.22E-12
	ANRCRSFLK0LASRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	
	ANRJSSFLK0LASRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRPRSFLK0LASRM	FIELD JOINT PRIMARY O-RING SEAL FAILURE	1.34E-03	
2340)	ANRCPSFLK0LMSRM	FIELD JOINT LEAK CHECK PORT PLUG SEAL FAILURE	6.10E-04	2.22E-12
	ANRCRSFLK0LMSRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	
	ANRJSSFLK0LMSRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRPRSFLK0LMSRM	FIELD JOINT PRIMARY O-RING SEAL FAILURE	1.34E-03	
2341)	ANRCPSFLK0RFSRM	FIELD JOINT LEAK CHECK PORT PLUG SEAL FAILURE	6.10E-04	2.22E-12
	ANRCRSFLK0RFSRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	
	ANRJSSFLK0RFSRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRPRSFLK0RFSRM	FIELD JOINT PRIMARY O-RING SEAL FAILURE	1.34E-03	
2342)	ANRCPSFLK0RMSRM	FIELD JOINT LEAK CHECK PORT PLUG SEAL FAILURE	6.10E-04	2.22E-12
	ANRCRSFLK0RMSRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	
	ANRJSSFLK0RMSRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRPRSFLK0RMSRM	FIELD JOINT PRIMARY O-RING SEAL FAILURE	1.34E-03	
2343)	ANRCPSFLK0RASRM	FIELD JOINT LEAK CHECK PORT PLUG SEAL FAILURE	6.10E-04	2.22E-12
	ANRCRSFLK0RASRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ANRJSSFLK0RASRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRPRSFLK0RASRM	FIELD JOINT PRIMARY O-RING SEAL FAILURE	1.34E-03	
2344)	ANRCPSFLK0LFSRM	FIELD JOINT LEAK CHECK PORT PLUG SEAL FAILURE	6.10E-04	2.22E-12
	ANRCRSFLK0LFSRM	FIELD JOINT CAPTURE FEATURE O-RING SEAL FAILURE	2.07E-03	
	ANRJSSFLK0LFSRM	FIELD JOINT J-SEAL FAILURE	1.31E-03	
	ANRPRSFLK0LFSRM	FIELD JOINT PRIMARY O-RING SEAL FAILURE	1.34E-03	
2345)	ASMAVFOMPHIFD3	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 3)	3.31E-05	2.14E-12
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2346)	ASMAVFOMPHIFD1	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 1)	3.31E-05	2.14E-12
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2347)	ASMAVFOMPHIFD2	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 2)	3.31E-05	2.14E-12
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2348)	ASMAVFOMPHOFD3	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 3)	3.31E-05	2.14E-12
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2349)	ASMAVFOMPHOFD1	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 1)	3.31E-05	2.14E-12
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2350)	ASMAVFOMPHOFD2	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 2)	3.31E-05	2.14E-12
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2351)	EAOAASRA1ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	1.83E-12
	EAOAASRA2ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISLT12	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LZLT12	LEAK UNDETECTED; INITIAL LEAK IN 3 APUS;	8.33E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2352)	APMCOMCPRPMFDTCA	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL A	1.43E-07	1.79E-12
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEFH	INITIATING EVENT LOSS OF GROSS H2 FLOW	1.25E-03	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
2353)	APMCOMCPRPMFDTCB	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL B	1.43E-07	1.79E-12
	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEFH	INITIATING EVENT LOSS OF GROSS H2 FLOW	1.25E-03	
2354)	APMCOMCPRPMCLCHA	CONTROLLER SENSOR HPFTP CL INTERFACE FAILURE. CHANNEL A	1.43E-07	1.43E-12
	APMPSFPPRPMCLCHB	HPFTP CL SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMELO	INITIATING EVENT COOLANT LINER OVERPRESSURE	1.00E-03	
2355)	APMCOMCPRPMCLCHB	CONTROLLER SENSOR HPFTP CL INTERFACE FAILURE. CHANNEL B	1.43E-07	1.43E-12
	APMPSFPPRPMCLCHA	HPFTP CL SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMELO	INITIATING EVENT COOLANT LINER OVERPRESSURE	1.00E-03	
2356)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.41E-12
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	ASMSVFOMPOPRV2	SSME-2 LO2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2357)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.41E-12
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	ASMSVFOMPHPRV3	SSME-3 LH2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2358)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.41E-12
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	ASMSVFOMPOPRV1	SSME-1 LO2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2359)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.41E-12
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	ASMSVFOMPHPRV2	SSME-2 LH2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2360)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.41E-12
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	ASMSVFOMPHPRV1	SSME-1 LH2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2361)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.41E-12
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	ASMSVFOMPOPRV3	SSME-3 LO2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2362)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	1.25E-12
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2363)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	1.25E-12
	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2364)	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	1.25E-12

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	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2365)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.15E-12
	ASMAVFOMPHIFD3	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 3)	3.31E-05	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2366)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.15E-12
	ASMAVFOMPHIFD2	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 2)	3.31E-05	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2367)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.15E-12
	ASMAVFOMPHOFD1	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 1)	3.31E-05	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2368)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.15E-12
	ASMAVFOMPHOFD3	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 3)	3.31E-05	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2369)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.15E-12
	ASMAVFOMPHIFD1	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 1)	3.31E-05	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2370)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.15E-12
	ASMAVFOMPHOFD2	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 2)	3.31E-05	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2371)	ANMSVCOMPENG23	COMMON CAUSE FAILURE TO OPEN THE CROSS LINE SOLENOID VALVE (ENGINE	2.93E-07	1.14E-12
	ASMHUHSPHFEMESD	HUMAN ERROR TO INITIATE THE MANUAL EMERGENCY HYDRAULIC S/D	1.00E-02	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2372)	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	1.10E-12
	ASMSVFOMPHPRV1	SSME-1 LH2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2373)	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	1.10E-12
	ASMSVFOMPHPRV2	SSME-2 LH2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2374)	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	1.10E-12

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMSVFOMPOPRV2	SSME-2 LO2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2375)	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	1.10E-12
	ASMSVFOMPOPRV1	SSME-1 LO2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2376)	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	1.10E-12
	ASMSVFOMPOPRV3	SSME-3 LO2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2377)	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	1.10E-12
	ASMSVFOMPHPRV3	SSME-3 LH2 PREVALVE FAILS TO OPEN	4.07E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2378)	ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	1.04E-12
	ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2379)	ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	1.04E-12
	ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2380)	ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	1.04E-12
	ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2381)	ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	1.04E-12
	ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2382)	ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	1.04E-12
	ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2383)	ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	1.04E-12
	ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	

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	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2384)	EAOAASRA1ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	9.93E-13
	EAOAASRA2ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISL019	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1CLL019	COMMON CAUSE LEAK; INITIAL LEAK IN 1 APU;	2.70E-02	
	ENOAALKA1LAL019	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	IL0	REENTRY WITH UNDETECTED LEAK IN ONE APU	1.70E-04	
2385)	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	9.80E-13
	RPSTFAILACTRAM	RIGHT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2386)	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	9.80E-13
	RYSTFAILACTRAM	RIGHT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2387)	CPSTFAILACTRAM	CENTER PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	9.80E-13
	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2388)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	9.80E-13
	RYSTFAILACTRAM	RIGHT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2389)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	9.80E-13
	RPSTFAILACTRAM	RIGHT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2390)	CPSTFAILACTRAM	CENTER PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	9.80E-13
	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2391)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	9.80E-13
	RPSTFAILACTRAM	RIGHT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2392)	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	9.80E-13
	RPSTFAILACTRAM	RIGHT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2393)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	9.80E-13
	RYSTFAILACTRAM	RIGHT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2394)	CYSTFAILACTRAM	CENTER YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	9.80E-13
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2395)	CYSTFAILACTRAM	CENTER YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	9.80E-13
	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2396)	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	9.80E-13
	RYSTFAILACTRAM	RIGHT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2397)	CYSTFAILACTRAM	CENTER YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	9.80E-13
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2398)	CPSTFAILACTRAM	CENTER PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	9.80E-13
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2399)	CYSTFAILACTRAM	CENTER YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	9.80E-13
	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2400)	CPSTFAILACTRAM	CENTER PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	9.80E-13

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2401)	LPSTFAILACTRAM	LEFT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	9.62E-13
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2402)	LYSTFAILACTRAM	LEFT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	9.62E-13
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2403)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	9.62E-13
	LYSTFAILACTRAM	LEFT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	
2404)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	9.62E-13
	LPSTFAILACTRAM	LEFT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	
2405)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	9.62E-13
	LPSTFAILACTRAM	LEFT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	
2406)	LPSTFAILACTRAM	LEFT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	9.62E-13
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2407)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	9.62E-13
	LYSTFAILACTRAM	LEFT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	
2408)	LYSTFAILACTRAM	LEFT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	9.62E-13
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
2409)	APMCOMCPRPMFDTCA	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL A	1.43E-07	8.97E-13
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEMF	INITIATING EVENT HIGH MIXTURE RATIO IN FUEL PREBURNER	6.27E-04	
2410)	APMCOMCPRPMFDTCB	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL B	1.43E-07	8.97E-13
	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEMF	INITIATING EVENT HIGH MIXTURE RATIO IN FUEL PREBURNER	6.27E-04	
2411)	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	8.97E-13
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEMO	INITIATING EVENT HIGH MIXTURE RATIO IN OXIDIZER PREBURNERS	6.27E-04	
2412)	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	8.97E-13
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEMO	INITIATING EVENT HIGH MIXTURE RATIO IN OXIDIZER PREBURNERS	6.27E-04	
2413)	ASMAVFOMPHIFD1	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 1)	3.31E-05	8.91E-13
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2414)	ASMAVFOMPHIFD3	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 3)	3.31E-05	8.91E-13
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2415)	ASMAVFOMPHOFD3	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 3)	3.31E-05	8.91E-13

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2416)	ASMAVFOMPHOFD2	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 2)	3.31E-05	8.91E-13
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2417)	ASMAVFOMPHOFD1	FAILURE TO OPEN THE OUTBOARD LH2 F&D VALVE (ENGINE 1)	3.31E-05	8.91E-13
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2418)	ASMAVFOMPHIFD2	FAILURE TO OPEN THE INBOARD LH2 F&D VALVE (ENGINE 2)	3.31E-05	8.91E-13
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2419)	ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	6.59E-13
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2420)	ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	6.59E-13
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2421)	ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	6.59E-13
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2422)	ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	6.59E-13
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2423)	ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	6.59E-13
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2424)	ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	6.59E-13
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	

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	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2425)	ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	6.53E-13
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2426)	ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	6.53E-13
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2427)	ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	6.53E-13
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2428)	ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	6.53E-13
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2429)	ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	6.53E-13
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2430)	ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	6.53E-13
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2431)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.05E-13
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2432)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	6.05E-13
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2433)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	6.05E-13
	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2434)	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	6.05E-13
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2435)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.05E-13
	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2436)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.05E-13
	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2437)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	6.05E-13

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	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2438)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.05E-13
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2439)	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.05E-13
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2440)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	6.05E-13
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2441)	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.05E-13
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2442)	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	6.05E-13
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2443)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	5.31E-13
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2444)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	5.31E-13
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2445)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	5.31E-13
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2446)	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	4.86E-13
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
2447)	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	4.86E-13
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
2448)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	4.49E-13
	ASMAVFOMPHBLE1	SSME-1 FUEL BLEED VALVE FAILS TO OPEN	8.45E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2449)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	4.49E-13

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	ASMAVFOMPHBLE2	SSME-2 FUEL BLEED VALVE FAILS TO OPEN	8.45E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2450)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	4.49E-13
	ASMAVFOMPHBLE3	SSME-3 FUEL BLEED VALVE FAILS TO OPEN	8.45E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2451)	ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	4.31E-13
	ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2452)	ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	4.31E-13
	ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2453)	ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	4.31E-13
	ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2454)	ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	4.31E-13
	ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2455)	ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	4.31E-13
	ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2456)	ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	4.31E-13
	ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2457)	AAOAAFRA1IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	4.11E-13
	AAOAAFRA2IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	
	AAOAAFRA3IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	
	ANOAALKA1CLLK20	COMMON CAUSE LEAK; APU/HYD HYDRAZINE	1.70E-06	
	ANOAALKA1LZLK20	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	

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2458)	ANMPCFPMPDETEC	FAILURE OF THE HELIUM LEAKAGE DETECTION SYSTEM	1.00E-07	3.90E-13
	ASMHUHSPHFEMESD	HUMAN ERROR TO INITIATE THE MANUAL EMERGENCY HYDRAULIC S/D	1.00E-02	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2459)	EAOAASRA1ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	3.68E-13
	EAOAASRA2ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	EAOAASRA3ISLT07	INDEPENDENT FAILURE TO START OR RUN;	1.09E-02	
	ENOAALKA1LALT07	LEAK IS DETECTED/CONFIRMED; INITIAL LEAK IN	1.67E-01	
	ILT	REENTRY WITH UNDETECTED LEAK IN THE THREE APUs	1.70E-06	
2460)	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	3.50E-13
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
2461)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.38E-13
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2462)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.38E-13
	ASMAVFOMPHRPR1	SSME LH2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.36E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2463)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.38E-13
	ASMAVFOMPHRPR2	SSME LH2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2464)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.35E-13
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2465)	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	3.11E-13
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
2466)	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	3.11E-13
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
2467)	ATTSNSFAIL	ATTITUDE SENSORS OR PROCESSING FAILS	1.00E-05	3.00E-13
	TGLHFAIL	CREW FAILURE TO SELECT MANUAL SEPARATION	1.00E-03	
	WRVALILD	WRONG VALUES IN I LOAD	3.00E-05	
2468)	ATTSNSFAIL	ATTITUDE SENSORS OR PROCESSING FAILS	1.00E-05	3.00E-13
	PBSHFAIL	CREW FAILURE TO INITIATE MANUAL SEPARATION	1.00E-03	
	WRILOAD	WRONG I LOAD	3.00E-05	
2469)	ATTSNSFAIL	ATTITUDE SENSORS OR PROCESSING FAILS	1.00E-05	3.00E-13
	PBSHFAIL	CREW FAILURE TO INITIATE MANUAL SEPARATION	1.00E-03	
	WRVALILD	WRONG VALUES IN I LOAD	3.00E-05	
2470)	ATTSNSFAIL	ATTITUDE SENSORS OR PROCESSING FAILS	1.00E-05	3.00E-13
	TGLHFAIL	CREW FAILURE TO SELECT MANUAL SEPARATION	1.00E-03	
	WRILOAD	WRONG I LOAD	3.00E-05	
2471)	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	2.92E-13
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2472)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	2.92E-13
	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2473)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	2.92E-13
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2474)	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	2.92E-13
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2475)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	2.92E-13
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2476)	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	2.92E-13
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2477)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	2.92E-13
	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2478)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	2.92E-13
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2479)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	2.92E-13
	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2480)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	2.92E-13
	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2481)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	2.92E-13
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2482)	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	2.92E-13
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2483)	ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	2.74E-13
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2484)	ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	2.74E-13
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2485)	ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	2.74E-13
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2486)	ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	2.74E-13
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2487)	ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	2.74E-13
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2488)	ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	2.74E-13
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2489)	ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	2.71E-13
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2490)	ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	2.71E-13
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2491)	ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	2.71E-13
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2492)	ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	2.71E-13
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
2493)	ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	2.71E-13
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2494)	ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	2.71E-13
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2495)	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	2.24E-13
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
2496)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.21E-13
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2497)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.21E-13
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2498)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.21E-13
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2499)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.87E-13
	ASMAVFOMPHBLE1	SSME-1 FUEL BLEED VALVE FAILS TO OPEN	8.45E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2500)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.87E-13
	ASMAVFOMPHBLE3	SSME-3 FUEL BLEED VALVE FAILS TO OPEN	8.45E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2501)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.87E-13
	ASMAVFOMPHBLE2	SSME-2 FUEL BLEED VALVE FAILS TO OPEN	8.45E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2502)	APMSVFPPRPMSWB	SERVO-SWITCH B FAILS TO CHANGE ITS POSITION (HARDWARE FAILURES)	2.00E-06	1.76E-13
	ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	1.40E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2503)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.40E-13
	ASMAVFOMPHRPR1	SSME LH2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.36E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2504)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.40E-13
	ASMAVFOMPHRPR2	SSME LH2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2505)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.40E-13
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2506)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.39E-13
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2507)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.21E-13
	ASMHVCPPHFOSAB3	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	2.70E-07	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2508)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.21E-13
	ASMHVCPPHFOSAB2	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	2.70E-07	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2509)	CYFAILGENCOM	CENTER YAW FAILURE TO GENERATE A COMMAND	1.00E-07	1.12E-13
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2510)	LYFAILGENCOM	LEFT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	1.12E-13
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
2511)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	1.12E-13
	LPFAILGENCOM	LEFT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2512)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	1.12E-13
	RPFAILGENCOM	RIGHT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2513)	CPFAILGENCOM	CENTER PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	1.12E-13
	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2514)	CYFAILGENCOM	CENTER YAW FAILURE TO GENERATE A COMMAND	1.00E-07	1.12E-13
	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2515)	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	1.12E-13
	RPFAILGENCOM	RIGHT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2516)	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	1.12E-13
	RYFAILGENCOM	RIGHT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2517)	CPFAILGENCOM	CENTER PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	1.12E-13
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2518)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	1.12E-13
	RYFAILGENCOM	RIGHT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2519)	LPFAILGENCOM	LEFT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	1.12E-13
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2520)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	1.12E-13
	LYFAILGENCOM	LEFT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2521)	ACRCADHL2ASRB	LOCAL WIRE FAILURE(CM) SSSW - PIC L AFT	3.33E-07	1.11E-13
	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	
2522)	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	1.11E-13
	ACRDCPWBSTS	DC PWR FAILURE BUS B	3.33E-07	
2523)	ACRCADHL2BSRB	LOCAL WIRE FAILURE(CM) L FWD	3.33E-07	1.11E-13
	ACRDCPWASTS	DC PWR FAILURE BUS A	3.33E-07	
2524)	ACRCADHL2ASRB	LOCAL WIRE FAILURE(CM) SSSW - PIC L AFT	3.33E-07	1.11E-13
	ACRCADHL2BSRB	LOCAL WIRE FAILURE(CM) L FWD	3.33E-07	
2525)	ATTSNSFAIL	ATTITUDE SENSORS OR PROCESSING FAILS	1.00E-05	1.00E-13
	SWCMNCOD	FLIGHT CONTROL SW COMMON CAUSE FAILURE IN CODE	1.00E-05	
	TGLHFAIL	CREW FAILURE TO SELECT MANUAL SEPARATION	1.00E-03	
2526)	HENDETILOTTEST	PB OF NO RECOVER THE H.E. BY THE LOT ACCEPTENCE TESTS (IGNITER)	1.00E-02	1.00E-13
	HENDETISTDTEST	PB OF NO RECOVERY THE H.E. BY STANDARIZE TESTS (IGNITER)	1.00E-02	
	HESELIMATMIX	H.E. IN MIXTURE PROCESS (IGNITER)	1.00E-03	
	LOV_SSWRTHR	INSUFFICIENT SSME AUTHORITY TO COMPENSATE FOR SRB WRONG THRUST	1.00E-06	
2527)	ATTSNSFAIL	ATTITUDE SENSORS OR PROCESSING FAILS	1.00E-05	1.00E-13
	PBSHFAIL	CREW FAILURE TO INITIATE MANUAL SEPARATION	1.00E-03	
	SWCMNCOD	FLIGHT CONTROL SW COMMON CAUSE FAILURE IN CODE	1.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Bacic Event Probability	Cutset Probability
2528)	ATTSNSFAIL	ATTITUDE SENSORS OR PROCESSING FAILS	1.00E-05	1.00E-13
	METFAIL	MASTER EVENT TIMER FAILS	1.00E-05	
	TGLHFAIL	CREW FAILURE TO SELECT MANUAL SEPARATION	1.00E-03	
2529)	ATTSNSFAIL	ATTITUDE SENSORS OR PROCESSING FAILS	1.00E-05	1.00E-13
	OVTHERMAL	OV THERMAL CONTROL FAILURE	1.00E-05	
	PBSHFAIL	CREW FAILURE TO INITIATE MANUAL SEPARATION	1.00E-03	
2530)	ATTSNSFAIL	ATTITUDE SENSORS OR PROCESSING FAILS	1.00E-05	1.00E-13
	OVTHERMAL	OV THERMAL CONTROL FAILURE	1.00E-05	
	TGLHFAIL	CREW FAILURE TO SELECT MANUAL SEPARATION	1.00E-03	
2531)	ATTSNSFAIL	ATTITUDE SENSORS OR PROCESSING FAILS	1.00E-05	1.00E-13
	METFAIL	MASTER EVENT TIMER FAILS	1.00E-05	
	PBSHFAIL	CREW FAILURE TO INITIATE MANUAL SEPARATION	1.00E-03	
2532)	RSNSRCMNCSE	R Pc SENSOR COMMON CAUSE FAILURE	1.00E-04	9.00E-14
	WRVALILD	WRONG VALUES IN I LOAD	3.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2533)	RSNSRCMNCSE	R Pc SENSOR COMMON CAUSE FAILURE	1.00E-04	9.00E-14
	WRILOAD	WRONG I LOAD	3.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2534)	LSNSRCMNCSE	L Pc SENSOR COMMON CAUSE FAILURE	1.00E-04	9.00E-14
	WRVALILD	WRONG VALUES IN I LOAD	3.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2535)	LSNSRCMNCSE	L Pc SENSOR COMMON CAUSE FAILURE	1.00E-04	9.00E-14
	WRILOAD	WRONG I LOAD	3.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2536)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	8.33E-14
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2537)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	8.33E-14
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2538)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	8.33E-14
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2539)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	7.04E-14
	ASMAVFOMPHBLE3	SSME-3 FUEL BLEED VALVE FAILS TO OPEN	8.45E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2540)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	7.04E-14
	ASMAVFOMPHBLE2	SSME-2 FUEL BLEED VALVE FAILS TO OPEN	8.45E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2541)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	7.04E-14
	ASMAVFOMPHBLE1	SSME-1 FUEL BLEED VALVE FAILS TO OPEN	8.45E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2542)	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	6.48E-14
	ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2543)	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	6.48E-14
	ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2544)	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	6.48E-14
	ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2545)	HENDETMSTDTEST	PB OF NO RECOVERY THE H.E. BY STANDARIZE TESTS (MOTOR)	1.00E-02	6.25E-14
	HENRECVBYVERF	PB OF NO RECOVERY THE H.E. BY THE VERIFICATION OF THE 160 MIXES (M	6.25E-03	
	HESELMMATMIX	H.E. IN MIXTURE PROCESS (MOTOR)	1.00E-03	
	LOV_SSWRTHR	INSUFFICIENT SSME AUTHORITY TO COMPENSATE FOR SRB WRONG THRUST	1.00E-06	
2546)	ASMAVFOMPHBLE1	SSME-1 FUEL BLEED VALVE FAILS TO OPEN	8.45E-05	5.47E-14
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	

