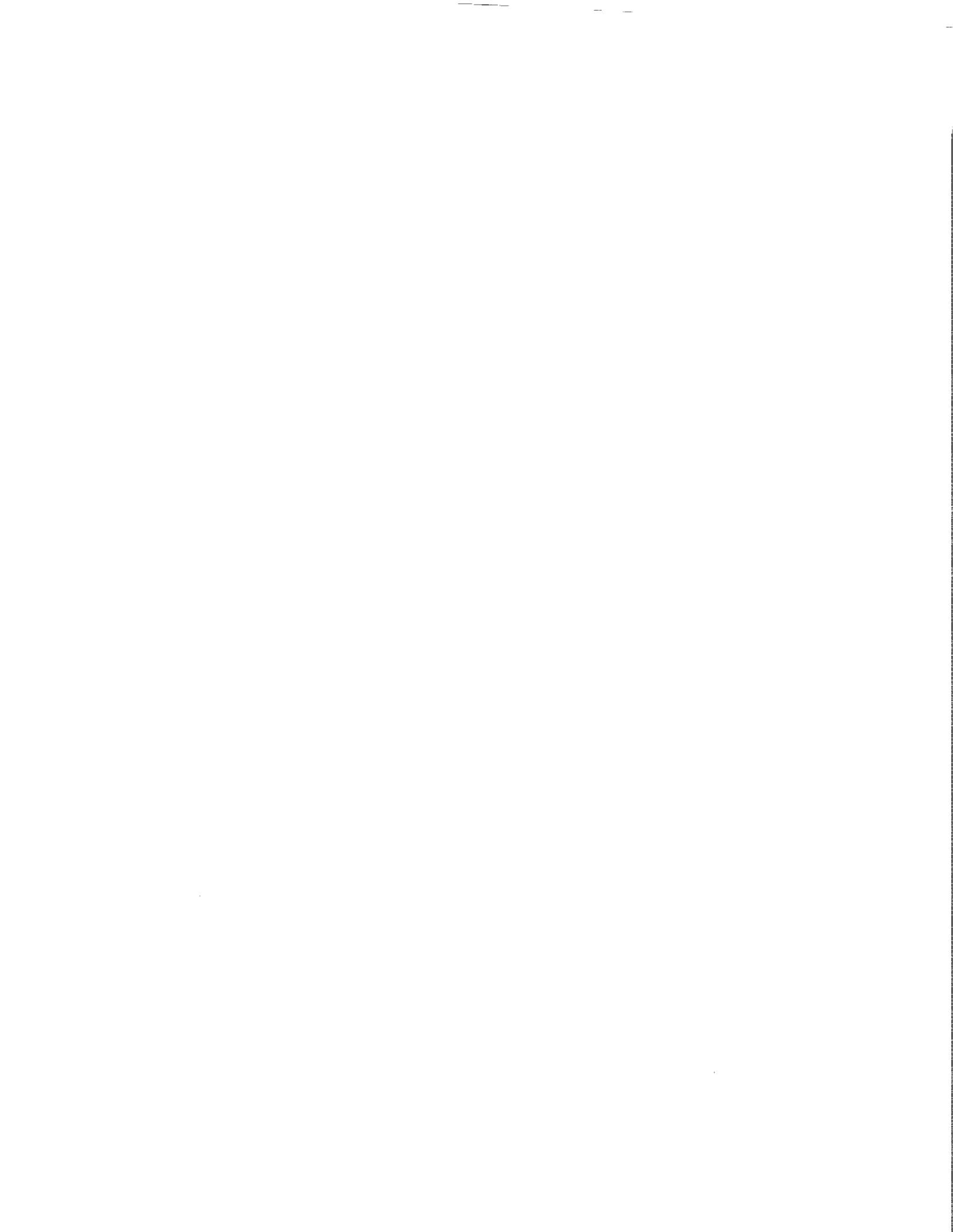


# **INDEPENDENT ORBITER ASSESSMENT**

**CIL ISSUES  
RESOLUTION REPORT  
VOLUME 3 OF 3**

**16 SEPTEMBER 1988**



SECTION C.18  
REACTION CONTROL SUBSYSTEM

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-103  
 NASA FMEA #: 03-2F-101020-3