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	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2547)	ASMAVFOMPHBLE3	SSME-3 FUEL BLEED VALVE FAILS TO OPEN	8.45E-05	5.47E-14
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2548)	ASMAVFOMPHBLE2	SSME-2 FUEL BLEED VALVE FAILS TO OPEN	8.45E-05	5.47E-14
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2549)	LPFAILGENCOM	LEFT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	5.40E-14
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2550)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	5.40E-14
	RPFAILGENCOM	RIGHT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2551)	LYFAILGENCOM	LEFT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	5.40E-14
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2552)	CYFAILGENCOM	CENTER YAW FAILURE TO GENERATE A COMMAND	1.00E-07	5.40E-14
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2553)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	5.40E-14
	RYFAILGENCOM	RIGHT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2554)	LYFAILGENCOM	LEFT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	5.40E-14
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2555)	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	5.40E-14
	RYFAILGENCOM	RIGHT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2556)	CYFAILGENCOM	CENTER YAW FAILURE TO GENERATE A COMMAND	1.00E-07	5.40E-14
	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2557)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	5.40E-14
	RPFAILGENCOM	RIGHT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2558)	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	5.40E-14
	RPFAILGENCOM	RIGHT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2559)	CPFAILGENCOM	CENTER PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	5.40E-14
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2560)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	5.40E-14
	LYFAILGENCOM	LEFT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2561)	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	5.40E-14
	RYFAILGENCOM	RIGHT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	

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2562)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	5.40E-14
	LPFAILGENCOM	LEFT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2563)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	5.40E-14
	LPFAILGENCOM	LEFT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2564)	CYFAILGENCOM	CENTER YAW FAILURE TO GENERATE A COMMAND	1.00E-07	5.40E-14
	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2565)	CYFAILGENCOM	CENTER YAW FAILURE TO GENERATE A COMMAND	1.00E-07	5.40E-14
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2566)	LPFAILGENCOM	LEFT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	5.40E-14
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2567)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	5.40E-14
	RYFAILGENCOM	RIGHT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2568)	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	5.40E-14
	RPFAILGENCOM	RIGHT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2569)	CPFAILGENCOM	CENTER PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	5.40E-14
	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2570)	CPFAILGENCOM	CENTER PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	5.40E-14
	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2571)	CPFAILGENCOM	CENTER PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	5.40E-14
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2572)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	5.40E-14
	LYFAILGENCOM	LEFT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2573)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	5.30E-14
	ASMAVFOMPHRPR2	SSME LH2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2574)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	5.30E-14
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2575)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	5.30E-14
	ASMAVFOMPHRPR1	SSME LH2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.36E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2576)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	5.25E-14

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	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2577)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	4.79E-14
	RPSTFAILACTRAM	RIGHT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2578)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	4.79E-14
	RYSTFAILACTRAM	RIGHT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2579)	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	4.79E-14
	RPSTFAILACTRAM	RIGHT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2580)	CPSTFAILACTRAM	CENTER PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	4.79E-14
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2581)	CPSTFAILACTRAM	CENTER PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	4.79E-14
	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2582)	CYSTFAILACTRAM	CENTER YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	4.79E-14
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2583)	CYSTFAILACTRAM	CENTER YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	4.79E-14
	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2584)	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	4.79E-14
	RYSTFAILACTRAM	RIGHT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2585)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	4.70E-14
	LYSTFAILACTRAM	LEFT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	
2586)	LPSTFAILACTRAM	LEFT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	4.70E-14
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2587)	LYSTFAILACTRAM	LEFT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	4.70E-14
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
2588)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	4.70E-14
	LPSTFAILACTRAM	LEFT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	
2589)	ASMAVFOMPHRPR1	SSME LH2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.36E-05	4.12E-14
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2590)	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	4.12E-14
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	

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2591)	ASMAVFOMPHRPR2	SSME LH2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	4.12E-14
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPFFRIV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2592)	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	4.08E-14
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2593)	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	3.89E-14
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEFH	INITIATING EVENT LOSS OF GROSS H2 FLOW	1.25E-03	
2594)	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	3.89E-14
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEFH	INITIATING EVENT LOSS OF GROSS H2 FLOW	1.25E-03	
2595)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.46E-14
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2596)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.46E-14
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2597)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.46E-14
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2598)	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	3.11E-14
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELO	INITIATING EVENT COOLANT LINER OVERPRESSURE	1.00E-03	
2599)	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	3.11E-14
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELO	INITIATING EVENT COOLANT LINER OVERPRESSURE	1.00E-03	
2600)	RRISOVALFAIL	FAILURE TO ISOLATE ROCK ACTUATOR DAMAGE SERVO-VALVES (R SRB)	2.00E-05	3.04E-14

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Bacic Event Probability	Cutset Probability
	RRSV2FAIL	RIGHT ROCK SERVO-VALVE 2 FAILURE	3.90E-05	
	RRSV4FAIL	RIGHT ROCK SERVO-VALVE FAILURE	3.90E-05	
2601)	RTISOVALFAIL	FAILURE TO ISOLATE TILT ACTUATOR DAMAGE SERVO-VALVES (R SRB)	2.00E-05	3.04E-14
	RTSV1FAIL	RIGHT SERVO-VALVE 1 FAILURE	3.90E-05	
	RTSV4FAIL	RIGHT SERVO-VALVE 4 FAILURE	3.90E-05	
2602)	LRISOVALFAIL	FAILURE TO ISOLATE ROCK ACTUATOR DAMAGE SERVO-VALVES (L SRB)	2.00E-05	3.04E-14
	LRSV1FAIL	LEFT ROCK SERVO-VALVE 1 FAILURE	3.90E-05	
	LRSV4FAIL	LEFT ROCK SERVO-VALVE 4 FAILURE	3.90E-05	
2603)	RTISOVALFAIL	FAILURE TO ISOLATE TILT ACTUATOR DAMAGE SERVO-VALVES (R SRB)	2.00E-05	3.04E-14
	RTSV2FAIL	RIGHT SERVO-VALVE 2 FAILURE	3.90E-05	
	RTSV4FAIL	RIGHT SERVO-VALVE 4 FAILURE	3.90E-05	
2604)	LRISOVALFAIL	FAILURE TO ISOLATE ROCK ACTUATOR DAMAGE SERVO-VALVES (L SRB)	2.00E-05	3.04E-14
	LRSV1FAIL	LEFT ROCK SERVO-VALVE 1 FAILURE	3.90E-05	
	LRSV2FAIL	LEFT ROCK SERVO-VALVE 2 FAILURE	3.90E-05	
2605)	RTISOVALFAIL	FAILURE TO ISOLATE TILT ACTUATOR DAMAGE SERVO-VALVES (R SRB)	2.00E-05	3.04E-14
	RTSV2FAIL	RIGHT SERVO-VALVE 2 FAILURE	3.90E-05	
	RTSV3FAIL	RIGHT SERVO-VALVE 3 FAILURE	3.90E-05	
2606)	LTISOVALFAIL	FAILURE TO ISOLATE TILT ACTUATOR DAMAGE SERVO-VALVES (L SRB)	2.00E-05	3.04E-14
	LTSV3FAIL	LEFT TILT SERVO-VALVE 3 FAILURE	3.90E-05	
	LTSV4FAIL	LEFT TILT SERVO-VALVE 4 FAILURE	3.90E-05	
2607)	LTISOVALFAIL	FAILURE TO ISOLATE TILT ACTUATOR DAMAGE SERVO-VALVES (L SRB)	2.00E-05	3.04E-14
	LTSV2FAIL	LEFT TILT SERVO-VALVE 2 FAILURE	3.90E-05	
	LTSV3FAIL	LEFT TILT SERVO-VALVE 3 FAILURE	3.90E-05	
2608)	RRISOVALFAIL	FAILURE TO ISOLATE ROCK ACTUATOR DAMAGE SERVO-VALVES (R SRB)	2.00E-05	3.04E-14
	RRSV1FAIL	RIGHT ROCK SERVO-VALVE 1 FAILURE	3.90E-05	
	RRSV3FAIL	RIGHT ROCK SERVO-VALVE FAILURE	3.90E-05	
2609)	LRISOVALFAIL	FAILURE TO ISOLATE ROCK ACTUATOR DAMAGE SERVO-VALVES (L SRB)	2.00E-05	3.04E-14
	LRSV2FAIL	LEFT ROCK SERVO-VALVE 2 FAILURE	3.90E-05	
	LRSV3FAIL	LEFT ROCK SERVO-VALVE 3 FAILURE	3.90E-05	
2610)	LTISOVALFAIL	FAILURE TO ISOLATE TILT ACTUATOR DAMAGE SERVO-VALVES (L SRB)	2.00E-05	3.04E-14
	LTSV2FAIL	LEFT TILT SERVO-VALVE 2 FAILURE	3.90E-05	
	LTSV4FAIL	LEFT TILT SERVO-VALVE 4 FAILURE	3.90E-05	
2611)	RRISOVALFAIL	FAILURE TO ISOLATE ROCK ACTUATOR DAMAGE SERVO-VALVES (R SRB)	2.00E-05	3.04E-14
	RRSV2FAIL	RIGHT ROCK SERVO-VALVE 2 FAILURE	3.90E-05	
	RRSV3FAIL	RIGHT ROCK SERVO-VALVE FAILURE	3.90E-05	
2612)	LRISOVALFAIL	FAILURE TO ISOLATE ROCK ACTUATOR DAMAGE SERVO-VALVES (L SRB)	2.00E-05	3.04E-14
	LRSV1FAIL	LEFT ROCK SERVO-VALVE 1 FAILURE	3.90E-05	
	LRSV3FAIL	LEFT ROCK SERVO-VALVE 3 FAILURE	3.90E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
2613)	RTISOVALFAIL	FAILURE TO ISOLATE TILT ACTUATOR DAMAGE SERVO-VALVES (R SRB)	2.00E-05	3.04E-14
	RTSV1FAIL	RIGHT SERVO-VALVE 1 FAILURE	3.90E-05	
	RTSV2FAIL	RIGHT SERVO-VALVE 2 FAILURE	3.90E-05	
2614)	RRISOVALFAIL	FAILURE TO ISOLATE ROCK ACTUATOR DAMAGE SERVO-VALVES (R SRB)	2.00E-05	3.04E-14
	RRSV1FAIL	RIGHT ROCK SERVO-VALVE 1 FAILURE	3.90E-05	
	RRSV4FAIL	RIGHT ROCK SERVO-VALVE FAILURE	3.90E-05	
2615)	LTISOVALFAIL	FAILURE TO ISOLATE TILT ACTUATOR DAMAGE SERVO-VALVES (L SRB)	2.00E-05	3.04E-14
	LTSV1FAIL	LEFT TILT SERVO-VALVE 1 FAILURE	3.90E-05	
	LTSV2FAIL	LEFT TILT SERVO-VALVE 2 FAILURE	3.90E-05	
2616)	LRISOVALFAIL	FAILURE TO ISOLATE ROCK ACTUATOR DAMAGE SERVO-VALVES (L SRB)	2.00E-05	3.04E-14
	LRSV3FAIL	LEFT ROCK SERVO-VALVE 3 FAILURE	3.90E-05	
	LRSV4FAIL	LEFT ROCK SERVO-VALVE 4 FAILURE	3.90E-05	
2617)	RTISOVALFAIL	FAILURE TO ISOLATE TILT ACTUATOR DAMAGE SERVO-VALVES (R SRB)	2.00E-05	3.04E-14
	RTSV1FAIL	RIGHT SERVO-VALVE 1 FAILURE	3.90E-05	
	RTSV3FAIL	RIGHT SERVO-VALVE 3 FAILURE	3.90E-05	
2618)	RRISOVALFAIL	FAILURE TO ISOLATE ROCK ACTUATOR DAMAGE SERVO-VALVES (R SRB)	2.00E-05	3.04E-14
	RRSV1FAIL	RIGHT ROCK SERVO-VALVE 1 FAILURE	3.90E-05	
	RRSV2FAIL	RIGHT ROCK SERVO-VALVE 2 FAILURE	3.90E-05	
2619)	RTISOVALFAIL	FAILURE TO ISOLATE TILT ACTUATOR DAMAGE SERVO-VALVES (R SRB)	2.00E-05	3.04E-14
	RTSV3FAIL	RIGHT SERVO-VALVE 3 FAILURE	3.90E-05	
	RTSV4FAIL	RIGHT SERVO-VALVE 4 FAILURE	3.90E-05	
2620)	RRISOVALFAIL	FAILURE TO ISOLATE ROCK ACTUATOR DAMAGE SERVO-VALVES (R SRB)	2.00E-05	3.04E-14
	RRSV3FAIL	RIGHT ROCK SERVO-VALVE FAILURE	3.90E-05	
	RRSV4FAIL	RIGHT ROCK SERVO-VALVE FAILURE	3.90E-05	
2621)	LRISOVALFAIL	FAILURE TO ISOLATE ROCK ACTUATOR DAMAGE SERVO-VALVES (L SRB)	2.00E-05	3.04E-14
	LRSV2FAIL	LEFT ROCK SERVO-VALVE 2 FAILURE	3.90E-05	
	LRSV4FAIL	LEFT ROCK SERVO-VALVE 4 FAILURE	3.90E-05	
2622)	LTISOVALFAIL	FAILURE TO ISOLATE TILT ACTUATOR DAMAGE SERVO-VALVES (L SRB)	2.00E-05	3.04E-14
	LTSV1FAIL	LEFT TILT SERVO-VALVE 1 FAILURE	3.90E-05	
	LTSV4FAIL	LEFT TILT SERVO-VALVE 4 FAILURE	3.90E-05	
2623)	LTISOVALFAIL	FAILURE TO ISOLATE TILT ACTUATOR DAMAGE SERVO-VALVES (L SRB)	2.00E-05	3.04E-14
	LTSV1FAIL	LEFT TILT SERVO-VALVE 1 FAILURE	3.90E-05	
	LTSV3FAIL	LEFT TILT SERVO-VALVE 3 FAILURE	3.90E-05	
2624)	LSNSRCMNCSE	L Pc SENSOR COMMON CAUSE FAILURE	1.00E-04	3.00E-14
	METFAIL	MASTER EVENT TIMER FAILS	1.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2625)	METFAIL	MASTER EVENT TIMER FAILS	1.00E-05	3.00E-14
	RSNSRCMNCSE	R Pc SENSOR COMMON CAUSE FAILURE	1.00E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2626)	OVTHERMAL	OV THERMAL CONTROL FAILURE	1.00E-05	3.00E-14
	RSNSRCMNCSE	R Pc SENSOR COMMON CAUSE FAILURE	1.00E-04	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2627)	LSNSRCMNCSE	L Pc SENSOR COMMON CAUSE FAILURE	1.00E-04	3.00E-14
	SWCMNCOD	FLIGHT CONTROL SW COMMON CAUSE FAILURE IN CODE	1.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2628)	LSNSRCMNCSE	L Pc SENSOR COMMON CAUSE FAILURE	1.00E-04	3.00E-14
	OVTHERMAL	OV THERMAL CONTROL FAILURE	1.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2629)	RSNSRCMNCSE	R Pc SENSOR COMMON CAUSE FAILURE	1.00E-04	3.00E-14
	SWCMNCOD	FLIGHT CONTROL SW COMMON CAUSE FAILURE IN CODE	1.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2630)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.92E-14
	ASMAVFOMPHBLE3	SSME-3 FUEL BLEED VALVE FAILS TO OPEN	8.45E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2631)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.92E-14
	ASMAVFOMPHBLE2	SSME-2 FUEL BLEED VALVE FAILS TO OPEN	8.45E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2632)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.92E-14
	ASMAVFOMPHBLE1	SSME-1 FUEL BLEED VALVE FAILS TO OPEN	8.45E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2633)-	OPOVCOMLCREL	OPOV COMMAND LIMIT ENGAGED	9.98E-01	2.86E-14
	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
2634)-	OPOVCOMLCREL	OPOV COMMAND LIMIT ENGAGED	9.98E-01	2.86E-14
	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
2635)	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	2.80E-14
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	SMEFH	INITIATING EVENT LOSS OF GROSS H2 FLOW	1.25E-03	
2636)	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	2.69E-14
	ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2637)	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	2.69E-14
	ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2638)	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	2.69E-14
	ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2639)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	2.31E-14
	RYSTFAILACTRAM	RIGHT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2640)	CYSTFAILACTRAM	CENTER YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	2.31E-14
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2641)	CPSTFAILACTRAM	CENTER PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	2.31E-14
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2642)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	2.31E-14
	RYSTFAILACTRAM	RIGHT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2643)	CPSTFAILACTRAM	CENTER PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	2.31E-14
	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2644)	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	2.31E-14
	RYSTFAILACTRAM	RIGHT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2645)	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	2.31E-14
	RYSTFAILACTRAM	RIGHT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2646)	CYSTFAILACTRAM	CENTER YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	2.31E-14
	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2647)	CPSTFAILACTRAM	CENTER PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	2.31E-14
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2648)	CYSTFAILACTRAM	CENTER YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	2.31E-14
	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2649)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	2.31E-14
	RPSTFAILACTRAM	RIGHT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
2650)	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	2.31E-14
	RPSTFAILACTRAM	RIGHT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2651)	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	2.31E-14
	RPSTFAILACTRAM	RIGHT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2652)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	2.31E-14
	RPSTFAILACTRAM	RIGHT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2653)	CYSTFAILACTRAM	CENTER YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	2.31E-14
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2654)	CPSTFAILACTRAM	CENTER PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	2.31E-14
	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2655)	ASMAVFOMPHBLE3	SSME-3 FUEL BLEED VALVE FAILS TO OPEN	8.45E-05	2.27E-14
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2656)	ASMAVFOMPHBLE2	SSME-2 FUEL BLEED VALVE FAILS TO OPEN	8.45E-05	2.27E-14
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2657)	ASMAVFOMPHBLE1	SSME-1 FUEL BLEED VALVE FAILS TO OPEN	8.45E-05	2.27E-14
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2658)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	2.27E-14
	LYSTFAILACTRAM	LEFT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	
2659)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	2.27E-14
	LYSTFAILACTRAM	LEFT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	
2660)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	2.27E-14
	LPSTFAILACTRAM	LEFT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	
2661)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	2.27E-14
	LPSTFAILACTRAM	LEFT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	
2662)	LYSTFAILACTRAM	LEFT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	2.27E-14
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2663)	LPSTFAILACTRAM	LEFT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	2.27E-14
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2664)	LYSTFAILACTRAM	LEFT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	2.27E-14

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2665)	LPSTFAILACTRAM	LEFT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	2.27E-14
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
2666)	LSNSRAFAIL	L Pc SENSOR A FAILURE	5.00E-03	2.25E-14
	LSNSRBFAIL	L Pc SENSOR B FAILURE	5.00E-03	
	WRILOAD	WRONG I LOAD	3.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2667)	LSNSRAFAIL	L Pc SENSOR A FAILURE	5.00E-03	2.25E-14
	LSNSRCFAIL	L Pc SENSOR C FAILURE	5.00E-03	
	WRVALILD	WRONG VALUES IN I LOAD	3.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2668)	RSNSRAFAIL	R Pc SENSOR A FAILURE	5.00E-03	2.25E-14
	RSNSRBFAIL	R Pc SENSOR B FAILURE	5.00E-03	
	WRILOAD	WRONG I LOAD	3.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2669)	LSNSRAFAIL	L Pc SENSOR A FAILURE	5.00E-03	2.25E-14
	LSNSRCFAIL	L Pc SENSOR C FAILURE	5.00E-03	
	WRILOAD	WRONG I LOAD	3.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2670)	RSNSRAFAIL	R Pc SENSOR A FAILURE	5.00E-03	2.25E-14
	RSNSRBFAIL	R Pc SENSOR B FAILURE	5.00E-03	
	WRVALILD	WRONG VALUES IN I LOAD	3.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2671)	LSNSRBFAIL	L Pc SENSOR B FAILURE	5.00E-03	2.25E-14
	LSNSRCFAIL	L Pc SENSOR C FAILURE	5.00E-03	
	WRVALILD	WRONG VALUES IN I LOAD	3.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2672)	RSNSRBFAIL	R Pc SENSOR B FAILURE	5.00E-03	2.25E-14
	RSNSRCFAIL	R Pc SENSOR C FAILURE	5.00E-03	
	WRILOAD	WRONG I LOAD	3.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2673)	LSNSRAFAIL	L Pc SENSOR A FAILURE	5.00E-03	2.25E-14
	LSNSRBFAIL	L Pc SENSOR B FAILURE	5.00E-03	
	WRVALILD	WRONG VALUES IN I LOAD	3.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2674)	RSNSRAFAIL	R Pc SENSOR A FAILURE	5.00E-03	2.25E-14
	RSNSRCFAIL	R Pc SENSOR C FAILURE	5.00E-03	
	WRVALILD	WRONG VALUES IN I LOAD	3.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2675)	LSNSRBFAIL	L Pc SENSOR B FAILURE	5.00E-03	2.25E-14
	LSNSRCFAIL	L Pc SENSOR C FAILURE	5.00E-03	
	WRILOAD	WRONG I LOAD	3.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2676)	RSNSRAFAIL	R Pc SENSOR A FAILURE	5.00E-03	2.25E-14
	RSNSRCFAIL	R Pc SENSOR C FAILURE	5.00E-03	
	WRILOAD	WRONG I LOAD	3.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2677)	RSNSRBFAIL	R Pc SENSOR B FAILURE	5.00E-03	2.25E-14
	RSNSRCFAIL	R Pc SENSOR C FAILURE	5.00E-03	
	WRVALILD	WRONG VALUES IN I LOAD	3.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2678)	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	2.24E-14
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELO	INITIATING EVENT COOLANT LINER OVERPRESSURE	1.00E-03	
2679)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.20E-14
	ASMAVFOMPHRPR1	SSME LH2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.36E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2680)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.20E-14
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2681)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.20E-14
	ASMAVFOMPHRPR2	SSME LH2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2682)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.18E-14
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2683)	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	1.95E-14
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	SMEMO	INITIATING EVENT HIGH MIXTURE RATIO IN OXIDIZER PREBURNERS	6.27E-04	
2684)	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	1.95E-14
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEMF	INITIATING EVENT HIGH MIXTURE RATIO IN FUEL PREBURNER	6.27E-04	
2685)	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	1.95E-14
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEMF	INITIATING EVENT HIGH MIXTURE RATIO IN FUEL PREBURNER	6.27E-04	
2686)	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	1.95E-14
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEMO	INITIATING EVENT HIGH MIXTURE RATIO IN OXIDIZER PREBURNERS	6.27E-04	
2687)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.90E-14
	ASMHVCPPHFOSAB2	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	2.70E-07	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2688)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.90E-14
	ASMHVCPPHFOSAB3	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	2.70E-07	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2689)	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	1.88E-14
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEPG	INITIATING EVENT FAILURE TO PRECHARGE POGO ACC	6.05E-04	
2690)	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	1.88E-14
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEPG	INITIATING EVENT FAILURE TO PRECHARGE POGO ACC	6.05E-04	
2691)	APMCAOCPRPMFDTCA	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	1.79E-14
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEFH	INITIATING EVENT LOSS OF GROSS H2 FLOW	1.25E-03	
2692)	APMCAOCPRPMFDTCB	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	1.79E-14
	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEFH	INITIATING EVENT LOSS OF GROSS H2 FLOW	1.25E-03	
2693)	ASMAVFOMPHRPR1	SSME LH2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.36E-05	1.71E-14
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2694)	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	1.71E-14
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2695)	ASMAVFOMPHRPR2	SSME LH2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	1.71E-14
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPFFRV	FAILURE TO OPEN OF THE FUEL FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2696)	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	1.70E-14
	ASMHUHSMPVACCU	HUMAN ERROR TO INITIATE THE VACCUM INERTING PHASE	1.00E-02	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2697)	ASMHVCPPHFOSAB1	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B (ENGINE 1)	2.70E-07	1.47E-14
	ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2698)	ASMHVCPPHFOSAB3	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	2.70E-07	1.47E-14
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2699)	ASMHVCPPHFOSAB2	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	2.70E-07	1.47E-14
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2700)	APMCAOCPRPMCLCHB	HPFTP CL HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	1.43E-14
	APMPSFPPRPMCLCHA	HPFTP CL SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMELO	INITIATING EVENT COOLANT LINER OVERPRESSURE	1.00E-03	
2701)	APMCAOCPRPMCLCHA	HPFTP CL HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	1.43E-14
	APMPSFPPRPMCLCHB	HPFTP CL SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMELO	INITIATING EVENT COOLANT LINER OVERPRESSURE	1.00E-03	
2702)	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	1.41E-14
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEMF	INITIATING EVENT HIGH MIXTURE RATIO IN FUEL PREBURNER	6.27E-04	
2703)	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	1.41E-14
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEMO	INITIATING EVENT HIGH MIXTURE RATIO IN OXIDIZER PREBURNERS	6.27E-04	
2704)	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	1.36E-14
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	SMEPG	INITIATING EVENT FAILURE TO PRECHARGE POGO ACC	6.05E-04	
2705)	ATTSNSFAIL	ATTITUDE SENSORS OR PROCESSING FAILS	1.00E-05	1.00E-14
	OVPOWER	OV POWER FAILURE	1.00E-06	
	TGLHFAIL	CREW FAILURE TO SELECT MANUAL SEPARATION	1.00E-03	
2706)	ATTSNSFAIL	ATTITUDE SENSORS OR PROCESSING FAILS	1.00E-05	1.00E-14
	OVPOWER	OV POWER FAILURE	1.00E-06	
	PBSHFAIL	CREW FAILURE TO INITIATE MANUAL SEPARATION	1.00E-03	
2707)	CPFAILGENCOM	CENTER PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	1.00E-14
	LPFAILGENCOM	LEFT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2708)	LPFAILGENCOM	LEFT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	1.00E-14
	RPFAILGENCOM	RIGHT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2709)	CYFAILGENCOM	CENTER YAW FAILURE TO GENERATE A COMMAND	1.00E-07	1.00E-14
	RPFAILGENCOM	RIGHT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2710)	CPFAILGENCOM	CENTER PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	1.00E-14
	LYFAILGENCOM	LEFT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2711)	CYFAILGENCOM	CENTER YAW FAILURE TO GENERATE A COMMAND	1.00E-07	1.00E-14
	LPFAILGENCOM	LEFT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2712)	CYFAILGENCOM	CENTER YAW FAILURE TO GENERATE A COMMAND	1.00E-07	1.00E-14
	LYFAILGENCOM	LEFT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2713)	LYFAILGENCOM	LEFT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	1.00E-14
	RPFAILGENCOM	RIGHT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2714)	CYFAILGENCOM	CENTER YAW FAILURE TO GENERATE A COMMAND	1.00E-07	1.00E-14
	RYFAILGENCOM	RIGHT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2715)	CPFAILGENCOM	CENTER PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	1.00E-14
	RYFAILGENCOM	RIGHT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2716)	LPFAILGENCOM	LEFT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	1.00E-14
	RYFAILGENCOM	RIGHT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2717)	CPFAILGENCOM	CENTER PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	1.00E-14
	RPFAILGENCOM	RIGHT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2718)	LYFAILGENCOM	LEFT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	1.00E-14
	RYFAILGENCOM	RIGHT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2719)	HENDETILOTTEST	PB OF NO RECOVER THE H.E. BY THE LOT ACCEPTENCE TESTS (IGNITER)	1.00E-02	1.00E-14
	HENDETISTDTEST	PB OF NO RECOVERY THE H.E. BY STANDARIZE TESTS (IGNITER)	1.00E-02	
	HESELIRAWMAT	RAW MATERIAL SELECTION ERROR (IGNITER)	1.00E-04	
	LOV_SSWRTHR	INSUFFICIENT SSME AUTHORITY TO COMPENSATE FOR SRB WRONG THRUST	1.00E-06	
2720)	APMCAOCPRPMFDTCB	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	8.97E-15
	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEMF	INITIATING EVENT HIGH MIXTURE RATIO IN FUEL PREBURNER	6.27E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
2721)	APMCAOCPRPMFDTCA	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	8.97E-15
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEMF	INITIATING EVENT HIGH MIXTURE RATIO IN FUEL PREBURNER	6.27E-04	
2722)	APMCAOCPRPMODTCB	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	8.97E-15
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEMO	INITIATING EVENT HIGH MIXTURE RATIO IN OXIDIZER PREBURNERS	6.27E-04	
2723)	APMCAOCPRPMODTCA	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	8.97E-15
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEMO	INITIATING EVENT HIGH MIXTURE RATIO IN OXIDIZER PREBURNERS	6.27E-04	
2724)	APMLOGICSWB	FAILURE OF THE LOGIC TO DE-ENERGIZE SERVO-SWITCH B	1.00E-07	8.78E-15
	ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	1.40E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2725)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	8.70E-15
	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
2726)	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	8.70E-15
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
2727)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	8.70E-15
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
2728)-	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	7.97E-15
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
2729)-	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	7.97E-15
	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
2730)	LSNSRAFAIL	L Pc SENSOR A FAILURE	5.00E-03	7.50E-15
	LSNSRBFAIL	L Pc SENSOR B FAILURE	5.00E-03	
	OVTHERMAL	OV THERMAL CONTROL FAILURE	1.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2731)	LSNSRBFAIL	L Pc SENSOR B FAILURE	5.00E-03	7.50E-15
	LSNSRCFAIL	L Pc SENSOR C FAILURE	5.00E-03	
	OVTHERMAL	OV THERMAL CONTROL FAILURE	1.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2732)	OVTHERMAL	OV THERMAL CONTROL FAILURE	1.00E-05	7.50E-15

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	RSNSRBFAIL	R Pc SENSOR B FAILURE	5.00E-03	
	RSNSRCFAIL	R Pc SENSOR C FAILURE	5.00E-03	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2733)	LSNSRBFAIL	L Pc SENSOR B FAILURE	5.00E-03	7.50E-15
	LSNSRCFAIL	L Pc SENSOR C FAILURE	5.00E-03	
	METFAIL	MASTER EVENT TIMER FAILS	1.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2734)	LSNSRAFAIL	L Pc SENSOR A FAILURE	5.00E-03	7.50E-15
	LSNSRCFAIL	L Pc SENSOR C FAILURE	5.00E-03	
	OVTHERMAL	OV THERMAL CONTROL FAILURE	1.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2735)	LSNSRAFAIL	L Pc SENSOR A FAILURE	5.00E-03	7.50E-15
	LSNSRCFAIL	L Pc SENSOR C FAILURE	5.00E-03	
	METFAIL	MASTER EVENT TIMER FAILS	1.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2736)	METFAIL	MASTER EVENT TIMER FAILS	1.00E-05	7.50E-15
	RSNSRBFAIL	R Pc SENSOR B FAILURE	5.00E-03	
	RSNSRCFAIL	R Pc SENSOR C FAILURE	5.00E-03	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2737)	OVTHERMAL	OV THERMAL CONTROL FAILURE	1.00E-05	7.50E-15
	RSNSRAFAIL	R Pc SENSOR A FAILURE	5.00E-03	
	RSNSRCFAIL	R Pc SENSOR C FAILURE	5.00E-03	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2738)	RSNSRBFAIL	R Pc SENSOR B FAILURE	5.00E-03	7.50E-15
	RSNSRCFAIL	R Pc SENSOR C FAILURE	5.00E-03	
	SWCMNCOD	FLIGHT CONTROL SW COMMON CAUSE FAILURE IN CODE	1.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2739)	METFAIL	MASTER EVENT TIMER FAILS	1.00E-05	7.50E-15
	RSNSRAFAIL	R Pc SENSOR A FAILURE	5.00E-03	
	RSNSRBFAIL	R Pc SENSOR B FAILURE	5.00E-03	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2740)	RSNSRAFAIL	R Pc SENSOR A FAILURE	5.00E-03	7.50E-15
	RSNSRCFAIL	R Pc SENSOR C FAILURE	5.00E-03	
	SWCMNCOD	FLIGHT CONTROL SW COMMON CAUSE FAILURE IN CODE	1.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2741)	LSNSRAFAIL	L Pc SENSOR A FAILURE	5.00E-03	7.50E-15
	LSNSRCFAIL	L Pc SENSOR C FAILURE	5.00E-03	
	SWCMNCOD	FLIGHT CONTROL SW COMMON CAUSE FAILURE IN CODE	1.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2742)	METFAIL	MASTER EVENT TIMER FAILS	1.00E-05	7.50E-15
	RSNSRAFAIL	R Pc SENSOR A FAILURE	5.00E-03	
	RSNSRCFAIL	R Pc SENSOR C FAILURE	5.00E-03	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2743)	LSNSRAFAIL	L Pc SENSOR A FAILURE	5.00E-03	7.50E-15
	LSNSRBFAIL	L Pc SENSOR B FAILURE	5.00E-03	
	METFAIL	MASTER EVENT TIMER FAILS	1.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2744)	RSNSRAFAIL	R Pc SENSOR A FAILURE	5.00E-03	7.50E-15
	RSNSRBFAIL	R Pc SENSOR B FAILURE	5.00E-03	
	SWCMNCOD	FLIGHT CONTROL SW COMMON CAUSE FAILURE IN CODE	1.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2745)	LSNSRBFAIL	L Pc SENSOR B FAILURE	5.00E-03	7.50E-15
	LSNSRCFAIL	L Pc SENSOR C FAILURE	5.00E-03	
	SWCMNCOD	FLIGHT CONTROL SW COMMON CAUSE FAILURE IN CODE	1.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2746)	OVTHERMAL	OV THERMAL CONTROL FAILURE	1.00E-05	7.50E-15
	RSNSRAFAIL	R Pc SENSOR A FAILURE	5.00E-03	
	RSNSRBFAIL	R Pc SENSOR B FAILURE	5.00E-03	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2747)	LSNSRAFAIL	L Pc SENSOR A FAILURE	5.00E-03	7.50E-15
	LSNSRBFAIL	L Pc SENSOR B FAILURE	5.00E-03	
	SWCMNCOD	FLIGHT CONTROL SW COMMON CAUSE FAILURE IN CODE	1.00E-05	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2748)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	6.27E-15
	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
2749)	HENDETMSTDTEST	PB OF NO RECOVERY THE H.E. BY STANDARIZE TESTS (MOTOR)	1.00E-02	6.25E-15
	HENRECVBYVERF	PB OF NO RECOVERY THE H.E. BY THE VERIFICATION OF THE 160 MIXES (M	6.25E-03	
	HESELMRAWMAT	RAW MATERIAL SELECTION ERROR (MOTOR)	1.00E-04	
	LOV_SSWRTHR	INSUFFICIENT SSME AUTHORITY TO COMPENSATE FOR SRB WRONG THRUST	1.00E-06	
2750)-	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	5.74E-15
	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
2751)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	5.58E-15
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
2752)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	5.58E-15
	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
2753)	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	5.58E-15
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
2754)	CYSTFAILACTRAM	CENTER YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	4.28E-15
	LYFAILGENCOM	LEFT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2755)	CPSTFAILACTRAM	CENTER PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	4.28E-15
	LPFAILGENCOM	LEFT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2756)	CPSTFAILACTRAM	CENTER PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	4.28E-15
	RYFAILGENCOM	RIGHT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2757)	CYFAILGENCOM	CENTER YAW FAILURE TO GENERATE A COMMAND	1.00E-07	4.28E-15
	RPSTFAILACTRAM	RIGHT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2758)	CYSTFAILACTRAM	CENTER YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	4.28E-15
	RPFAILGENCOM	RIGHT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2759)	CPFAILGENCOM	CENTER PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	4.28E-15
	RYSTFAILACTRAM	RIGHT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2760)	CYFAILGENCOM	CENTER YAW FAILURE TO GENERATE A COMMAND	1.00E-07	4.28E-15
	RYSTFAILACTRAM	RIGHT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2761)	LYFAILGENCOM	LEFT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	4.28E-15
	RPSTFAILACTRAM	RIGHT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2762)	LPFAILGENCOM	LEFT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	4.28E-15
	RPSTFAILACTRAM	RIGHT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2763)	CPSTFAILACTRAM	CENTER PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	4.28E-15
	RPFAILGENCOM	RIGHT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2764)	CYSTFAILACTRAM	CENTER YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	4.28E-15
	RYFAILGENCOM	RIGHT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2765)	CPFAILGENCOM	CENTER PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	4.28E-15
	RPSTFAILACTRAM	RIGHT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2766)	LPFAILGENCOM	LEFT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	4.28E-15
	RYSTFAILACTRAM	RIGHT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2767)	LYFAILGENCOM	LEFT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	4.28E-15
	RYSTFAILACTRAM	RIGHT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2768)	CYSTFAILACTRAM	CENTER YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	4.28E-15
	LPFAILGENCOM	LEFT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2769)	CPSTFAILACTRAM	CENTER PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	4.28E-15

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	LYFAILGENCOM	LEFT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2770)	CPFAILGENCOM	CENTER PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	4.20E-15
	LYSTFAILACTRAM	LEFT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	
2771)	LPSTFAILACTRAM	LEFT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	4.20E-15
	RPFAILGENCOM	RIGHT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2772)	LPSTFAILACTRAM	LEFT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	4.20E-15
	RYFAILGENCOM	RIGHT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2773)	LYSTFAILACTRAM	LEFT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	4.20E-15
	RPFAILGENCOM	RIGHT PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	
2774)	CYFAILGENCOM	CENTER YAW FAILURE TO GENERATE A COMMAND	1.00E-07	4.20E-15
	LYSTFAILACTRAM	LEFT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	
2775)	CYFAILGENCOM	CENTER YAW FAILURE TO GENERATE A COMMAND	1.00E-07	4.20E-15
	LPSTFAILACTRAM	LEFT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	
2776)	CPFAILGENCOM	CENTER PITCH FAILURE TO GENERATE A COMMAND	1.00E-07	4.20E-15
	LPSTFAILACTRAM	LEFT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	
2777)	LYSTFAILACTRAM	LEFT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	4.20E-15
	RYFAILGENCOM	RIGHT YAW FAILURE TO GENERATE A COMMAND	1.00E-07	
2778)	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	4.11E-15
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2779)	ASMHVFPPHFOPSH3	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	4.11E-15
	ASMHVFPPHFOSVA3	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2780)	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	4.11E-15
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2781)	ASMHVFPPHFOPSH2	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	4.11E-15
	ASMHVFPPHFOSVA2	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2782)	ASMHVFPPHFOSVA3	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	4.11E-15
	ASMHVFPPHFOSVB3	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2783)	ASMHVFPPHFOSVA2	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	4.11E-15