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 103  
 ITEM: HE ISOL A & B VLVS

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ] [ P ] [ F ] [ P ] [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA NOW RECOMMENDS THAT THE B SCREEN BE FAILED AND THAT THIS ITEM AND FAILURE MODE BE PLACED ON THE CIL. A FAILURE OF THE REDUNDANT SECONDARY REG IS NOT DETECTABLE IN FLIGHT. IOA RECOMMENDS THE ADDITION OF A STATEMENT TO THE EFFECTS (FAILS OPEN) REGARDING POSSIBLE VIOLATIONS OF ORBITER ENTRY MASS PROPERTIES CONSTRAINTS. FINAL RESOLUTION: IOA WITHDRAWS ISSUE BASED ON NSTS 22206 GROUND RULE (8/21/87, P. 2-13, 2.3.4.c). A FAILED OPEN ISOL VALVE IS DETECTABLE DURING FLIGHT VIA TALKBACK DISPLAY. THE REDUNDANCY SCREEN B TEST SHOULD BE APPLIED ONLY TO THE ISOL VALVE SINCE THE UNLIKE REDUNDANT REGULATOR IS IDENTIFIED SEPARATELY IN THE FMEA/CIL. THAT IS, AN UNDETECTABLE REG FAILURE SHOULD NOT CAUSE A B SCREEN FAILURE FOR THE DETECTABLE ISOL VALVE FAILURE. HOWEVER, IOA RECOMMENDS THAT THE B SCREEN BE FAILED SINCE ONE LEVEL OF REDUNDANCY (REG) CAN BE LOST WITHOUT BEING DETECTED. ALSO, THE NASA RCS FMEA/CIL ANALYSIS CONSIDERED THE DETECTABILITY OF ALL REDUNDANT ITEMS IN DETERMINING B SCREEN PASSAGE OR FAILURE. IOA AGREES WITH THIS PRACTICE. FOR CONSISTENCY WITHIN THE RCS FMEA/CIL, THIS B SCREEN SHOULD BE FAILED.

REPORT DATE: 21 JULY 1988 C.18-2

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-103A  
 NASA FMEA #: NONE

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM: FRCS  
 MDAC ID: 103  
 ITEM: HE ISOL A & B VLVS

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ]    [ P ]    [ F ]    [ P ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (INTERNAL LEAKAGE).  
FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 5/19/88 AGREED TO ADD  
 "INTERNAL LEAKAGE" TO THE FAILURE MODES ON 03-2F-101020-3 (3/1R  
 PPP, FAILS OPEN) DURING THE NEXT FMEA UPDATE ACTIVITY. IOA  
 WITHDRAWS B SCREEN ISSUE. WITH ONE HELIUM ISOL VALVE OPEN,  
 INTERNAL LEAKAGE OF THE CLOSED PARALLEL VALVE IS UNDETECTABLE, BUT  
 HAS NO EFFECT. IF BOTH VALVES ARE CLOSED AND ONE VALVE IS LEAKING  
 INTERNALLY, THE EFFECTS ARE DETECTABLE VIA PRESSURE SENSORS IN THE  
 HELIUM TANK AND/OR THE PROPELLANT TANK.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-104  
 NASA FMEA #: 03-2F-101020-4

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 104  
 ITEM: HE ISOL A & B VLVS