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMHVFPPHFOSVB2	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2784)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	4.02E-15
	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
2785)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.52E-15
	ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	
	ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2786)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.52E-15
	ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	
	ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2787)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.52E-15
	ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	
	ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2788)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.52E-15
	ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	
	ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2789)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.52E-15
	ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	
	ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2790)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.52E-15
	ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	
	ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2791)	OVPOWER	OV POWER FAILURE	1.00E-06	3.00E-15
	RSNSRCMNCSE	R Pc SENSOR COMMON CAUSE FAILURE	1.00E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2792)	LSNSRCMNCSE	L Pc SENSOR COMMON CAUSE FAILURE	1.00E-04	3.00E-15
	OVPOWER	OV POWER FAILURE	1.00E-06	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2793)	ASMHVFOPHFOSWA2	OPOV SERVO-SWITCH B FAILS TO CHANGE ITS POSITION (ENGINE 2)	4.02E-06	2.96E-15
	ASMHVFPPHFOSVA2	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2794)	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	2.96E-15
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2795)	ASMHVFOPHFOSWA3	OPOV SERVO-SWITCH B FAILS TO CHANGE ITS POSITION (ENGINE 3)	4.02E-06	2.96E-15
	ASMHVFPPHFOSVA3	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
2796)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.24E-15
	ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2797)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.24E-15
	ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2798)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.24E-15
	ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2799)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.24E-15
	ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2800)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.24E-15
	ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2801)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.24E-15
	ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2802)	APMCOMCPRPMFDTCA	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL A	1.43E-07	2.23E-15
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
2803)	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	2.23E-15
	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
2804)	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	2.23E-15
	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
2805)	APMCOMCPRPMFDTCB	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL B	1.43E-07	2.23E-15
	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
2806)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.22E-15
	ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2807)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.22E-15
	ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
2808)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.22E-15
	ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2809)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.22E-15
	ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2810)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.22E-15
	ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2811)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.22E-15
	ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2812)	ANMPPLRMPCRLI2	CROSS-TIE LINE ENGINE 2 DEPRESSURIZES	2.19E-05	1.87E-15
	ANMPPLRMPCRLI3	CROSS-TIE LINE ENGINE 3 DEPRESSURIZES	2.19E-05	
	ASMHUHSPHFEMESD	HUMAN ERROR TO INITIATE THE MANUAL EMERGENCY HYDRAULIC S/D	1.00E-02	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2813)	CYSTFAILACTRAM	CENTER YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	1.83E-15
	RYSTFAILACTRAM	RIGHT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2814)	CPSTFAILACTRAM	CENTER PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	1.83E-15
	RYSTFAILACTRAM	RIGHT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2815)	CYSTFAILACTRAM	CENTER YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	1.83E-15
	RPSTFAILACTRAM	RIGHT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2816)	CPSTFAILACTRAM	CENTER PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	1.83E-15
	RPSTFAILACTRAM	RIGHT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2817)	CYSTFAILACTRAM	CENTER YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	1.80E-15
	LPSTFAILACTRAM	LEFT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	
2818)	LYSTFAILACTRAM	LEFT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	1.80E-15
	RPSTFAILACTRAM	RIGHT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2819)	CYSTFAILACTRAM	CENTER YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	1.80E-15

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	LYSTFAILACTRAM	LEFT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	
2820)	LPSTFAILACTRAM	LEFT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	1.80E-15
	RYSTFAILACTRAM	RIGHT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2821)	CPSTFAILACTRAM	CENTER PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	1.80E-15
	LPSTFAILACTRAM	LEFT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	
2822)	LPSTFAILACTRAM	LEFT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	1.80E-15
	RPSTFAILACTRAM	RIGHT PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2823)	CPSTFAILACTRAM	CENTER PITCH STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	1.80E-15
	LYSTFAILACTRAM	LEFT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	
2824)	LYSTFAILACTRAM	LEFT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.20E-08	1.80E-15
	RYSTFAILACTRAM	RIGHT YAW STRUCTURAL FAILURE OF ACTUATOR RAM	4.28E-08	
2825)	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	1.54E-15
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
2826)	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	1.54E-15
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
2827)	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	1.54E-15
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
2828)	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	1.54E-15
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
2829)	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	1.54E-15
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
2830)	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	1.54E-15
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
2831)	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	1.54E-15
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
2832)	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	1.54E-15
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
2833)	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	1.54E-15
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
2834)	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	1.54E-15
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
2835)	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	1.54E-15
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
2836)	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	1.54E-15
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
2837)	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	1.54E-15
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
2838)	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	1.54E-15
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
2839)	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	1.54E-15
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
2840)	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	1.54E-15
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
2841)	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	1.54E-15
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
2842)	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	1.54E-15
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
2843)	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	1.54E-15
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
2844)	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	1.54E-15
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
2845)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.46E-15
	ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	
	ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
2846)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.46E-15
	ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	
	ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2847)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.46E-15
	ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	
	ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2848)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.46E-15
	ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	
	ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2849)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.46E-15
	ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	
	ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2850)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.46E-15
	ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	
	ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2851)	APMCOMCPRPMPCCHB	CONTROLLER INTERFACE FAILURE. CHANNEL B	1.43E-07	1.43E-15
	APMPSFPPRPMPCCHA	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
2852)	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	1.43E-15
	APMPSFPPRPMPCCHA	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL A	1.00E-02	
	APMPSFPPRPMPCCHB	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
2853)	APMCOMCPRPMPCCHA	CONTROLLER INTERFACE FAILURE. CHANNEL A	1.43E-07	1.43E-15
	APMPSFPPRPMPCCHB	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
2854)	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	1.43E-15
	APMPSFPPRPMPCCHA	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL A	1.00E-02	
	APMPSFPPRPMPCCHB	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
2855)	APMCOMCPRPMFDTCB	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL B	1.43E-07	1.12E-15
	APMTSCCPRPMODTAB	CCF OF CHANNEL A CHANNEL B HPOTP DT SENSORS	5.00E-05	
	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
2856)	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	1.12E-15
	APMTSCCPRPMFDTAB	CCF OF CHANNEL A AND CHANNEL B HPFTP DT SENSORS	5.00E-05	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
2857)	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	1.12E-15
	APMTSCCPRPMFDTAB	CCF OF CHANNEL A AND CHANNEL B HPFTP DT SENSORS	5.00E-05	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
2858)	APMCOMCPRPMFDTCA	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL A	1.43E-07	1.12E-15
	APMTSCCPRPMODTAB	CCF OF CHANNEL A CHANNEL B HPOTP DT SENSORS	5.00E-05	
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
2859)	APMHVFCPRPMOPO1	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 1)	8.10E-07	1.02E-15
	APMSVFPPRPMSWB	SERVO-SWITCH B FAILS TO CHANGE ITS POSITION (HARDWARE FAILURES)	2.00E-06	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2860)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	9.30E-16
	ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2861)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	9.30E-16
	ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2862)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	9.30E-16
	ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	

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	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2863)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	9.30E-16
	ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2864)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	9.30E-16
	ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2865)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	9.30E-16
	ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2866)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	9.21E-16
	ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2867)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	9.21E-16
	ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2868)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	9.21E-16
	ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2869)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	9.21E-16
	ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
2870)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	9.21E-16
	ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2871)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	9.21E-16
	ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
2872)	OVPOWER	OV POWER FAILURE	1.00E-06	7.50E-16
	RSNSRBFAIL	R Pc SENSOR B FAILURE	5.00E-03	
	RSNSRCFAIL	R Pc SENSOR C FAILURE	5.00E-03	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2873)	OVPOWER	OV POWER FAILURE	1.00E-06	7.50E-16
	RSNSRAFAIL	R Pc SENSOR A FAILURE	5.00E-03	
	RSNSRBFAIL	R Pc SENSOR B FAILURE	5.00E-03	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2874)	LSNSRAFAIL	L Pc SENSOR A FAILURE	5.00E-03	7.50E-16
	LSNSRBFAIL	L Pc SENSOR B FAILURE	5.00E-03	
	OVPOWER	OV POWER FAILURE	1.00E-06	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2875)	OVPOWER	OV POWER FAILURE	1.00E-06	7.50E-16
	RSNSRAFAIL	R Pc SENSOR A FAILURE	5.00E-03	
	RSNSRCFAIL	R Pc SENSOR C FAILURE	5.00E-03	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2876)	LSNSRBFAIL	L Pc SENSOR B FAILURE	5.00E-03	7.50E-16
	LSNSRCFAIL	L Pc SENSOR C FAILURE	5.00E-03	
	OVPOWER	OV POWER FAILURE	1.00E-06	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2877)	LSNSRAFAIL	L Pc SENSOR A FAILURE	5.00E-03	7.50E-16
	LSNSRCFAIL	L Pc SENSOR C FAILURE	5.00E-03	
	OVPOWER	OV POWER FAILURE	1.00E-06	
	WRVALILD1	WRONG VALUES IN I LOAD	3.00E-05	
2878)	APMCOMCPRPMPCCHA	CONTROLLER INTERFACE FAILURE. CHANNEL A	1.43E-07	7.15E-16
	APMPSFPPRPMPCCHB	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL B	1.00E-02	
	APMTSCCPRPMODTAB	CCF OF CHANNEL A CHANNEL B HPOTP DT SENSORS	5.00E-05	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
2879)	APMCOMCPRPMPCCHB	CONTROLLER INTERFACE FAILURE. CHANNEL B	1.43E-07	7.15E-16
	APMPSFPPRPMPCCHA	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL A	1.00E-02	
	APMTSCCPRPMODTAB	CCF OF CHANNEL A CHANNEL B HPOTP DT SENSORS	5.00E-05	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
2880)	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	7.15E-16
	APMPSCCPRPMPCCAB	CCF OF CHANNEL A AND CHANNEL B PRESSURE DROP SENSORS	5.00E-05	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
2881)	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	7.15E-16
	APMPSCCPRPMPCCAB	CCF OF CHANNEL A AND CHANNEL B PRESSURE DROP SENSORS	5.00E-05	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
2882)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	6.98E-16
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEFH	INITIATING EVENT LOSS OF GROSS H2 FLOW	1.25E-03	
2883)	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	6.98E-16
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEFH	INITIATING EVENT LOSS OF GROSS H2 FLOW	1.25E-03	
2884)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	6.98E-16
	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEFH	INITIATING EVENT LOSS OF GROSS H2 FLOW	1.25E-03	
2885)	ANMHUHSMPISO	HUMAN ERROR TO ISOLATE THE LEAKAGE	5.00E-02	6.07E-16
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2886)	ANMHUHSMPISO	HUMAN ERROR TO ISOLATE THE LEAKAGE	5.00E-02	6.07E-16
	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2887)	ANMHUHSMPCROSS	HUMAN ERROR TO OPEN THE CROSS LINES VALVES	5.00E-02	6.07E-16
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2888)	ANMHUHSMPCROSS	HUMAN ERROR TO OPEN THE CROSS LINES VALVES	5.00E-02	6.07E-16
	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2889)	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	5.58E-16
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELO	INITIATING EVENT COOLANT LINER OVERPRESSURE	1.00E-03	
2890)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	5.58E-16
	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELO	INITIATING EVENT COOLANT LINER OVERPRESSURE	1.00E-03	
2891)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	5.58E-16
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELO	INITIATING EVENT COOLANT LINER OVERPRESSURE	1.00E-03	
2892)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	5.51E-16
	ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	
	ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2893)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	5.51E-16
	ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	
	ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2894)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	5.51E-16
	ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	
	ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2895)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	5.51E-16
	ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	
	ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2896)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	5.51E-16
	ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	
	ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2897)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	5.51E-16

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	
	ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2898)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	5.02E-16
	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	
	SMEFH	INITIATING EVENT LOSS OF GROSS H2 FLOW	1.25E-03	
2899)	ANMHUHSMPISO	HUMAN ERROR TO ISOLATE THE LEAKAGE	5.00E-02	4.38E-16
	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2900)	ANMHUHSMPCROSS	HUMAN ERROR TO OPEN THE CROSS LINES VALVES	5.00E-02	4.38E-16
	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2901)	ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	4.29E-16
	ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2902)	ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	4.29E-16
	ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2903)	ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	4.29E-16
	ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2904)	ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	4.29E-16
	ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2905)	ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	4.29E-16

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2906)	ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	4.29E-16
	ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	1.00E-04	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2907)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	4.02E-16
	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	
	SMELO	INITIATING EVENT COOLANT LINER OVERPRESSURE	1.00E-03	
2908)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.51E-16
	ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2909)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.51E-16
	ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2910)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.51E-16
	ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2911)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.51E-16
	ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2912)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.51E-16
	ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2913)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.51E-16

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2914)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	3.50E-16
	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEMF	INITIATING EVENT HIGH MIXTURE RATIO IN FUEL PREBURNER	6.27E-04	
2915)	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	3.50E-16
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEMF	INITIATING EVENT HIGH MIXTURE RATIO IN FUEL PREBURNER	6.27E-04	
2916)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	3.50E-16
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEMF	INITIATING EVENT HIGH MIXTURE RATIO IN FUEL PREBURNER	6.27E-04	
2917)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	3.50E-16
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEMO	INITIATING EVENT HIGH MIXTURE RATIO IN OXIDIZER PREBURNERS	6.27E-04	
2918)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	3.50E-16
	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEMO	INITIATING EVENT HIGH MIXTURE RATIO IN OXIDIZER PREBURNERS	6.27E-04	
2919)	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	3.50E-16
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEMO	INITIATING EVENT HIGH MIXTURE RATIO IN OXIDIZER PREBURNERS	6.27E-04	
2920)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.47E-16
	ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2921)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.47E-16
	ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2922)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.47E-16
	ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2923)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.47E-16

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2924)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.47E-16
	ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2925)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.47E-16
	ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2926)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	3.38E-16
	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEPG	INITIATING EVENT FAILURE TO PRECHARGE POGO ACC	6.05E-04	
2927)	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	3.38E-16
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEPG	INITIATING EVENT FAILURE TO PRECHARGE POGO ACC	6.05E-04	
2928)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	3.38E-16
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMEPG	INITIATING EVENT FAILURE TO PRECHARGE POGO ACC	6.05E-04	
2929)	ANMSVFCMPENG1	ISOLATION VALVE FAILS TO CLOSE	2.93E-06	3.09E-16
	ASMHVCPPHFSVA&B	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	2.70E-07	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2930)-	OPOVCOMLCREL	OPOV COMMAND LIMIT ENGAGED	9.98E-01	2.86E-16
	APMCAOCPRPMODTCA	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
2931)-	OPOVCOMLCREL	OPOV COMMAND LIMIT ENGAGED	9.98E-01	2.86E-16
	APMCAOCPRPMODTCB	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
2932)	ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	2.73E-16
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2933)	ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	2.73E-16
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2934)	ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	2.73E-16
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2935)	ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	2.73E-16
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2936)	ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	2.73E-16
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2937)	ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	2.73E-16
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2938)	ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	2.70E-16
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2939)	ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	2.70E-16
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2940)	ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	2.70E-16

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2941)	ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	2.70E-16
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2942)	ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	2.70E-16
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2943)	ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	2.70E-16
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMSVFOMPOFRIV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF ISOLATION VALVE	1.66E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2944)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	2.52E-16
	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	
	SMEMO	INITIATING EVENT HIGH MIXTURE RATIO IN OXIDIZER PREBURNERS	6.27E-04	
2945)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	2.52E-16
	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	
	SMEMF	INITIATING EVENT HIGH MIXTURE RATIO IN FUEL PREBURNER	6.27E-04	
2946)	ANMPPLRMPCRLI2	CROSS-TIE LINE ENGINE 2 DEPRESSURIZES	2.19E-05	2.50E-16
	ANMSVFOMPCRLI3	SOLENOID VALVE ENGINE 3 FAILS TO OPEN	2.93E-06	
	ASMHUHSPHFEMESD	HUMAN ERROR TO INITIATE THE MANUAL EMERGENCY HYDRAULIC S/D	1.00E-02	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2947)	ANMPPLRMPCRLI3	CROSS-TIE LINE ENGINE 3 DEPRESSURIZES	2.19E-05	2.50E-16
	ANMSVFOMPCRLI2	SOLENOID VALVE ENGINE 2 FAILS TO OPEN	2.93E-06	
	ASMHUHSPHFEMESD	HUMAN ERROR TO INITIATE THE MANUAL EMERGENCY HYDRAULIC S/D	1.00E-02	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2948)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	2.43E-16
	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	
	SMEPG	INITIATING EVENT FAILURE TO PRECHARGE POGO ACC	6.05E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
2949)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.29E-16
	ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	
	ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2950)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.29E-16
	ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	
	ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2951)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.29E-16
	ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	
	ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2952)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.29E-16
	ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	
	ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2953)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.29E-16
	ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	
	ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2954)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.29E-16
	ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	
	ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2955)	AAOAAFRA1LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	1.00E-01	1.82E-16
	AAOAAFRA2LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	1.00E-01	
	AAOAAFRA3LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	1.00E-01	
	ANOAALKA1LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
	ANOAALKA1LZLK20	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
	ANOAALKA2LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
	ANOAALKA3LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
2956)	ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	1.78E-16

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2957)	ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	1.78E-16
	ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2958)	ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	1.78E-16
	ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2959)	ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	1.78E-16
	ASMHVFOPRPMMOV3	SSME-3 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2960)	ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	1.78E-16
	ASMHVFOPRPMMOV1	SSME-1 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2961)	ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	1.78E-16
	ASMHVFOPRPMMOV2	SSME-2 MOV FAILS TO OPEN	1.00E-04	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2962)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	1.56E-16
	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
2963)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.46E-16
	ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2964)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.46E-16

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2965)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.46E-16
	ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2966)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.46E-16
	ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2967)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.46E-16
	ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2968)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.46E-16
	ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2969)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.44E-16
	ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2970)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.44E-16
	ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2971)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.44E-16
	ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2972)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.44E-16
	ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2973)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.44E-16
	ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2974)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.44E-16
	ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
2975)-	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	1.43E-16
	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
2976)-	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	1.43E-16
	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
2977)-	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	1.43E-16
	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
2978)	ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	1.13E-16
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2979)	ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	1.13E-16
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
2980)	ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	1.13E-16
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2981)	ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	1.13E-16
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2982)	ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	1.13E-16
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2983)	ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	1.13E-16
	ASMAVFOMPORPR2	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 2 FAILS TO OPEN	6.36E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2984)	ASMAVFOMPOOFD2	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	1.12E-16
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2985)	ASMAVFOMPOOFD3	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	1.12E-16
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2986)	ASMAVFOMPOIFD2	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 2)	6.62E-05	1.12E-16
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2987)	ASMAVFOMPOIFD1	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	1.12E-16
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2988)	ASMAVFOMPOIFD3	FAILURE TO OPEN THE INBOARD LO2 F&D VALVE (ENGINE 3)	6.62E-05	1.12E-16
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2989)	ASMAVFOMPOOFD1	FAILURE TO OPEN THE OUTBOARD LO2 F&D VALVE (ENGINE 1)	6.62E-05	1.12E-16
	ASMAVFOMPORPR1	SSME-2 LO2 MANIFOLD REPRESSURIZATION VALVE 1 FAILS TO OPEN	6.30E-05	
	ASMRVFOMPOFRV	FAILURE TO OPEN OF THE OXIDIZER FEEDLINE RELIEF VALVE	6.90E-05	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2990)-	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	1.03E-16
	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
2991)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	1.00E-16
	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
2992)	ACRRMPIRBS5SRB	ROCKET MOTOR RBS5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	1.00E-16
	ACRRMPIRBS6SRB	ROCKET MOTOR RBS6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS7SRB	ROCKET MOTOR RBS7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS8SRB	ROCKET MOTOR RBS8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
2993)	ACRRMPILBS1SRB	ROCKET MOTOR L BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	1.00E-16
	ACRRMPILBS2SRB	ROCKET MOTOR L BSM 2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS3SRB	ROCKET MOTOR L BSM 3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS4SRB	ROCKET MOTOR L BSM 4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
2994)	ACRRMPILBS5SRB	ROCKET MOTOR L BSM 5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	1.00E-16
	ACRRMPILBS6SRB	ROCKET MOTOR L BSM 6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS7SRB	ROCKET MOTOR L BSM 7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS8SRB	ROCKET MOTOR L BSM 8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
2995)	ACRRMPIRBS1SRB	ROCKET MOTOR R BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	1.00E-16
	ACRRMPIRBS2SRB	ROCKET MOTOR RBS2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS3SRB	ROCKET MOTOR RBS3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS4SRB	ROCKET MOTOR RBS4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
2996)	APMSVFPPRPMSWB	SERVO-SWITCH B FAILS TO CHANGE ITS POSITION (HARDWARE FAILURES)	2.00E-06	9.73E-17
	ASMPAFPMPPRPB1	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 1)	7.76E-08	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
2997)	ANMCVFOMPCRLI3	CHECK VALVE ENGINE 3 FAILS TO OPEN	1.00E-06	8.55E-17
	ANMPPLRMPCRLI2	CROSS-TIE LINE ENGINE 2 DEPRESSURIZES	2.19E-05	
	ASMHUHSPHFEMESD	HUMAN ERROR TO INITIATE THE MANUAL EMERGENCY HYDRAULIC S/D	1.00E-02	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2998)	ANMCVFOMPCRLI2	CHECK VALVE ENGINE 2 FAILS TO OPEN	1.00E-06	8.55E-17
	ANMPPLRMPCRLI3	CROSS-TIE LINE ENGINE 3 DEPRESSURIZES	2.19E-05	
	ASMHUHSPHFEMESD	HUMAN ERROR TO INITIATE THE MANUAL EMERGENCY HYDRAULIC S/D	1.00E-02	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
2999)	ASMCOFPBCFOCHA2	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 2)	1.00E-07	7.37E-17
	ASMHVFPPHFOPSH2	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
3000)	ASMCOFPBCFOCHA2	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 2)	1.00E-07	7.37E-17
	ASMHVFPPHFOSVB2	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
3001)	ASMCOFPBCFOCHA3	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 3)	1.00E-07	7.37E-17
	ASMHVFPPHFOPSH3	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
3002)	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	7.37E-17
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
3003)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	7.37E-17
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
3004)	ASMCOFPBCFOCHB2	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 2)	1.00E-07	7.37E-17
	ASMHVFPPHFOSVA2	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
3005)	ASMCOFPBCFOCHB3	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 3)	1.00E-07	7.37E-17
	ASMHVFPPHFOSVA3	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
3006)	ASMCOFPBCFOCHA3	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 3)	1.00E-07	7.37E-17
	ASMHVFPPHFOSVB3	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
3007)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	7.37E-17
	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
3008)	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	6.43E-17
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
3009)	ACOGPCF03	GPC 03 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3010)	ACOGPCF02	GPC 02 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
3011)	ACOGPCF01	GPC 01 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3012)	ACOGPCF03	GPC 03 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
3013)	ACOGPCF01	GPC 01 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3014)	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	6.43E-17
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3015)	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	6.43E-17
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3016)	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	6.43E-17
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3017)	ACOGPCF01	GPC 01 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
3018)	ACOGPCF04	GPC 04 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3019)	ACOGPCF03	GPC 03 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
3020)	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	6.43E-17
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
3021)	ACOGPCF01	GPC 01 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
3022)	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	6.43E-17
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
3023)	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	6.43E-17
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3024)	ACOGPCF02	GPC 02 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
3025)	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	6.43E-17
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3026)	ACOGPCF03	GPC 03 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3027)	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	6.43E-17
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3028)	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	6.43E-17
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3029)	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	6.43E-17
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
3030)	ACOGPCF04	GPC 04 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
3031)	ACOGPCF04	GPC 04 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
3032)	ACOGPCF01	GPC 01 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3033)	ACOGPCF04	GPC 04 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3034)	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	6.43E-17
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3035)	ACOGPCF01	GPC 01 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3036)	ACOGPCF04	GPC 04 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
3037)	ACOGPCF03	GPC 03 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
3038)	ACOGPCF02	GPC 02 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
3039)	ACOGPCF02	GPC 02 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
3040)	ACOGPCF02	GPC 02 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
3041)	ACOGPCF03	GPC 03 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
3042)	ACOGPCF03	GPC 03 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
3043)	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	6.43E-17

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
3044)	ACOGPCF04	GPC 04 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
3045)	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	6.43E-17
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
3046)	ACOGPCF01	GPC 01 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
3047)	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	6.43E-17
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
3048)	ACOGPCF04	GPC 04 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
3049)	ACOGPCF02	GPC 02 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
3050)	ACOGPCF04	GPC 04 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
3051)	ACOGPCF04	GPC 04 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
3052)	ACOGPCF02	GPC 02 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
3053)	ACOGPCF02	GPC 02 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
3054)	ACOGPCF03	GPC 03 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
3055)	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	6.43E-17
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
3056)	ACOGPCF03	GPC 03 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
3057)	ACOGPCF04	GPC 04 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
3058)	ACOGPCF03	GPC 03 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
3059)	ACOGPCF01	GPC 01 FAILS TO FUNCTION	1.39E-06<	6.43E-17
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
3060)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	5.31E-17
	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	
	ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
3061)	ASMCOFPBCFOCHA2	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 2)	1.00E-07	5.31E-17
	ASMHVFOPHFOSWA2	OPOV SERVO-SWITCH B FAILS TO CHANGE ITS POSITION (ENGINE 2)	4.02E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
3062)	ASMCOFPBCFOCHA3	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 3)	1.00E-07	5.31E-17
	ASMHVFOPHFOSWA3	OPOV SERVO-SWITCH B FAILS TO CHANGE ITS POSITION (ENGINE 3)	4.02E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
3063)	APMHVFCPRPMOPO1	OPOV FAILS TO CLOSE DUE TO MECHANICAL VALVE FAILURE (ENGINE 1)	8.10E-07	5.08E-17
	APMLOGICSWB	FAILURE OF THE LOGIC TO DE-ENERGIZE SERVO-SWITCH B	1.00E-07	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
3064)	AAOAAFRA1CFLK20	COMMON CAUSE FAILURE; APU/HYD	1.92E-04	3.50E-17
	ANOAALKA1LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
	ANOAALKA1LZLK20	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
	ANOAALKA2LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
	ANOAALKA3LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
3065)	ANMSVFOMPCRLI2	SOLENOID VALVE ENGINE 2 FAILS TO OPEN	2.93E-06	3.35E-17
	ANMSVFOMPCRLI3	SOLENOID VALVE ENGINE 3 FAILS TO OPEN	2.93E-06	
	ASMHUHSPHFEMESD	HUMAN ERROR TO INITIATE THE MANUAL EMERGENCY HYDRAULIC S/D	1.00E-02	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3066)	ANMSVCOMPENG23	COMMON CAUSE FAILURE TO OPEN THE CROSS LINE SOLENOID VALVE (ENGINE	2.93E-07	3.09E-17

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMHVCPPHFSVA&B	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	2.70E-07	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3067)	APMCOMCPRPMFDTCA	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL A	1.43E-07	2.56E-17
	APMCOMCPRPMFDTCB	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL B	1.43E-07	
	SMEFH	INITIATING EVENT LOSS OF GROSS H2 FLOW	1.25E-03	
3068)	APMCAOCPRPMFDTCB	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	2.23E-17
	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3069)	APMCAOCPRPMODTCB	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	2.23E-17
	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3070)	APMCAOCPRPMFDTCA	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	2.23E-17
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3071)	APMCAOCPRPMODTCA	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	2.23E-17
	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3072)	APMCOMCPRPMCLCHA	CONTROLLER SENSOR HPFTP CL INTERFACE FAILURE. CHANNEL A	1.43E-07	2.04E-17
	APMCOMCPRPMCLCHB	CONTROLLER SENSOR HPFTP CL INTERFACE FAILURE. CHANNEL B	1.43E-07	
	SMELO	INITIATING EVENT COOLANT LINER OVERPRESSURE	1.00E-03	
3073)	APMCAOCPRPMPCCHB	Pc PRESSURE SENSOR HARNESS FAILURE (FAILS OPEN OR SHORTED) CHANNE	1.43E-09	1.43E-17
	APMPSFPPRPMPCCHA	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3074)	APMCAOCPRPMODTCA	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	1.43E-17
	APMPSFPPRPMPCCHA	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL A	1.00E-02	
	APMPSFPPRPMPCCHB	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3075)	APMCAOCPRPMODTCB	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	1.43E-17
	APMPSFPPRPMPCCHA	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL A	1.00E-02	
	APMPSFPPRPMPCCHB	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3076)	APMCAOCPRPMPCCHA	Pc PRESSURE SENSOR HARNESS FAILURE (FAILS OPEN OR SHORTED) CHANNE	1.43E-09	1.43E-17
	APMPSFPPRPMPCCHB	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3077)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.39E-17
	ASMHVFPPHFOPSH2	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMHVFPPHFOSVA2	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
3078)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.39E-17
	ASMHVFPPHFOPSH3	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMHVFPPHFOSVA3	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
3079)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.39E-17
	ASMHVFPPHFOSVA3	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMHVFPPHFOSVB3	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
3080)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.39E-17
	ASMHVFPPHFOSVA2	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMHVFPPHFOSVB2	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
3081)	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	1.28E-17
	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	SMEMO	INITIATING EVENT HIGH MIXTURE RATIO IN OXIDIZER PREBURNERS	6.27E-04	
3082)	APMCOMCPRPMFDTCA	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL A	1.43E-07	1.28E-17
	APMCOMCPRPMFDTCB	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL B	1.43E-07	
	SMEMF	INITIATING EVENT HIGH MIXTURE RATIO IN FUEL PREBURNER	6.27E-04	
3083)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	1.25E-17

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	SMEFH	INITIATING EVENT LOSS OF GROSS H2 FLOW	1.25E-03	
3084)	ANMCVFOMPCRLI2	CHECK VALVE ENGINE 2 FAILS TO OPEN	1.00E-06	1.14E-17
	ANMSVFOMPCRLI3	SOLENOID VALVE ENGINE 3 FAILS TO OPEN	2.93E-06	
	ASMHUHSPHFEMESD	HUMAN ERROR TO INITIATE THE MANUAL EMERGENCY HYDRAULIC S/D	1.00E-02	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3085)	ANMCVFOMPCRLI3	CHECK VALVE ENGINE 3 FAILS TO OPEN	1.00E-06	1.14E-17
	ANMSVFOMPCRLI2	SOLENOID VALVE ENGINE 2 FAILS TO OPEN	2.93E-06	
	ASMHUHSPHFEMESD	HUMAN ERROR TO INITIATE THE MANUAL EMERGENCY HYDRAULIC S/D	1.00E-02	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3086)	AAOAAFRA1IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	1.14E-17
	AAOAAFRA2LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	1.00E-01	
	AAOAAFRA3LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	1.00E-01	
	ANOAALKA1LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
	ANOAALKA1LZLK20	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
	ANOAALKA2LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
	ANOAALKA3LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
3087)	AAOAAFRA1LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	1.00E-01	1.14E-17
	AAOAAFRA2IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	
	AAOAAFRA3LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	1.00E-01	
	ANOAALKA1LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
	ANOAALKA1LZLK20	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
	ANOAALKA2LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
	ANOAALKA3LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
3088)	AAOAAFRA1LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	1.00E-01	1.14E-17
	AAOAAFRA2LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	1.00E-01	
	AAOAAFRA3IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	
	ANOAALKA1LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
	ANOAALKA1LZLK20	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
	ANOAALKA2LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
	ANOAALKA3LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
3089)	APMCAOCPRPMODTCA	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	1.12E-17
	APMTSCCPRPMFDTAB	CCF OF CHANNEL A AND CHANNEL B HPFTP DT SENSORS	5.00E-05	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3090)	APMCAOCPRPMFDTCA	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	1.12E-17

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Bacic Event Probability	Cutset Probability
	APMTSCCPRPMODTAB	CCF OF CHANNEL A CHANNEL B HPOTP DT SENSORS	5.00E-05	
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3091)	APMCAOCPRPMODTCB	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	1.12E-17
	APMTSCCPRPMFDTAB	CCF OF CHANNEL A AND CHANNEL B HPFTP DT SENSORS	5.00E-05	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3092)	APMCAOCPRPMFDTCB	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	1.12E-17
	APMTSCCPRPMODTAB	CCF OF CHANNEL A CHANNEL B HPOTP DT SENSORS	5.00E-05	
	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3093)	ANMHUHSMPCROSS	HUMAN ERROR TO OPEN THE CROSS LINES VALVES	5.00E-02	1.09E-17
	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3094)	ANMHUHSMPISO	HUMAN ERROR TO ISOLATE THE LEAKAGE	5.00E-02	1.09E-17
	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3095)	ANMHUHSMPISO	HUMAN ERROR TO ISOLATE THE LEAKAGE	5.00E-02	1.09E-17
	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3096)	ANMHUHSMPISO	HUMAN ERROR TO ISOLATE THE LEAKAGE	5.00E-02	1.09E-17
	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3097)	ANMHUHSMPCROSS	HUMAN ERROR TO OPEN THE CROSS LINES VALVES	5.00E-02	1.09E-17
	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3098)	ANMHUHSMPCROSS	HUMAN ERROR TO OPEN THE CROSS LINES VALVES	5.00E-02	1.09E-17
	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3099)	ANMPCFPMPDETEC	FAILURE OF THE HELIUM LEAKAGE DETECTION SYSTEM	1.00E-07	1.05E-17
	ASMHVCPPHFSVA&B	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	2.70E-07	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3100)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.00E-17
	ASMHVFOPHFOSWA3	OPOV SERVO-SWITCH B FAILS TO CHANGE ITS POSITION (ENGINE 3)	4.02E-06	
	ASMHVFPPHFOSVA3	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
3101)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.00E-17
	ASMHVFOPHFOSWA2	OPOV SERVO-SWITCH B FAILS TO CHANGE ITS POSITION (ENGINE 2)	4.02E-06	
	ASMHVFPPHFOSVA2	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
3102)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	1.00E-17
	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	SMELO	INITIATING EVENT COOLANT LINER OVERPRESSURE	1.00E-03	
3103)	ANMHUHSMPCROSS	HUMAN ERROR TO OPEN THE CROSS LINES VALVES	5.00E-02	7.84E-18
	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3104)	ANMHUHSMPISO	HUMAN ERROR TO ISOLATE THE LEAKAGE	5.00E-02	7.84E-18
	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3105)	APMCAOCPRPMODTCA	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	7.15E-18
	APMPSCCPRPMPCCAB	CCF OF CHANNEL A AND CHANNEL B PRESSURE DROP SENSORS	5.00E-05	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3106)	APMCAOCPRPMPCCHA	Pc PRESSURE SENSOR HARNESS FAILURE (FAILS OPEN OR SHORTED) CHANNE	1.43E-09	7.15E-18
	APMPSFPPRPMPCCHB	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL B	1.00E-02	
	APMTSCCPRPMODTAB	CCF OF CHANNEL A CHANNEL B HPOTP DT SENSORS	5.00E-05	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
3107)	APMCAOCPRPMPCCHB	Pc PRESSURE SENSOR HARNESS FAILURE (FAILS OPEN OR SHORTED) CHANNE	1.43E-09	7.15E-18
	APMPSFPPRPMPCCHA	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL A	1.00E-02	
	APMTSCCPRPMODTAB	CCF OF CHANNEL A CHANNEL B HPOTP DT SENSORS	5.00E-05	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3108)	APMCAOCPRPMODTCB	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	7.15E-18
	APMPSCCPRPMPCCAB	CCF OF CHANNEL A AND CHANNEL B PRESSURE DROP SENSORS	5.00E-05	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3109)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	6.27E-18
	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	SMEMF	INITIATING EVENT HIGH MIXTURE RATIO IN FUEL PREBURNER	6.27E-04	
3110)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	6.27E-18
	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	SMEMO	INITIATING EVENT HIGH MIXTURE RATIO IN OXIDIZER PREBURNERS	6.27E-04	
3111)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	6.05E-18
	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	SMEPG	INITIATING EVENT FAILURE TO PRECHARGE POGO ACC	6.05E-04	
3112)	APMLOGICSWB	FAILURE OF THE LOGIC TO DE-ENERGIZE SERVO-SWITCH B	1.00E-07	4.87E-18
	ASMPAFPMPPRPB1	FAILURE OF THE PCA TO PURGE THE OXIDIZER PREBURNER (ENGINE 1)	7.76E-08	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
3113)	ANMCVFOMPCRLI2	CHECK VALVE ENGINE 2 FAILS TO OPEN	1.00E-06	3.90E-18
	ANMCVFOMPCRLI3	CHECK VALVE ENGINE 3 FAILS TO OPEN	1.00E-06	
	ASMHUHSPHFEMESD	HUMAN ERROR TO INITIATE THE MANUAL EMERGENCY HYDRAULIC S/D	1.00E-02	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3114)	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	2.69E-18
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
3115)	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	2.69E-18
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
3116)	ACOGPCF03	GPC 03 FAILS TO FUNCTION	1.39E-06<	2.69E-18
	ACOGPCF04	GPC 04 FAILS TO FUNCTION	1.39E-06<	
	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	
3117)	ACOGPCF02	GPC 02 FAILS TO FUNCTION	1.39E-06<	2.69E-18
	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
3118)	ACOGPCF02	GPC 02 FAILS TO FUNCTION	1.39E-06<	2.69E-18