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	
IOA	[ 2 /1R ]	[ P ]	[ NA ]	[ P ]	[    ] *
COMPARE	[ N /    ]	[    ]	[ N ]	[    ]	[ X ]
					[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ]    [ P ]    [ P ]    [ P ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA RECOMMENDS THIS FAILURE MODE BE UPGRADED TO A 2/1R AND PLACED ON THE CIL. INABILITY TO REPRESS FRCS PROP TANK AND SUBSEQUENT INABILITY TO DEplete PROP COULD RESULT IN VIOLATION OF X CG LIMIT. FINAL RESOLUTION: IOA HELD MTG ON 6/2/88 WITH RCS SSM, & MOD, BOEING, & RSOC PERSONNEL TO DISCUSS IOA 1R/2 ISSUE AND INCONSISTENCY BETWEEN RCS HDW CRIT (1R/3) AND GN&C FMEA 05-1-FC6242-1 (1R/2). SSM STATED THAT USE OF A FRCS DUMP FOR ENTRY X CG MANAGEMENT WAS NOT CONSIDERED IN RCS CRIT ASSIGNMENT AS WAS DONE IN IOA AND GN&C CRITS. A POST-DEORBIT FRCS DUMP IS USED TO MEET THE FWD X CG LIMIT (1076.7 IN). THEREFORE, IF A PLANNED DUMP ISN'T COMPLETED BECAUSE OF TWO FAILED CLOSED HE ISOL VLVS, THE X CG LIMIT MAY BE VIOLATED CAUSING LOSS OF CREW/VEHICLE. THE CRIT ASSIGNED TO THIS FAILURE SHOULD REFLECT THE POTENTIAL ENTRY X CG LIMIT VIOLATION. IOA RELUCTANTLY WITHDRAWS ISSUE BASED ON THE NARROW TIME SPAN IN WHICH BOTH FAILURES MUST OCCUR, PARTIAL ULLAGE CAPABILITY, THE "CONTINGENCY CG ENVELOPE", AND THE SSM'S JUDGMENT. HOWEVER, IOA STRONGLY RECOMMENDS EITHER A 1R/2 FOR THIS FAILURE, OR A FLIGHT RULE WHICH PROHIBITS RELIANCE ON A FRCS DUMP TO MEET THE ENTRY X CG LIMIT. ALSO, THE INCONSISTENCY BETWEEN THE RCS CRIT AND ABOVE GN&C FMEA SHOULD BE CORRECTED.

REPORT DATE: 21 JULY 1988    C.18-4

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-109  
 NASA FMEA #: 03-2F-101091-1

NASA DATA:  
 BASELINE [   ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 109  
 ITEM: HIGH PRESSURE HELIUM TEST PORT COUPLINGS A & B

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ NA ]	[ P ]	[   ]
COMPARE	[ / ]	[ N ]	[ N ]	[   ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ]      [ F ]      [ F ]      [ P ]      [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

IOA AGREES WITH NASA/RI FAILURE OF A AND B SCREENS. IOA RECOMMENDS THAT "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS FMEA/CIL. THIS IS A CREDIBLE FAILURE MODE AND IS ADDRESSED ON OTHER QD FMEAS. THE QUANTITY ON THIS FMEA/CIL SHOULD BE 12. IOA RECOMMENDS ADDING A STATEMENT TO THE EFFECTS REGARDING POSSIBLE VIOLATIONS OF ORBITER ENTRY MASS PROPERTIES CONSTRAINTS. FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA MAINTAINS RECOMMENDATION THE "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS CIL FOR COMPLETENESS, HOWEVER CIL IS ADEQUATE WITHOUT THIS ADDITION.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-112  
 NASA FMEA #: 03-2F-101030-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 112  
 ITEM: HE PRESS REGULATOR ASSEMBLY