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
3119)	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	2.69E-18
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3120)	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	2.69E-18
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3121)	ACOGPCF01	GPC 01 FAILS TO FUNCTION	1.39E-06<	2.69E-18
	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3122)	ACOGPCF01	GPC 01 FAILS TO FUNCTION	1.39E-06<	2.69E-18
	ACOGPCF02	GPC 02 FAILS TO FUNCTION	1.39E-06<	
	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	
3123)	ACOGPCF01	GPC 01 FAILS TO FUNCTION	1.39E-06<	2.69E-18
	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
3124)-	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	2.56E-18
	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
3125)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.19E-18
	ASMHVFPPHFOSVA2	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMHVFPPHFOSVB2	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
3126)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.19E-18
	ASMHVFPPHFOSVA3	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMHVFPPHFOSVB3	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
3127)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.19E-18
	ASMHVFPPHFOPSH2	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMHVFPPHFOSVA2	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
3128)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.19E-18
	ASMHVFPPHFOPSH3	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMHVFPPHFOSVA3	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
3129)	ASMHVFPPHFOPSH3	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	1.70E-18
	ASMHVFPPHFOSVA3	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3130)	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	1.70E-18
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3131)	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	1.70E-18
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3132)	ASMHVFPPHFOSVA3	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	1.70E-18
	ASMHVFPPHFOSVB3	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3133)	ASMHVFPPHFOPSH2	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	1.70E-18
	ASMHVFPPHFOSVA2	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3134)	ASMHVFPPHFOSVA2	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	1.70E-18
	ASMHVFPPHFOSVB2	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3135)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.58E-18
	ASMHVFOPHFOSWA2	OPOV SERVO-SWITCH B FAILS TO CHANGE ITS POSITION (ENGINE 2)	4.02E-06	
	ASMHVFPPHFOSVA2	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
3136)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.58E-18
	ASMHVFOPHFOSWA3	OPOV SERVO-SWITCH B FAILS TO CHANGE ITS POSITION (ENGINE 3)	4.02E-06	
	ASMHVFPPHFOSVA3	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
3137)	ASMCOFPBCFOCHA3	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 3)	1.00E-07	1.32E-18
	ASMCOFPBCFOCHB3	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 3)	1.00E-07	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
3138)	ASMCOFPBCFOCHA2	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 2)	1.00E-07	1.32E-18
	ASMCOFPBCFOCHB2	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 2)	1.00E-07	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
3139)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	1.32E-18
	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	1.40E-04	
	SMECD	NOMINAL MECO AND DUMP REQUIRED;NO MAINSTAGE INITIATORS	9.43E-01	
3140)	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	1.23E-18
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3141)	ASMHVFOPHFOSWA3	OPOV SERVO-SWITCH B FAILS TO CHANGE ITS POSITION (ENGINE 3)	4.02E-06	1.23E-18
	ASMHVFPPHFOSVA3	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3142)	ASMHVFOPHFOSWA2	OPOV SERVO-SWITCH B FAILS TO CHANGE ITS POSITION (ENGINE 2)	4.02E-06	1.23E-18
	ASMHVFPPHFOSVA2	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3143)	AAOAAFRA1IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	7.07E-19
	AAOAAFRA2LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	1.00E-01	
	AAOAAFRA3IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	
	ANOAALKA1LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
	ANOAALKA1LZLK20	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
	ANOAALKA2LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ANOAALKA3LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
3144)	AAOAAFRA1IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	7.07E-19
	AAOAAFRA2IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	
	AAOAAFRA3LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	1.00E-01	
	ANOAALKA1LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
	ANOAALKA1LZLK20	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
	ANOAALKA2LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
	ANOAALKA3LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
3145)	AAOAAFRA1LFLK20	OWN LEAK INDUCED FAILURE; APU/HYD	1.00E-01	7.07E-19
	AAOAAFRA2IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	
	AAOAAFRA3IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	
	ANOAALKA1LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
	ANOAALKA1LZLK20	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
	ANOAALKA2LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
	ANOAALKA3LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
3146)	ACOCADWDB02OV	CABLE DB02 BROKEN/FAILS/SHORTS	5.36E-10	5.94E-19
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
3147)	ACOCADWDB01OV	CABLE DB01 BROKEN/FAILS/SHORTS	5.36E-10	5.94E-19
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
3148)	ACOCADWDB01OV	CABLE DB01 BROKEN/FAILS/SHORTS	5.36E-10	5.94E-19
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
3149)	ACOCADWDB02OV	CABLE DB02 BROKEN/FAILS/SHORTS	5.36E-10	5.94E-19
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
3150)	ACOCADWDB02OV	CABLE DB02 BROKEN/FAILS/SHORTS	5.36E-10	5.94E-19
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
3151)	ACOCADWDB01OV	CABLE DB01 BROKEN/FAILS/SHORTS	5.36E-10	5.94E-19
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
3152)	ACOCADWDB02OV	CABLE DB02 BROKEN/FAILS/SHORTS	5.36E-10	5.94E-19
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
3153)	ACOCADWDB01OV	CABLE DB01 BROKEN/FAILS/SHORTS	5.36E-10	5.94E-19
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
3154)-	OPOVCOMLCREL	OPOV COMMAND LIMIT ENGAGED	9.98E-01	4.09E-19
	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3155)	APMCAOCPRPMFDTCA	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	2.56E-19
	APMCOMCPRPMFDTCB	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL B	1.43E-07	
	SMEFH	INITIATING EVENT LOSS OF GROSS H2 FLOW	1.25E-03	
3156)	APMCAOCPRPMFDTCB	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	2.56E-19
	APMCOMCPRPMFDTCA	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL A	1.43E-07	
	SMEFH	INITIATING EVENT LOSS OF GROSS H2 FLOW	1.25E-03	
3157)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.50E-19
	ASMCOFPBCFOCHA2	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 2)	1.00E-07	
	ASMHVFPPHFOPSH2	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
3158)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.50E-19
	ASMCOFPBCFOCHB3	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 3)	1.00E-07	
	ASMHVFPPHFOSVA3	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
3159)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.50E-19
	ASMCOFPBCFOCHA3	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 3)	1.00E-07	
	ASMHVFPPHFOSVB3	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
3160)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.50E-19
	ASMCOFPBCFOCHA3	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 3)	1.00E-07	
	ASMHVFPPHFOPSH3	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
3161)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.50E-19
	ASMCOFPBCFOCHA2	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 2)	1.00E-07	
	ASMHVFPPHFOSVB2	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
3162)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.50E-19
	ASMCOFPBCFOCHB2	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 2)	1.00E-07	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMHVFPPHFOSVA2	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
3163)	APMCAOCPRPMCLCHB	HPFTP CL HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	2.04E-19
	APMCOMCPRPMCLCHA	CONTROLLER SENSOR HPFTP CL INTERFACE FAILURE. CHANNEL A	1.43E-07	
	SMELO	INITIATING EVENT COOLANT LINER OVERPRESSURE	1.00E-03	
3164)	APMCAOCPRPMCLCHA	HPFTP CL HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	2.04E-19
	APMCOMCPRPMCLCHB	CONTROLLER SENSOR HPFTP CL INTERFACE FAILURE. CHANNEL B	1.43E-07	
	SMELO	INITIATING EVENT COOLANT LINER OVERPRESSURE	1.00E-03	
3165)	ANMHUHSMPISO	HUMAN ERROR TO ISOLATE THE LEAKAGE	5.00E-02	1.95E-19
	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3166)	ANMHUHSMPCROSS	HUMAN ERROR TO OPEN THE CROSS LINES VALVES	5.00E-02	1.95E-19
	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3167)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.80E-19
	ASMCOFPBCFOCHA3	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 3)	1.00E-07	
	ASMHVFOPHFOSWA3	OPOV SERVO-SWITCH B FAILS TO CHANGE ITS POSITION (ENGINE 3)	4.02E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
3168)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	1.80E-19
	ASMCOFPBCFOCHA2	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 2)	1.00E-07	
	ASMHVFOPHFOSWA2	OPOV SERVO-SWITCH B FAILS TO CHANGE ITS POSITION (ENGINE 2)	4.02E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
3169)	APMCAOCPRPMFDTCB	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	1.28E-19
	APMCOMCPRPMFDTCA	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL A	1.43E-07	
	SMEMF	INITIATING EVENT HIGH MIXTURE RATIO IN FUEL PREBURNER	6.27E-04	
3170)	APMCAOCPRPMFDTCA	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	1.28E-19
	APMCOMCPRPMFDTCB	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL B	1.43E-07	
	SMEMF	INITIATING EVENT HIGH MIXTURE RATIO IN FUEL PREBURNER	6.27E-04	
3171)	APMCAOCPRPMODTCA	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	1.28E-19
	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	SMEMO	INITIATING EVENT HIGH MIXTURE RATIO IN OXIDIZER PREBURNERS	6.27E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
3172)	APMCAOCPRPMODTCB	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	1.28E-19
	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	SMEMO	INITIATING EVENT HIGH MIXTURE RATIO IN OXIDIZER PREBURNERS	6.27E-04	
3173)	ANMPPLRMPCRLI2	CROSS-TIE LINE ENGINE 2 DEPRESSURIZES	2.19E-05	5.05E-20
	ANMPPLRMPCRLI3	CROSS-TIE LINE ENGINE 3 DEPRESSURIZES	2.19E-05	
	ASMHVCPPHFSVA&B	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	2.70E-07	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3174)	AAOAAFRA1IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	4.41E-20
	AAOAAFRA2IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	
	AAOAAFRA3IFLK20	IND FAILURE; APU/HYD HYDRAZINE LEAK STATE	6.23E-03	
	ANOAALKA1LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
	ANOAALKA1LZLK20	LEAK UNDETECTED; APU/HYD HYDRAZINE LEAK	1.00E+00	
	ANOAALKA2LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
	ANOAALKA3LKLK20	IND LEAK; APU/HYD HYDRAZINE LEAK STATE	5.67E-05	
3175)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.92E-20
	ASMCOFPBCFOCHB2	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 2)	1.00E-07	
	ASMHVFPPHFOSVA2	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
3176)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.92E-20
	ASMCOFPBCFOCHA3	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 3)	1.00E-07	
	ASMHVFPPHFOPSH3	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
3177)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.92E-20
	ASMCOFPBCFOCHB3	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 3)	1.00E-07	
	ASMHVFPPHFOSVA3	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
3178)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.92E-20
	ASMCOFPBCFOCHA2	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 2)	1.00E-07	
	ASMHVFPPHFOPSH2	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
3179)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.92E-20
	ASMCOFPBCFOCHA3	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 3)	1.00E-07	
	ASMHVFPPHFOSVB3	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
3180)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	3.92E-20
	ASMCOFPBCFOCHA2	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 2)	1.00E-07	
	ASMHVFPPHFOSVB2	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
3181)	ANMSVFCMPENG1	ISOLATION VALVE FAILS TO CLOSE	2.93E-06	3.56E-20
	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3182)	ANMSVFCMPENG1	ISOLATION VALVE FAILS TO CLOSE	2.93E-06	3.56E-20
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3183)	APMCOMCPRPMFDTCA	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL A	1.43E-07	3.19E-20
	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3184)	APMCOMCPRPMFDTCA	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL A	1.43E-07	3.19E-20
	APMCOMCPRPMFDTCB	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL B	1.43E-07	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3185)	APMCOMCPRPMFDTCB	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL B	1.43E-07	3.19E-20
	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3186)	APMCOMCPRPMFDTCA	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL A	1.43E-07	3.19E-20
	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3187)	APMCOMCPRPMFDTCB	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL B	1.43E-07	3.19E-20

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Bacic Event Probability	Cutset Probability
	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3188)	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	3.19E-20
	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3189)	ASMCOFPBCFOCHA3	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 3)	1.00E-07	3.05E-20
	ASMHVFPPHFOPSH3	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3190)	ASMCOFPBCFOCHB2	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 2)	1.00E-07	3.05E-20
	ASMHVFPPHFOSVA2	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3191)	ASMCOFPBCFOCHB3	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 3)	1.00E-07	3.05E-20
	ASMHVFPPHFOSVA3	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3192)	ASMCOFPBCFOCHA3	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 3)	1.00E-07	3.05E-20
	ASMHVFPPHFOSVB3	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 3)	5.58E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3193)	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	3.05E-20
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3194)	ASMCOFPBCFOCHA2	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 2)	1.00E-07	3.05E-20
	ASMHVFPPHFOSVB2	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3195)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	3.05E-20
	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3196)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	3.05E-20
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3197)	ASMCOFPBCFOCHA2	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 2)	1.00E-07	3.05E-20
	ASMHVFPPHFOPSH2	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 2)	5.58E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3198)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.82E-20
	ASMCOFPBCFOCHA3	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 3)	1.00E-07	
	ASMHVFOPHFOSWA3	OPOV SERVO-SWITCH B FAILS TO CHANGE ITS POSITION (ENGINE 3)	4.02E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
3199)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	2.82E-20
	ASMCOFPBCFOCHA2	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 2)	1.00E-07	
	ASMHVFOPHFOSWA2	OPOV SERVO-SWITCH B FAILS TO CHANGE ITS POSITION (ENGINE 2)	4.02E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
3200)	ANMSVFCMPENG1	ISOLATION VALVE FAILS TO CLOSE	2.93E-06	2.56E-20
	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3201)	ACOCADWDB02OV	CABLE DB02 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
3202)	ACOCADWDB01OV	CABLE DB01 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
3203)	ACOCADWDB04OV	CABLE DB04 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
3204)	ACOCADWDB01OV	CABLE DB01 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOGPCF02	GPC 02 FAILS TO FUNCTION	1.39E-06<	
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
3205)	ACOCADWDB02OV	CABLE DB02 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
3206)	ACOCADWDB01OV	CABLE DB01 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3207)	ACOCADWDB02OV	CABLE DB02 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOGPCF03	GPC 03 FAILS TO FUNCTION	1.39E-06<	
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
3208)	ACOCADWDB01OV	CABLE DB01 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOGPCF04	GPC 04 FAILS TO FUNCTION	1.39E-06<	
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
3209)	ACOCADWDBO3OV	CABLE DB03 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
3210)	ACOCADWDB01OV	CABLE DB01 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
3211)	ACOCADWDB04OV	CABLE DB04 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
3212)	ACOCADWDB01OV	CABLE DB01 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOGPCF02	GPC 02 FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
3213)	ACOCADWDBO3OV	CABLE DB03 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
3214)	ACOCADWDB04OV	CABLE DB04 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
3215)	ACOCADWDBO3OV	CABLE DB03 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
3216)	ACOCADWDBO3OV	CABLE DB03 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3217)	ACOCADWDB01OV	CABLE DB01 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOGPCF02	GPC 02 FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
3218)	ACOCADWDB04OV	CABLE DB04 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3219)	ACOCADWDBO3OV	CABLE DB03 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
3220)	ACOCADWDB01OV	CABLE DB01 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOGPCF02	GPC 02 FAILS TO FUNCTION	1.39E-06<	
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
3221)	ACOCADWDBO3OV	CABLE DB03 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
3222)	ACOCADWDB02OV	CABLE DB02 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
3223)	ACOCADWDB01OV	CABLE DB01 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOGPCF03	GPC 03 FAILS TO FUNCTION	1.39E-06<	
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
3224)	ACOCADWDBO3OV	CABLE DB03 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
3225)	ACOCADWDB01OV	CABLE DB01 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOGPCF04	GPC 04 FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
3226)	ACOCADWDB04OV	CABLE DB04 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
3227)	ACOCADWDB04OV	CABLE DB04 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
3228)	ACOCADWDB01OV	CABLE DB01 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
3229)	ACOCADWDBO3OV	CABLE DB03 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3230)	ACOCADWDBO3OV	CABLE DB03 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
3231)	ACOCADWDB02OV	CABLE DB02 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOGPCF04	GPC 04 FAILS TO FUNCTION	1.39E-06<	
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
3232)	ACOCADWDB01OV	CABLE DB01 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3233)	ACOCADWDB04OV	CABLE DB04 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3234)	ACOCADWDB04OV	CABLE DB04 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
3235)	ACOCADWDBO3OV	CABLE DB03 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
3236)	ACOCADWDB04OV	CABLE DB04 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
3237)	ACOCADWDB02OV	CABLE DB02 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOGPCF04	GPC 04 FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
3238)	ACOCADWDB01OV	CABLE DB01 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3239)	ACOCADWDB02OV	CABLE DB02 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOGPCF01	GPC 01 FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
3240)	ACOCADWDB02OV	CABLE DB02 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
3241)	ACOCADWDB01OV	CABLE DB01 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Bacic Event Probability	Cutset Probability
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3242)	ACOCADWDB02OV	CABLE DB02 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOGPCF01	GPC 01 FAILS TO FUNCTION	1.39E-06<	
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
3243)	ACOCADWDB04OV	CABLE DB04 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
3244)	ACOCADWDB02OV	CABLE DB02 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
3245)	ACOCADWDB02OV	CABLE DB02 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOGPCF03	GPC 03 FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
3246)	ACOCADWDB02OV	CABLE DB02 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
3247)	ACOCADWDB01OV	CABLE DB01 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOGPCF03	GPC 03 FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
3248)	ACOCADWDB01OV	CABLE DB01 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
3249)	ACOCADWDB02OV	CABLE DB02 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB04OV	MDM DB04 TRANSMIT FAILURE	3.33E-05	
3250)	ACOCADWDB02OV	CABLE DB02 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOGPCF01	GPC 01 FAILS TO FUNCTION	1.39E-06<	
	ACOMDRFMIA3OV	MEC MIA3 RECEIVE FAILURE	3.33E-05	
3251)	ACOCADWDB02OV	CABLE DB02 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOGPCF01	GPC 01 FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFDB03OV	MDM DB03 TRANSMIT FAILURE	3.33E-05	
3252)	ACOCADWDB02OV	CABLE DB02 BROKEN/FAILS/SHORTS	5.36E-10	2.48E-20
	ACOMDRFMIA4OV	MEC MIA4 RECEIVE FAILURE	3.33E-05	
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
3253)	ASMCOFPBCFOCHA3	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 3)	1.00E-07	2.20E-20
	ASMHVFOPHFOSWA3	OPOV SERVO-SWITCH B FAILS TO CHANGE ITS POSITION (ENGINE 3)	4.02E-06	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3254)	ASMCOFPBCFOCHA2	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 2)	1.00E-07	2.20E-20
	ASMHVFOPHFOSWA2	OPOV SERVO-SWITCH B FAILS TO CHANGE ITS POSITION (ENGINE 2)	4.02E-06	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3255)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	2.20E-20
	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	
	ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3256)	APMCOMCPRPMPCCHA	CONTROLLER INTERFACE FAILURE. CHANNEL A	1.43E-07	2.04E-20
	APMCOMCPRPMPCCHB	CONTROLLER INTERFACE FAILURE. CHANNEL B	1.43E-07	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3257)	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	2.04E-20
	APMCOMCPRPMPCCHA	CONTROLLER INTERFACE FAILURE. CHANNEL A	1.43E-07	
	APMPSFPPRPMPCCHB	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3258)	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	2.04E-20
	APMCOMCPRPMPCCHB	CONTROLLER INTERFACE FAILURE. CHANNEL B	1.43E-07	
	APMPSFPPRPMPCCHA	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3259)	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	2.04E-20
	APMCOMCPRPMPCCHB	CONTROLLER INTERFACE FAILURE. CHANNEL B	1.43E-07	
	APMPSFPPRPMPCCHA	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3260)	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	2.04E-20
	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMPSFPPRPMPCCHA	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL A	1.00E-02	
	APMPSFPPRPMPCCHB	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL B	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3261)	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	2.04E-20

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	APMCOMCPRPMPCCHA	CONTROLLER INTERFACE FAILURE. CHANNEL A	1.43E-07	
	APMPSFPPRPMPCCHB	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3262)	APMCOMCPRPMFDTCA	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL A	1.43E-07	1.60E-20
	APMCOMCPRPMFDTCB	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL B	1.43E-07	
	APMTSCCPRPMODTAB	CCF OF CHANNEL A CHANNEL B HPOTP DT SENSORS	5.00E-05	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3263)	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	1.60E-20
	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMTSCCPRPMFDTAB	CCF OF CHANNEL A AND CHANNEL B HPFTP DT SENSORS	5.00E-05	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3264)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3265)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3266)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3267)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	1.43E-20
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3268)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	1.43E-20
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3269)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3270)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3271)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	1.43E-20
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3272)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3273)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3274)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3275)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3276)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3277)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3278)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	1.43E-20
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3279)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
3280)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3281)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	1.43E-20
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3282)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3283)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3284)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3285)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3286)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3287)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3288)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3289)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3290)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3291)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3292)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	1.43E-20
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3293)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3294)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3295)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3296)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	1.43E-20
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3297)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3298)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
3299)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3300)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	1.43E-20
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3301)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3302)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3303)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3304)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	1.43E-20
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3305)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3306)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	1.43E-20
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3307)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	1.43E-20
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3308)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3309)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	1.43E-20
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3310)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3311)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	1.43E-20
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3312)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	1.43E-20
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3313)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	1.43E-20
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3314)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	1.43E-20
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3315)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3316)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3317)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	1.43E-20
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
3318)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3319)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3320)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3321)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3322)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3323)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3324)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	1.43E-20
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3325)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	1.43E-20
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3326)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3327)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	1.43E-20
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3328)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	1.43E-20
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3329)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3330)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3331)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	1.43E-20
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3332)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3333)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	1.43E-20
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	RPHWFAILACTRAM	RIGHT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3334)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	1.43E-20
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3335)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	1.43E-20
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RYHWFAILACTRAM	RIGHT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	
3336)	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
3337)	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3338)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3339)	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3340)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3341)	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3342)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3343)	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
3344)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
3345)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3346)	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3347)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
3348)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3349)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3350)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
3351)	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3352)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
3353)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3354)	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3355)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Bacic Event Probability	Cutset Probability
3356)	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3357)	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3358)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3359)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
3360)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3361)	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3362)	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3363)	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3364)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3365)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3366)	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3367)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3368)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3369)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3370)	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
3371)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3372)	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3373)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
3374)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
3375)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3376)	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3377)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3378)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3379)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3380)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3381)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
3382)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3383)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
3384)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3385)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3386)	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3387)	LPHWFAILACTRAM	LEFT PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3388)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3389)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3390)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3391)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3392)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3393)	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
3394)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3395)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3396)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3397)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3398)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3399)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3400)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3401)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3402)	CPHWFAILACTRAM	CENTER PITCH HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3403)	CYHWFAILACTRAM	CENTER YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3404)	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
3405)	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3406)	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3407)	LYHWFAILACTRAM	LEFT YAW HARDWARE FAILURE OF ACTUATOR RAM	2.29E-05	1.43E-20
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3408)	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	1.02E-20
	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMPSCCPRPMPCCAB	CCF OF CHANNEL A AND CHANNEL B PRESSURE DROP SENSORS	5.00E-05	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3409)	APMCOMCPRPMPCCHA	CONTROLLER INTERFACE FAILURE. CHANNEL A	1.43E-07	1.02E-20
	APMCOMCPRPMPCCHB	CONTROLLER INTERFACE FAILURE. CHANNEL B	1.43E-07	
	APMTSCCPRPMODTAB	CCF OF CHANNEL A CHANNEL B HPOTP DT SENSORS	5.00E-05	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3410)	ANMPPLRMPCRLI2	CROSS-TIE LINE ENGINE 2 DEPRESSURIZES	2.19E-05	6.76E-21
	ANMSVFOMPCRLI3	SOLENOID VALVE ENGINE 3 FAILS TO OPEN	2.93E-06	
	ASMHVCPPHFSVA&B	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	2.70E-07	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3411)	ANMPPLRMPCRLI3	CROSS-TIE LINE ENGINE 3 DEPRESSURIZES	2.19E-05	6.76E-21
	ANMSVFOMPCRLI2	SOLENOID VALVE ENGINE 2 FAILS TO OPEN	2.93E-06	
	ASMHVCPPHFSVA&B	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	2.70E-07	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3412)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	4.48E-21
	ASMCOFPBCFOCHA2	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 2)	1.00E-07	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMCOFPBCFOCHB2	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 2)	1.00E-07	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
3413)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	4.48E-21
	ASMCOFPBCFOCHA3	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 3)	1.00E-07	
	ASMCOFPBCFOCHB3	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 3)	1.00E-07	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMEHL	INITIATING EVENT HYDRAULIC LOCKUP REQUIRED	4.00E-03	
3414)-	OPOVCOMLCREL	OPOV COMMAND LIMIT ENGAGED	9.98E-01	4.09E-21
	APMCAOCPRPMODTCB	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	
	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3415)-	OPOVCOMLCREL	OPOV COMMAND LIMIT ENGAGED	9.98E-01	4.09E-21
	APMCAOCPRPMODTCA	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	
	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3416)	ANMSVCOMPENG23	COMMON CAUSE FAILURE TO OPEN THE CROSS LINE SOLENOID VALVE (ENGINE	2.93E-07	3.56E-21
	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3417)	ANMSVCOMPENG23	COMMON CAUSE FAILURE TO OPEN THE CROSS LINE SOLENOID VALVE (ENGINE	2.93E-07	3.56E-21
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3418)	ANMSVCOMPENG23	COMMON CAUSE FAILURE TO OPEN THE CROSS LINE SOLENOID VALVE (ENGINE	2.93E-07	2.56E-21
	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3419)	APMCAOCPRPMFDTCA	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	2.56E-21
	APMCAOCPRPMFDTCB	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	
	SMEFH	INITIATING EVENT LOSS OF GROSS H2 FLOW	1.25E-03	
3420)	ANMCVFOMPCRLI2	CHECK VALVE ENGINE 2 FAILS TO OPEN	1.00E-06	2.31E-21
	ANMPPLRMPCRLI3	CROSS-TIE LINE ENGINE 3 DEPRESSURIZES	2.19E-05	
	ASMHVCPPHFSVA&B	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	2.70E-07	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3421)	ANMCVFOMPCRLI3	CHECK VALVE ENGINE 3 FAILS TO OPEN	1.00E-06	2.31E-21
	ANMPPLRMPCRLI2	CROSS-TIE LINE ENGINE 2 DEPRESSURIZES	2.19E-05	
	ASMHVCPPHFSVA&B	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	2.70E-07	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3422)	APMCAOCPRPMCLCHA	HPFTP CL HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	2.04E-21
	APMCAOCPRPMCLCHB	HPFTP CL HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	
	SMELO	INITIATING EVENT COOLANT LINER OVERPRESSURE	1.00E-03	
3423)	APMCAOCPRPMFDTCA	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	1.28E-21
	APMCAOCPRPMFDTCB	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	
	SMEMF	INITIATING EVENT HIGH MIXTURE RATIO IN FUEL PREBURNER	6.27E-04	
3424)	APMCAOCPRPMODTCA	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	1.28E-21
	APMCAOCPRPMODTCB	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	
	SMEMO	INITIATING EVENT HIGH MIXTURE RATIO IN OXIDIZER PREBURNERS	6.27E-04	
3425)	ANMPCFPMPDETEC	FAILURE OF THE HELIUM LEAKAGE DETECTION SYSTEM	1.00E-07	1.21E-21
	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3426)	ANMPCFPMPDETEC	FAILURE OF THE HELIUM LEAKAGE DETECTION SYSTEM	1.00E-07	1.21E-21
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3427)	ACOCADWDBO3OV	CABLE DB03 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOGPCF04	GPC 04 FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
3428)	ACOCADWDB04OV	CABLE DB04 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOGPCF03	GPC 03 FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3429)	ACOCADWDB04OV	CABLE DB04 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOGPCF03	GPC 03 FAILS TO FUNCTION	1.39E-06<	
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
3430)	ACOCADWDBO3OV	CABLE DB03 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
3431)	ACOCADWDB04OV	CABLE DB04 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
3432)	ACOCADWDB01OV	CABLE DB01 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
3433)	ACOCADWDB04OV	CABLE DB04 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOGPCF03	GPC 03 FAILS TO FUNCTION	1.39E-06<	
	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	
3434)	ACOCADWDB04OV	CABLE DB04 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOGPCF03	GPC 03 FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
3435)	ACOCADWDBO3OV	CABLE DB03 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3436)	ACOCADWDB04OV	CABLE DB04 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
3437)	ACOCADWDBO3OV	CABLE DB03 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOGPCF04	GPC 04 FAILS TO FUNCTION	1.39E-06<	
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
3438)	ACOCADWDBO3OV	CABLE DB03 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOGPCF01	GPC 01 FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
3439)	ACOCADWDBO3OV	CABLE DB03 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOGPCF01	GPC 01 FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3440)	ACOCADWDBO3OV	CABLE DB03 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOGPCF02	GPC 02 FAILS TO FUNCTION	1.39E-06<	
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
3441)	ACOCADWDB04OV	CABLE DB04 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOGPCF02	GPC 02 FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
3442)	ACOCADWDBO3OV	CABLE DB03 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOGPCF02	GPC 02 FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
3443)	ACOCADWDB04OV	CABLE DB04 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOGPCF01	GPC 01 FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
3444)	ACOCADWDBO3OV	CABLE DB03 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOGPCF04	GPC 04 FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
3445)	ACOCADWDB02OV	CABLE DB02 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
3446)	ACOCADWDB04OV	CABLE DB04 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOGPCF03	GPC 03 FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
3447)	ACOCADWDB04OV	CABLE DB04 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3448)	ACOCADWDB04OV	CABLE DB04 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3449)	ACOCADWDB02OV	CABLE DB02 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOGPCF01	GPC 01 FAILS TO FUNCTION	1.39E-06<	
	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	
3450)	ACOCADWDBO3OV	CABLE DB03 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOGPCF04	GPC 04 FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3451)	ACOCADWDB04OV	CABLE DB04 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOGPCF02	GPC 02 FAILS TO FUNCTION	1.39E-06<	
	ACOMDRFMIA1OV	MEC MIA1 RECEIVE FAILURE	1.39E-06<	
3452)	ACOCADWDB01OV	CABLE DB01 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOGPCF02	GPC 02 FAILS TO FUNCTION	1.39E-06<	
	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	
3453)	ACOCADWDB02OV	CABLE DB02 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
3454)	ACOCADWDB01OV	CABLE DB01 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3455)	ACOCADWDB04OV	CABLE DB04 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOGPCF01	GPC 01 FAILS TO FUNCTION	1.39E-06<	
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
3456)	ACOCADWDBO3OV	CABLE DB03 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACOMDXFDB02OV	MDM DB02 TRANSMIT FAILURE	1.39E-06<	
3457)	ACOCADWDBO3OV	CABLE DB03 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOGPCF04	GPC 04 FAILS TO FUNCTION	1.39E-06<	
	ACOGPCFBU	GPC BACK UP FAILS TO FUNCTION	1.39E-06<	
3458)	ACOCADWDBO3OV	CABLE DB03 BROKEN/FAILS/SHORTS	5.36E-10	1.04E-21
	ACOMDXFDB01OV	MDM DB01 TRANSMIT FAILURE	1.39E-06<	
	ACOMDXFMIA2OV	MDM MIA2 TRANSMIT FAILURE	1.39E-06<	
3459)	ANMSVFOMPCRLI2	SOLENOID VALVE ENGINE 2 FAILS TO OPEN	2.93E-06	9.04E-22
	ANMSVFOMPCRLI3	SOLENOID VALVE ENGINE 3 FAILS TO OPEN	2.93E-06	
	ASMHVCPPHFSVA&B	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	2.70E-07	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3460)	ANMPCFPMPDETEC	FAILURE OF THE HELIUM LEAKAGE DETECTION SYSTEM	1.00E-07	8.75E-22
	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3461)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	7.02E-22
	ASMCOFPBCFOCHA2	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 2)	1.00E-07	
	ASMCOFPBCFOCHB2	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 2)	1.00E-07	
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
3462)-	TOP_VLVDRIFT	VALVE DRIFT AFTER HYDRAULIC LOCKUP CAUSES REDLINE	2.00E-01	7.02E-22
	ASMCOFPBCFOCHA3	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 3)	1.00E-07	
	ASMCOFPBCFOCHB3	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 3)	1.00E-07	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMEVP	INITIATING EVENT FAILURE TO MAINTAIN SSME PROPELLANT VALVE POSITIO	6.27E-04	
3463)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	6.97E-22
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3464)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	6.97E-22
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3465)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	6.97E-22
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3466)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	6.97E-22
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3467)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	6.97E-22
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3468)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	6.97E-22
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3469)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	6.97E-22
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3470)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	6.97E-22
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3471)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	6.97E-22
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3472)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	6.97E-22
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3473)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	6.97E-22
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3474)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	6.97E-22
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3475)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	6.97E-22

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3476)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	6.97E-22
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3477)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	6.97E-22
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3478)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	6.97E-22
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3479)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	6.97E-22
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3480)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	6.97E-22
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3481)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	6.97E-22
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3482)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	6.97E-22
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3483)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	6.97E-22
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3484)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	6.97E-22
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3485)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	6.97E-22
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3486)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	6.97E-22
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3487)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	6.97E-22
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3488)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	6.97E-22
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3489)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	6.97E-22
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3490)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	6.97E-22
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3491)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	6.97E-22
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3492)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	6.97E-22
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3493)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	6.97E-22
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3494)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	6.97E-22