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ NA ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[ N ]	[    ]	[ N ]
RECOMMENDATIONS:	(If different from NASA)				
	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ A ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA RECOMMENDS THIS FAILURE MODE BE UPGRADED TO A 2/1R AND PLACED ON THE CIL. INABILITY TO REPRESS FRCS PROP TANK AND SUBSEQUENT INABILITY TO DEplete PROP COULD RESULT IN VIOLATION OF X CG LIMIT. FINAL RESOLUTION: IOA HELD MTG ON 6/2/88 WITH RCS SSM, & MOD, BOEING, & RSOC PERSONNEL TO DISCUSS IOA 1R/2 ISSUE AND INCONSISTENCY BETWEEN RCS HDW CRIT (1R/3) AND GN&C FMEA 05-1-FC6242-1 (1R/2). SSM STATED THAT USE OF A FRCS DUMP FOR ENTRY X CG MANAGEMENT WAS NOT CONSIDERED IN RCS CRIT ASSIGNMENT AS WAS DONE IN IOA AND GN&C CRITS. A POST-DEORBIT FRCS DUMP IS USED TO MEET THE FWD X CG LIMIT (1076.7 IN). THEREFORE, IF A PLANNED DUMP IS NOT COMPLETED BECAUSE OF TWO FAILED CLOSED HELIUM REGS, THE X CG LIMIT MAY BE VIOLATED RESULTING IN LOSS OF CREW/VEHICLE. THE CRITICALITY ASSIGNED TO THIS FAILURE MODE SHOULD REFLECT THE POTENTIAL ENTRY X CG LIMIT VIOLATION. IOA RELUCTANTLY WITHDRAWS ISSUE BASED ON THE NARROW TIME SPAN IN WHICH BOTH FAILURES MUST BE PRESENT, PARTIAL ULLAGE CAPABILITY, THE "CONTINGENCY CG ENVELOPE", AND THE SSM'S JUDGMENT. HOWEVER, IOA STRONGLY RECOMMENDS EITHER A 1R/2 FOR THIS FAILURE MODE, OR A NEW FLIGHT RULE WHICH PROHIBITS RELIANCE ON A FRCS DUMP TO MEET THE ENTRY X CG LIMIT. ALSO, THE INCONSISTENCY BETWEEN THE RCS CRIT AND ABOVE GN&C FMEA SHOULD BE CORRECTED. IOA ACCEPTS B SCREEN FAILURE. SEE ASSESSMENT SHEET RCS-212 FOR RATIONALE.

REPORT DATE: 21 JULY 1988 C.18-6

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-113  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: FRCS  
MDAC ID: 113  
ITEM: HE PRESS REGULATOR ASSEMBLY

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ NA ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ]    [ P ]    [ F ]    [ P ]    [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (RESTRICTED FLOW).  
FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 5/19/88 AGREED TO ADD  
"RESTRICTED FLOW" TO THE FAILURE MODES ON 03-2F-101030-2 (3/1R  
PPP, FAILS CLOSED) DURING THE NEXT FMEA UPDATE ACTIVITY. IOA  
WITHDRAWS 2/1R ISSUE (SEE ASSESSMENT SHEET RCS-112 FOR RATIONALE).  
IOA ALSO WITHDRAWS B SCREEN ISSUE. THIS FAILURE WOULD BE  
DETECTABLE BEFORE LAUNCH AND AT SOME POINT ON-ORBIT SINCE ONLY ONE  
FLOW PATH IS OPEN AT A TIME DURING PAD PRE-PRESS AND ON-ORBIT.  
HOWEVER, IOA RECOMMENDS THAT THE B SCREEN BE FAILED FOR PHASES  
WHEN BOTH FLOW PATHS ARE USED SIMULTANEOUSLY (ASCENT AND ENTRY),  
WHEN THIS FAILURE WOULD NOT BE DETECTABLE.

REPORT DATE: 21 JULY 1988    C.18-7

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-114  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: FRCS  
MDAC ID: 114  
ITEM: HE PRESS REGULATOR ASSEMBLY

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	
IOA	[ 2 /1R ]	[ P ]	[ NA ]	[ P ]	[ X ] *
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 1 /1 ] [ ] [ ] [ ] [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (STRUCTURAL FAILURE, RUPTURE, EXTERNAL LEAKAGE). IOA ORIGINALLY CONSIDERED THE PARALLEL HELIUM PATHS TO BE REDUNDANT FOR THIS FAILURE (2/1R), BUT NOW CLASSIFIES THIS FAILURE AS A 1/1.

FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 12/15/87 AGREED TO ADD THIS VALVE BODY TO THE HELIUM LINE EXTERNAL LEAKAGE FMEA (03-2F-101013-1, 1/1) WITH CORRESPONDING RETENTION RATIONALE. THIS WAS ALSO AN ACTION ITEM FROM THE RCS PRCB ON 12/23/87.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-115  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [ ]  
NEW [ ]

SUBSYSTEM: FRCS  
MDAC ID: 115  
ITEM: HE PRESS REGULATOR PRIMARY SENSING PORT

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /2R ] [ P ] [ F ] [ P ] [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (EXTERNAL LEAKAGE THROUGH SENSING PORT). HOWEVER, THIS FAILURE MODE IS COVERED BY NASA/RI IN THE OMS SUBSYSTEM ON FMEA 03-3-1004-3 (3/2R PFP). IOA RECOMMENDS THAT THIS FAILURE MODE ALSO BE COVERED FOR THE RCS REGULATOR WITH THE SAME RATIONALE USED IN OMS. IOA WITHDRAWS 2/1R PPP CRIT.

FINAL RESOLUTION: IOA WITHDRAWS ISSUE. THE WORST CASE REGULATOR EXTERNAL LEAKAGE IS COVERED ON 03-2F-101013-1 (1/1). THE PROPOSED IOA FAILURE MODE IS A LESS SEVERE CASE OF THE FAILURE MODE COVERED ON 03-2F-101013-1 AND, THEREFORE, NEED NOT BE ADDED TO THE RCS FMEA/CIL. HOWEVER, FOR CONSISTENCY BETWEEN RCS AND OMS IDENTICAL ITEMS, IOA RECOMMENDS THAT THIS FAILURE MODE SHOULD ALSO BE ADDRESSED IN THE RCS FMEA/CIL.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-117  
 NASA FMEA #: 03-2F-101091-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 117  
 ITEM: HE PRESS REGULATOR OUTLET TEST PORT COUPLING

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ NA ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[ N ]	[ N ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ]    [ F ]    [ F ]    [ P ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA AGREES WITH NASA/RI 3/1R FFP ASSIGNMENT. IOA ORIGINALLY IDENTIFIED THIS AS A TWO-SEAL COUPLING RATHER THAN A MULTIPLE SEAL 0032 COUPLING. IOA RECOMMENDS THAT "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS FMEA/CIL. THIS IS A CREDIBLE FAILURE MODE AND IS ADDRESSED ON OTHER QD FMEAS. THE QUANTITY ON THIS FMEA SHOULD BE 12. IOA ALSO RECOMMENDS ADDING A STATEMENT TO THE EFFECTS REGARDING POSSIBLE VIOLATIONS OF ORBITER ENTRY MASS PROPERTIES CONSTRAINTS.

FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA MAINTAINS RECOMMENDATION THE "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS CIL FOR COMPLETENESS, HOWEVER CIL IS ADEQUATE WITHOUT THIS ADDITION.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-119  
 NASA FMEA #: 03-2F-101095-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 119  
 ITEM: QUAD CHECK VALVE ASSEMBLY