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3495)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	6.97E-22
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3496)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	6.97E-22
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3497)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	6.97E-22
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3498)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	6.97E-22
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	REGIMJTFAIL	RIGHT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	
3499)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3500)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3501)	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
3502)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3503)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3504)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3505)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3506)	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3507)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3508)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
3509)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3510)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3511)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3512)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3513)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
3514)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3515)	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3516)	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
3517)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
3518)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3519)	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3520)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3521)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3522)	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3523)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
3524)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3525)	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3526)	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3527)	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3528)	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3529)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3530)	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3531)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3532)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3533)	LEGIMJTFAIL	LEFT ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3534)	CEGIMJTFAIL	CENTER ENGINE GIMBAL JOINT FAILURE	1.12E-06<	6.97E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3535)	ANMSVFCMPENG1	ISOLATION VALVE FAILS TO CLOSE	2.93E-06	6.38E-22
	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	ASMHVFPPHFOPSH1	OPOV SHUTTLE VALVE FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3536)	ANMSVFCMPENG1	ISOLATION VALVE FAILS TO CLOSE	2.93E-06	6.38E-22
	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	ASMHVFPPHFOSVB1	OPOV SERVO-VALVE B FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3537)	ANMSVFCMPENG1	ISOLATION VALVE FAILS TO CLOSE	2.93E-06	6.38E-22
	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	ASMHVFPPHFOSVA1	OPOV SERVO-VALVE A FAILS TO CHANGE ITS POSITION (ENGINE 1)	5.58E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3538)	ASMCOFPBCFOCHA3	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 3)	1.00E-07	5.46E-22
	ASMCOFPBCFOCHB3	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 3)	1.00E-07	
	ASMPAFOMPOPO3	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 3)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3539)	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	5.46E-22
	ASMCOFPBCFOCHB1	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	ASMPAFOMPOPO1	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 1)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3540)	ASMCOFPBCFOCHA2	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 2)	1.00E-07	5.46E-22
	ASMCOFPBCFOCHB2	FAILURE ON CHANNEL B TO CONTROL OPOV POSITION (ENGINE 2)	1.00E-07	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMPAFOMPOPO2	FAILURE TO PNEUMATICALLY ACTUATE THE OPOV (ENGINE 2)	1.40E-04	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3541)	ANMSVFCMPENG1	ISOLATION VALVE FAILS TO CLOSE	2.93E-06	4.60E-22
	ASMCOFPBCFOCHA1	FAILURE ON CHANNEL A TO CONTROL OPOV POSITION (ENGINE 1)	1.00E-07	
	ASMHVFOPHFOSWA1	OPOV SERVO-SWITCH A FAILS TO CHANGE ITS POSITION (ENGINE 1)	4.02E-06	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3542)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3543)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3544)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	3.36E-22
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3545)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3546)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
3547)	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3548)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3549)	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3550)	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
3551)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
3552)	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3553)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3554)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3555)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3556)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3557)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	3.36E-22
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3558)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	3.36E-22
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
3559)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3560)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3561)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3562)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	3.36E-22
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3563)	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3564)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	3.36E-22
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3565)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	3.36E-22
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3566)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	3.36E-22
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3567)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3568)	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3569)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3570)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3571)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3572)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
3573)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3574)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
3575)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3576)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
3577)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	3.36E-22
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
3578)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3579)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3580)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3581)	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
3582)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	3.36E-22
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3583)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3584)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3585)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3586)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3587)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	3.36E-22
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3588)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	3.36E-22
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3589)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3590)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3591)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3592)	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3593)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	3.36E-22
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3594)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3595)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3596)	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
3597)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3598)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3599)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	3.36E-22
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3600)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	3.36E-22
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3601)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
3602)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3603)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3604)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3605)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3606)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3607)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3608)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3609)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	3.36E-22
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3610)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3611)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3612)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3613)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3614)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3615)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
3616)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3617)	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
3618)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3619)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3620)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3621)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3622)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3623)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3624)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3625)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3626)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3627)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3628)	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3629)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3630)	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3631)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3632)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3633)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
3634)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
3635)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3636)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	3.36E-22
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3637)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3638)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3639)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3640)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3641)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3642)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3643)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3644)	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Bacic Event Probability	Cutset Probability
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3645)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3646)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	3.36E-22
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3647)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3648)	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV1FAIL	RIGHT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
3649)	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3650)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	CPSV4FAIL	CENTER PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3651)	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3652)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3653)	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	3.36E-22
	LYSV1FAIL	LEFT YAW PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
3654)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3655)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV2FAIL	LEFT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3656)	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3657)	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3658)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	LYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	
	LYSV3FAIL	LEFT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	LYSV4FAIL	LEFT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3659)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3660)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	3.36E-22
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3661)	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3662)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	3.36E-22
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3663)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	3.36E-22
	LPSV1FAIL	LEFT PITCH SERVO-VALVE 1 FAILURE	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3664)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	3.36E-22
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3665)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3666)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3667)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3668)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3669)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
3670)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CPSV2FAIL	CENTER PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3671)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3672)	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
3673)	CPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CPSV1FAIL	CENTER PITCH SERVO-VALVE 1 FAILURE	5.58E-06	
	CPSV3FAIL	CENTER PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3674)	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3675)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	3.36E-22
	LPSV2FAIL	LEFT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3676)	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV3FAIL	RIGHT YAW SERVO-VALVE 3 FAILURE	5.58E-06	
3677)	LYCCFSV	LEFT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3678)	CPCCFSV	CENTER PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RPSV4FAIL	RIGHT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
3679)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	RYCCFSV	RIGHT YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3680)	LPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (L ENGINE)	2.00E-05	3.36E-22
	LPSV3FAIL	LEFT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
	LPSV4FAIL	LEFT PITCH SERVO-VALVE 4 FAILURE	5.58E-06	
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3681)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV2FAIL	RIGHT YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3682)	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RPISOVALFAIL	FAILURE TO ISOLATE PITCH ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	RPSV2FAIL	RIGHT PITCH SERVO-VALVE 2 FAILURE	5.58E-06	
	RPSV3FAIL	RIGHT PITCH SERVO-VALVE 3 FAILURE	5.58E-06	
3683)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CYSV1FAIL	CENTER YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	CYSV3FAIL	CENTER YAW SERVO-VALVE 3 FAILURE	5.58E-06	
	LPCCFSV	LEFT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3684)	CYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (C ENGINE)	2.00E-05	3.36E-22
	CYSV2FAIL	CENTER YAW SERVO-VALVE 2 FAILURE	5.58E-06	
	CYSV4FAIL	CENTER YAW SERVO-VALVE 4 FAILURE	5.58E-06	
	RPCCFSV	RIGHT PITCH COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	
3685)	CYCCFSV	CENTER YAW COMMON CAUSE FAILURE OF SERVO-VALVES	5.40E-07	3.36E-22
	RYISOVALFAIL	FAILURE TO ISOLATE YAW ACTUATOR DAMAGE SERVO-VALVES (R ENGINE)	2.00E-05	
	RYSV1FAIL	RIGHT YAW SERVO-VALVE 1 FAILURE	5.58E-06	
	RYSV4FAIL	RIGHT YAW SERVO-VALVE 4 FAILURE	5.58E-06	
3686)	APMCAOCPRPMODTCA	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	3.19E-22
	APMCOMCPRPMFDTCB	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL B	1.43E-07	
	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3687)	APMCAOCPRPMFDTCA	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	3.19E-22
	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3688)	APMCAOCPRPMODTCA	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	3.19E-22
	APMCOMCPRPMFDTCA	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL A	1.43E-07	
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3689)	APMCAOCPRPMFDTCB	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	3.19E-22
	APMCOMCPRPMFDTCA	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL A	1.43E-07	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3690)	APMCAOCPRPMFDTCA	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	3.19E-22
	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3691)	APMCAOCPRPMODTCB	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	3.19E-22
	APMCOMCPRPMFDTCA	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL A	1.43E-07	
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3692)	APMCAOCPRPMFDTCB	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	3.19E-22
	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3693)	APMCAOCPRPMFDTCA	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	3.19E-22
	APMCOMCPRPMFDTCB	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL B	1.43E-07	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3694)	APMCAOCPRPMFDTCB	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	3.19E-22
	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3695)	APMCAOCPRPMODTCB	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	3.19E-22
	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3696)	APMCAOCPRPMODTCA	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	3.19E-22
	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMFDTCB	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3697)	APMCAOCPRPMODTCB	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	3.19E-22
	APMCOMCPRPMFDTCB	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL B	1.43E-07	
	APMTSFPPRPMFDTCA	HPFTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3698)	ANMCVFOMPCRLI2	CHECK VALVE ENGINE 2 FAILS TO OPEN	1.00E-06	3.09E-22
	ANMSVFOMPCRLI3	SOLENOID VALVE ENGINE 3 FAILS TO OPEN	2.93E-06	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ASMHVCPPHFSVA&B	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	2.70E-07	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3699)	ANMCVFOMPCRLI3	CHECK VALVE ENGINE 3 FAILS TO OPEN	1.00E-06	3.09E-22
	ANMSVFOMPCRLI2	SOLENOID VALVE ENGINE 2 FAILS TO OPEN	2.93E-06	
	ASMHVCPPHFSVA&B	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	2.70E-07	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3700)	APMCAOCPRPMODTCB	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	2.04E-22
	APMCOMCPRPMPCCHB	CONTROLLER INTERFACE FAILURE. CHANNEL B	1.43E-07	
	APMPSFPPRPMPCCHA	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3701)	APMCAOCPRPMPCCHA	Pc PRESSURE SENSOR HARNESS FAILURE (FAILS OPEN OR SHORTED) CHANNE	1.43E-09	2.04E-22
	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMPSFPPRPMPCCHB	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3702)	APMCAOCPRPMPCCHB	Pc PRESSURE SENSOR HARNESS FAILURE (FAILS OPEN OR SHORTED) CHANNE	1.43E-09	2.04E-22
	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMPSFPPRPMPCCHA	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3703)	APMCAOCPRPMODTCB	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	2.04E-22
	APMCOMCPRPMPCCHA	CONTROLLER INTERFACE FAILURE. CHANNEL A	1.43E-07	
	APMPSFPPRPMPCCHB	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3704)	APMCAOCPRPMPCCHB	Pc PRESSURE SENSOR HARNESS FAILURE (FAILS OPEN OR SHORTED) CHANNE	1.43E-09	2.04E-22
	APMCOMCPRPMPCCHA	CONTROLLER INTERFACE FAILURE. CHANNEL A	1.43E-07	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3705)	APMCAOCPRPMPCCHA	Pc PRESSURE SENSOR HARNESS FAILURE (FAILS OPEN OR SHORTED) CHANNE	1.43E-09	2.04E-22
	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMPSFPPRPMPCCHB	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
3706)	APMCAOCPRPMODTCA	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	2.04E-22
	APMCOMCPRPMPCCHA	CONTROLLER INTERFACE FAILURE. CHANNEL A	1.43E-07	
	APMPSFPPRPMPCCHB	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL B	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3707)	APMCAOCPRPMODTCB	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	2.04E-22
	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMPSFPPRPMPCCHA	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL A	1.00E-02	
	APMPSFPPRPMPCCHB	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL B	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3708)	APMCAOCPRPMODTCA	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	2.04E-22
	APMCOMCPRPMPCCHB	CONTROLLER INTERFACE FAILURE. CHANNEL B	1.43E-07	
	APMPSFPPRPMPCCHA	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3709)	APMCAOCPRPMPCCHA	Pc PRESSURE SENSOR HARNESS FAILURE (FAILS OPEN OR SHORTED) CHANNE	1.43E-09	2.04E-22
	APMCOMCPRPMPCCHB	CONTROLLER INTERFACE FAILURE. CHANNEL B	1.43E-07	
	APMTSFPPRPMODTCA	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3710)	APMCAOCPRPMPCCHB	Pc PRESSURE SENSOR HARNESS FAILURE (FAILS OPEN OR SHORTED) CHANNE	1.43E-09	2.04E-22
	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMPSFPPRPMPCCHA	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL A	1.00E-02	
	APMTSFPPRPMODTCB	HPOTP DT SENSOR PRODUCES ERRONEOUS SIGNAL. CHANNEL B	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3711)	APMCAOCPRPMODTCA	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	2.04E-22
	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMPSFPPRPMPCCHA	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL A	1.00E-02	
	APMPSFPPRPMPCCHB	Pc PRESSURE SENSOR FAILURE (ERRONEOUS SIGNAL) CHANNEL B	1.00E-02	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3712)	APMCAOCPRPMODTCA	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	1.60E-22
	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMTSCCPRPMFDTAB	CCF OF CHANNEL A AND CHANNEL B HPFTP DT SENSORS	5.00E-05	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3713)	APMCAOCPRPMFDTCB	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	1.60E-22
	APMCOMCPRPMFDTCA	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL A	1.43E-07	
	APMTSCCPRPMODTAB	CCF OF CHANNEL A CHANNEL B HPOTP DT SENSORS	5.00E-05	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Bacic Event Probability	Cutset Probability
3714)	APMCAOCPRPMODTCB	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	1.60E-22
	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMTSCCPRPMFDTAB	CCF OF CHANNEL A AND CHANNEL B HPFTP DT SENSORS	5.00E-05	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3715)	APMCAOCPRPMFDTCA	HPFTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	1.60E-22
	APMCOMCPRPMFDTCB	CONTROLLER SENSOR HPFTP DT INTERFACE FAILURE. CHANNEL B	1.43E-07	
	APMTSCCPRPMODTAB	CCF OF CHANNEL A CHANNEL B HPOTP DT SENSORS	5.00E-05	
	SMEPB	INITIATING EVENT LOSS OF FUEL TO BOTH PREBURNERS	1.56E-02	
3716)	ANMCVFOMPCRLI2	CHECK VALVE ENGINE 2 FAILS TO OPEN	1.00E-06	1.05E-22
	ANMCVFOMPCRLI3	CHECK VALVE ENGINE 3 FAILS TO OPEN	1.00E-06	
	ASMHVCPPHFSVA&B	COMMON CAUSE FAILURE TO ACTUATE SERVO-VALVES A & B	2.70E-07	
	SMELH	INITIATING EVENT HELIUM LEAKAGE IN SSME	6.46E-04	
	TOP_HELKIL	HELIUM LEAKAGE IS IN ISOLATABLE LOCATION	6.04E-01	
3717)	APMCAOCPRPMPCCHB	Pc PRESSURE SENSOR HARNESS FAILURE (FAILS OPEN OR SHORTED) CHANNE	1.43E-09	1.02E-22
	APMCOMCPRPMPCCHA	CONTROLLER INTERFACE FAILURE. CHANNEL A	1.43E-07	
	APMTSCCPRPMODTAB	CCF OF CHANNEL A CHANNEL B HPOTP DT SENSORS	5.00E-05	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3718)	APMCAOCPRPMODTCA	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	1.02E-22
	APMCOMCPRPMODTCB	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMPSCCPRPMPCCAB	CCF OF CHANNEL A AND CHANNEL B PRESSURE DROP SENSORS	5.00E-05	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3719)	APMCAOCPRPMODTCB	HPOTP DT HARNESS OPEN OR SHORTED (ERRONEOUS SIGNAL) CHANNE	1.43E-09	1.02E-22
	APMCOMCPRPMODTCA	ENGINE CONTROLLER HPOTP DT SENSOR INTERFACE FAILURE CHANNE	1.43E-07	
	APMPSCCPRPMPCCAB	CCF OF CHANNEL A AND CHANNEL B PRESSURE DROP SENSORS	5.00E-05	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3720)	APMCAOCPRPMPCCHA	Pc PRESSURE SENSOR HARNESS FAILURE (FAILS OPEN OR SHORTED) CHANNE	1.43E-09	1.02E-22
	APMCOMCPRPMPCCHB	CONTROLLER INTERFACE FAILURE. CHANNEL B	1.43E-07	
	APMTSCCPRPMODTAB	CCF OF CHANNEL A CHANNEL B HPOTP DT SENSORS	5.00E-05	
	SMEFO	INITIATING EVENT LOSS OF MCC PRESSURE	1.00E-02	
3721)	ACRCDFDIR21SRB	CDF INIT R21 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIR22SRB	CDF INIT R22 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS1SRB	ROCKET MOTOR R BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS3SRB	ROCKET MOTOR RBS3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS4SRB	ROCKET MOTOR RBS4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3722)	ACRCDFDAR12SRB	CDF ASSY R12 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIR11SRB	CDF INIT R11 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS2SRB	ROCKET MOTOR RBS2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS3SRB	ROCKET MOTOR RBS3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRRMPIRBS4SRB	ROCKET MOTOR RBS4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3723)	ACRCDFDAR41SRB	CDF ASS R41 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDAR42SRB	CDF ASS R42 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS1SRB	ROCKET MOTOR R BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS2SRB	ROCKET MOTOR RBS2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS3SRB	ROCKET MOTOR RBS3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3724)	ACRCDFDAR21SRB	CDF ASS R21 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIR22SRB	CDF INIT R22 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS1SRB	ROCKET MOTOR R BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS3SRB	ROCKET MOTOR RBS3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS4SRB	ROCKET MOTOR RBS4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3725)	ACRCDFDAR72SRB	CDF ASS R72 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIR71SRB	CDF INIT R71 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS5SRB	ROCKET MOTOR RBS5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS6SRB	ROCKET MOTOR RBS6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS8SRB	ROCKET MOTOR RBS8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3726)	ACRCDFDIL21SRB	CDF INIT L21 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIL22SRB	CDF INIT L22 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS1SRB	ROCKET MOTOR L BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS3SRB	ROCKET MOTOR L BSM 3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS4SRB	ROCKET MOTOR L BSM 4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3727)	ACRCDFDAR61SRB	CDF ASS R61 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIR62SRB	CDF INIT R62 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS5SRB	ROCKET MOTOR RBS5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS7SRB	ROCKET MOTOR RBS7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS8SRB	ROCKET MOTOR RBS8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3728)	ACRCDFDAR32SRB	CDF ASS R32 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIR31SRB	CDF INIT R31 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS1SRB	ROCKET MOTOR R BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS2SRB	ROCKET MOTOR RBS2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS4SRB	ROCKET MOTOR RBS4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3729)	ACRCDFDIL61SRB	CDF INIT L61 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIL62SRB	CDF INIT L62 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS5SRB	ROCKET MOTOR L BSM 5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS7SRB	ROCKET MOTOR L BSM 7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS8SRB	ROCKET MOTOR L BSM 8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3730)	ACRCDFDIR81SRB	CDF IR81 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIR82SRB	CDF IR82 FAILS TO DETONATE OR PROPAGATE	1.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRRMPIRBS5SRB	ROCKET MOTOR RBS5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS6SRB	ROCKET MOTOR RBS6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS7SRB	ROCKET MOTOR RBS7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3731)	ACRCDFDAR71SRB	CDF ASS R71 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDAR72SRB	CDF ASS R72 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS5SRB	ROCKET MOTOR RBS5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS6SRB	ROCKET MOTOR RBS6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS8SRB	ROCKET MOTOR RBS8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3732)	ACRCDFDAL62SRB	CDF ASSY L62 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIL61SRB	CDF INIT L61 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS5SRB	ROCKET MOTOR L BSM 5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS7SRB	ROCKET MOTOR L BSM 7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS8SRB	ROCKET MOTOR L BSM 8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3733)	ACRCDFDAR52SRB	CDF ASS R52 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIR51SRB	CDF INIT R51 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS6SRB	ROCKET MOTOR RBS6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS7SRB	ROCKET MOTOR RBS7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS8SRB	ROCKET MOTOR RBS8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3734)	ACRCDFDAL51SRB	CDF ASSY L51 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDAL52SRB	CDF ASSY L52 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS6SRB	ROCKET MOTOR L BSM 6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS7SRB	ROCKET MOTOR L BSM 7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS8SRB	ROCKET MOTOR L BSM 8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3735)	ACRCDFDAR31SRB	CDF ASS R31 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIR32SRB	CDF INIT R32 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS1SRB	ROCKET MOTOR R BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS2SRB	ROCKET MOTOR RBS2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS4SRB	ROCKET MOTOR RBS4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3736)	ACRCDFDAL11SRB	CDF ASSY L11 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIL12SRB	CDF INIT L12 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS2SRB	ROCKET MOTOR L BSM 2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS3SRB	ROCKET MOTOR L BSM 3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS4SRB	ROCKET MOTOR L BSM 4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3737)	ACRCDFDAL22SRB	CDF ASSY L22 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIL21SRB	CDF INIT L21 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS1SRB	ROCKET MOTOR L BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS3SRB	ROCKET MOTOR L BSM 3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS4SRB	ROCKET MOTOR L BSM 4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
3738)	ACRCDFDAL71SRB	CDF ASSY L71 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDAL72SRB	CDF ASSY L72 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS5SRB	ROCKET MOTOR L BSM 5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS6SRB	ROCKET MOTOR L BSM 6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS8SRB	ROCKET MOTOR L BSM 8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3739)	ACRCDFDIR31SRB	CDF INIT R31 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIR32SRB	CDF INIT R32 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS1SRB	ROCKET MOTOR R BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS2SRB	ROCKET MOTOR RBS2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS4SRB	ROCKET MOTOR RBS4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3740)	ACRCDFDAR51SRB	CDF ASS R51 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIR52SRB	CDF INIT R52 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS6SRB	ROCKET MOTOR RBS6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS7SRB	ROCKET MOTOR RBS7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS8SRB	ROCKET MOTOR RBS8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3741)	ACRCDFDAL71SRB	CDF ASSY L71 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIL72SRB	CDF INIT L72 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS5SRB	ROCKET MOTOR L BSM 5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS6SRB	ROCKET MOTOR L BSM 6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS8SRB	ROCKET MOTOR L BSM 8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3742)	ACRCDFDAL81SRB	CDF ASSY L81 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDAL82SRB	CDF ASSY L82 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS5SRB	ROCKET MOTOR L BSM 5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS6SRB	ROCKET MOTOR L BSM 6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS7SRB	ROCKET MOTOR L BSM 7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3743)	ACRCDFDAR81SRB	CDF AR81 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIR82SRB	CDF IR82 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS5SRB	ROCKET MOTOR RBS5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS6SRB	ROCKET MOTOR RBS6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS7SRB	ROCKET MOTOR RBS7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3744)	ACRCDFDAR61SRB	CDF ASS R61 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDAR62SRB	CDF ASS R62 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS5SRB	ROCKET MOTOR RBS5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS7SRB	ROCKET MOTOR RBS7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS8SRB	ROCKET MOTOR RBS8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3745)	ACRCDFDAL31SRB	CDF ASSY L31 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDAL32SRB	CDF ASSY L32 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS1SRB	ROCKET MOTOR L BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRRMPILBS2SRB	ROCKET MOTOR L BSM 2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS4SRB	ROCKET MOTOR L BSM 4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3746)	ACRCDFDAR71SRB	CDF ASS R71 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIR72SRB	CDF INIT R72 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS5SRB	ROCKET MOTOR RBS5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS6SRB	ROCKET MOTOR RBS6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS8SRB	ROCKET MOTOR RBS8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3747)	ACRCDFDIR41SRB	CDF INIT R41 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIR42SRB	CDF INIT R42 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS1SRB	ROCKET MOTOR R BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS2SRB	ROCKET MOTOR RBS2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS3SRB	ROCKET MOTOR RBS3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3748)	ACRCDFDAL11SRB	CDF ASSY L11 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDAL12SRB	CDF ASSY L12 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS2SRB	ROCKET MOTOR L BSM 2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS3SRB	ROCKET MOTOR L BSM 3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS4SRB	ROCKET MOTOR L BSM 4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3749)	ACRCDFDAL51SRB	CDF ASSY L51 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIL52SRB	CDF INIT L52 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS6SRB	ROCKET MOTOR L BSM 6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS7SRB	ROCKET MOTOR L BSM 7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS8SRB	ROCKET MOTOR L BSM 8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3750)	ACRCDFDIR61SRB	CDF INIT R61 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIR62SRB	CDF INIT R62 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS5SRB	ROCKET MOTOR RBS5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS7SRB	ROCKET MOTOR RBS7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS8SRB	ROCKET MOTOR RBS8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3751)	ACRCDFDIL51SRB	CDF INIT L51 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIL52SRB	CDF INIT L52 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS6SRB	ROCKET MOTOR L BSM 6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS7SRB	ROCKET MOTOR L BSM 7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS8SRB	ROCKET MOTOR L BSM 8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3752)	ACRCDFDAL61SRB	CDF ASSY L61 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDAL62SRB	CDF ASSY L62 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS5SRB	ROCKET MOTOR L BSM 5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS7SRB	ROCKET MOTOR L BSM 7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS8SRB	ROCKET MOTOR L BSM 8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3753)	ACRCDFDAL21SRB	CDF ASSY L21 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRCDFDIL22SRB	CDF INIT L22 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS1SRB	ROCKET MOTOR L BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS3SRB	ROCKET MOTOR L BSM 3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS4SRB	ROCKET MOTOR L BSM 4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3754)	ACRCDFDIR51SRB	CDF INIT R51 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIR52SRB	CDF INIT R52 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS6SRB	ROCKET MOTOR RBS6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS7SRB	ROCKET MOTOR RBS7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS8SRB	ROCKET MOTOR RBS8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3755)	ACRCDFDAL41SRB	CDF ASSY L41 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDAL42SRB	CDF ASSY L42 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS1SRB	ROCKET MOTOR L BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS2SRB	ROCKET MOTOR L BSM 2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS3SRB	ROCKET MOTOR L BSM 3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3756)	ACRCDFDAR62SRB	CDF ASS R62 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIR61SRB	CDF INIT R61 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS5SRB	ROCKET MOTOR RBS5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS7SRB	ROCKET MOTOR RBS7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS8SRB	ROCKET MOTOR RBS8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3757)	ACRCDFDAR82SRB	CDF AR82 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIR81SRB	CDF IR81 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS5SRB	ROCKET MOTOR RBS5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS6SRB	ROCKET MOTOR RBS6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS7SRB	ROCKET MOTOR RBS7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3758)	ACRCDFDAL72SRB	CDF ASSY L72 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIL71SRB	CDF INIT L71 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS5SRB	ROCKET MOTOR L BSM 5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS6SRB	ROCKET MOTOR L BSM 6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS8SRB	ROCKET MOTOR L BSM 8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3759)	ACRCDFDAR81SRB	CDF AR81 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDAR82SRB	CDF AR82 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS5SRB	ROCKET MOTOR RBS5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS6SRB	ROCKET MOTOR RBS6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS7SRB	ROCKET MOTOR RBS7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3760)	ACRCDFDAL21SRB	CDF ASSY L21 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDAL22SRB	CDF ASSY L22 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS1SRB	ROCKET MOTOR L BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS3SRB	ROCKET MOTOR L BSM 3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRRMPILBS4SRB	ROCKET MOTOR L BSM 4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3761)	ACRCDFDAR31SRB	CDF ASS R31 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDAR32SRB	CDF ASS R32 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS1SRB	ROCKET MOTOR R BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS2SRB	ROCKET MOTOR RBS2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS4SRB	ROCKET MOTOR RBS4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3762)	ACRCDFDIR11SRB	CDF INIT R11 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIR12SRB	CDF INIT R12 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS2SRB	ROCKET MOTOR RBS2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS3SRB	ROCKET MOTOR RBS3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS4SRB	ROCKET MOTOR RBS4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3763)	ACRCDFDAL31SRB	CDF ASSY L31 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIL32SRB	CDF INIT L32 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS1SRB	ROCKET MOTOR L BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS2SRB	ROCKET MOTOR L BSM 2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS4SRB	ROCKET MOTOR L BSM 4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3764)	ACRCDFDIL81SRB	CDF INIT L81 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIL82SRB	CDF INIT L82 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS5SRB	ROCKET MOTOR L BSM 5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS6SRB	ROCKET MOTOR L BSM 6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS7SRB	ROCKET MOTOR L BSM 7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3765)	ACRCDFDAR11SRB	CDF ASSY R11 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDAR12SRB	CDF ASSY R12 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS2SRB	ROCKET MOTOR RBS2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS3SRB	ROCKET MOTOR RBS3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS4SRB	ROCKET MOTOR RBS4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3766)	ACRCDFDAL61SRB	CDF ASSY L61 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIL62SRB	CDF INIT L62 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS5SRB	ROCKET MOTOR L BSM 5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS7SRB	ROCKET MOTOR L BSM 7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS8SRB	ROCKET MOTOR L BSM 8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3767)	ACRCDFDAL42SRB	CDF ASSY L42 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIL41SRB	CDF INIT L41 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS1SRB	ROCKET MOTOR L BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS2SRB	ROCKET MOTOR L BSM 2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS3SRB	ROCKET MOTOR L BSM 3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3768)	ACRCDFDAR21SRB	CDF ASS R21 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDAR22SRB	CDF ASS R22 FAILS TO DETONATE OR PROPAGATE	1.00E-05	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRRMPIRBS1SRB	ROCKET MOTOR R BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS3SRB	ROCKET MOTOR RBS3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS4SRB	ROCKET MOTOR RBS4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3769)	ACRCDFDIL71SRB	CDF INIT L71 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIL72SRB	CDF INIT L72 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS5SRB	ROCKET MOTOR L BSM 5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS6SRB	ROCKET MOTOR L BSM 6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS8SRB	ROCKET MOTOR L BSM 8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3770)	ACRCDFDAL81SRB	CDF ASSY L81 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIL82SRB	CDF INIT L82 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS5SRB	ROCKET MOTOR L BSM 5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS6SRB	ROCKET MOTOR L BSM 6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS7SRB	ROCKET MOTOR L BSM 7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3771)	ACRCDFDAR51SRB	CDF ASS R51 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDAR52SRB	CDF ASS R52 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS6SRB	ROCKET MOTOR RBS6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS7SRB	ROCKET MOTOR RBS7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS8SRB	ROCKET MOTOR RBS8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3772)	ACRCDFDAL41SRB	CDF ASSY L41 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIL42SRB	CDF INIT L42 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS1SRB	ROCKET MOTOR L BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS2SRB	ROCKET MOTOR L BSM 2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS3SRB	ROCKET MOTOR L BSM 3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3773)	ACRCDFDIL41SRB	CDF INIT L41 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIL42SRB	CDF INIT L42 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS1SRB	ROCKET MOTOR L BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS2SRB	ROCKET MOTOR L BSM 2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS3SRB	ROCKET MOTOR L BSM 3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3774)	ACRCDFDIL11SRB	CDF INIT L11 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIL12SRB	CDF INIT L12 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS2SRB	ROCKET MOTOR L BSM 2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS3SRB	ROCKET MOTOR L BSM 3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS4SRB	ROCKET MOTOR L BSM 4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3775)	ACRCDFDAR41SRB	CDF ASS R41 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIR42SRB	CDF INIT R42 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS1SRB	ROCKET MOTOR R BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS2SRB	ROCKET MOTOR RBS2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS3SRB	ROCKET MOTOR RBS3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
3776)	ACRCDFDAL82SRB	CDF ASSY L82 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIL81SRB	CDF INIT L81 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS5SRB	ROCKET MOTOR L BSM 5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS6SRB	ROCKET MOTOR L BSM 6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS7SRB	ROCKET MOTOR L BSM 7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3777)	ACRCDFDAL12SRB	CDF ASSY L12 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIL11SRB	CDF INIT L11 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS2SRB	ROCKET MOTOR L BSM 2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS3SRB	ROCKET MOTOR L BSM 3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS4SRB	ROCKET MOTOR L BSM 4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3778)	ACRCDFDAR42SRB	CDF ASS R42 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIR41SRB	CDF INIT R41 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS1SRB	ROCKET MOTOR R BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS2SRB	ROCKET MOTOR RBS2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS3SRB	ROCKET MOTOR RBS3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3779)	ACRCDFDAL52SRB	CDF ASSY L52 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIL51SRB	CDF INIT L51 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS6SRB	ROCKET MOTOR L BSM 6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS7SRB	ROCKET MOTOR L BSM 7 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS8SRB	ROCKET MOTOR L BSM 8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3780)	ACRCDFDIL31SRB	CDF INIT L31 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIL32SRB	CDF INIT L32 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS1SRB	ROCKET MOTOR L BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS2SRB	ROCKET MOTOR L BSM 2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS4SRB	ROCKET MOTOR L BSM 4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3781)	ACRCDFDAL32SRB	CDF ASSY L32 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIL31SRB	CDF INIT L31 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPILBS1SRB	ROCKET MOTOR L BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS2SRB	ROCKET MOTOR L BSM 2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPILBS4SRB	ROCKET MOTOR L BSM 4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3782)	ACRCDFDIR71SRB	CDF INIT R71 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIR72SRB	CDF INIT R72 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS5SRB	ROCKET MOTOR RBS5 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS6SRB	ROCKET MOTOR RBS6 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS8SRB	ROCKET MOTOR RBS8 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3783)	ACRCDFDAR22SRB	CDF ASS R22 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIR21SRB	CDF INIT R21 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS1SRB	ROCKET MOTOR R BSM 1 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	

Cutset Ranking by Prob.	Basic Event ID	Basic Event Description	Basic Event Probability	Cutset Probability
	ACRRMPIRBS3SRB	ROCKET MOTOR RBS3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS4SRB	ROCKET MOTOR RBS4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
3784)	ACRCDFDAR11SRB	CDF ASSY R11 FAILS TO DETONATE OR PROPAGATE	1.00E-05	1.00E-22
	ACRCDFDIR12SRB	CDF INIT R12 FAILS TO DETONATE OR PROPAGATE	1.00E-05	
	ACRRMPIRBS2SRB	ROCKET MOTOR RBS2 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS3SRB	ROCKET MOTOR RBS3 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	
	ACRRMPIRBS4SRB	ROCKET MOTOR RBS4 FAILS TO IGNITE (PYROTECHNIC)	1.00E-04	