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ] [ P ] [ F ] [ P ] [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA RECOMMENDS THAT THIS ITEM AND FAILURE MODE BE UPGRADED TO A 2/1R AND PLACED ON THE CIL. WITH SERIES POPPETS FAILED OPEN, THE CONTAMINATION OF REGULATORS BY PROP OR PROP VAPORS COULD RESULT IN LOSS OF PROP TANK REPRESS CAPABILITY AND INABILITY TO USE OR DEplete FRCS PROP. THIS COULD LEAD TO VIOLATIONS OF ENTRY MASS PROPERTIES CONSTRAINTS AND LOSS OF LIFE OF VEHICLE DURING ENTRY. FAILURE OF ONE POPPET UNDETECTABLE DURING FLIGHT (FAIL B SCREEN).  
FINAL RESOLUTION: IOA ACCEPTS 3/3 BASED ON INPUTS FROM OMS AND RCS SSMS: THE REGS ARE DESIGNED TO BE COMPATIBLE WITH PROP AND HAVE PASSED 90 DAY PROP EXPOSURE TEST. ALSO, ENOUGH TIME DOES NOT EXIST DURING A MISSION FOR PROP EXPOSURE TO CAUSE A REG FAILURE. ANY PROBLEM RESULTING FROM PROP EXPOSURE ON THE GROUND WOULD BE DETECTED DURING PRELAUNCH OPS. THE SSMS AGREED THAT THE IOA CONCERNS WERE NOT IMPOSSIBLE, BUT CONSIDER THE PROBABILITY OF SUCH OCCURRENCES TO BE "INFINITESIMALLY SMALL". IOA STILL RECOMMENDS 2/1R BASED ON ULTIMATE WORST-CASE POSSIBLE EFFECTS, BUT ACCEPTS JUDGMENT OF SSMS. SINCE THESE FAILURE MODES CAN CAUSE 1R REGULATOR FAILURES (SEE CAUSES ON 03-2F-101030-1, 03-2A-201030-1, & 03-2A-201030-2), THEY SHOULD BE CLASSIFIED AS 1R'S.

REPORT DATE: 21 JULY 1988 C.18-11

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-120  
 NASA FMEA #: 03-2F-101095-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 120  
 ITEM: QUAD CHECK VALVE ASSEMBLY

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[    ]
RECOMMENDATIONS: (If different from NASA)					
	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ A ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA RECOMMENDS THIS FAILURE MODE BE UPGRADED TO A 2/1R. INABILITY TO REPRESS FRCS PROP TANK AND SUBSEQUENT INABILITY TO DEplete PROP COULD RESULT IN VIOLATION OF THE ENTRY X CG LIMIT.  
FINAL RESOLUTION: IOA HELD MTG ON 6/2/88 WITH RCS SSM, AND MOD, BOEING, & RSOC PERSONNEL TO DISCUSS IOA 1R/2 ISSUE AND INCONSISTENCY BETWEEN RCS HDW CRIT (1R/3) AND GN&C FMEA 05-1-FC6242-1 (1R/2). SSM STATED THAT USE OF A FRCS DUMP FOR ENTRY X CG MANAGEMENT WAS NOT CONSIDERED IN RCS CRIT ASSIGNMENT AS WAS DONE IN IOA AND GN&C CRITS. A POST-DEORBIT FRCS DUMP IS USED TO MEET THE FWD X CG LIMIT (1076.7 IN). THEREFORE, IF A PLANNED DUMP IS NOT COMPLETED BECAUSE OF TWO FAILED CLOSED CHECK VLV POPPETS, THE X CG LIMIT MAY BE VIOLATED RESULTING IN LOSS OF CREW/VEHICLE. THE CRITICALITY ASSIGNED TO THIS FAILURE MODE SHOULD REFLECT THE POTENTIAL ENTRY X CG LIMIT VIOLATION. IOA RELUCTANTLY WITHDRAWS ISSUE BASED ON THE NARROW TIME SPAN IN WHICH BOTH FAILURES MUST BE PRESENT, PARTIAL ULLAGE CAPABILITY, THE "CONTINGENCY CG ENVELOPE", AND THE SSM'S JUDGMENT. HOWEVER, IOA STRONGLY RECOMMENDS EITHER A 1R/2 FOR THIS FAILURE MODE, OR A NEW FLIGHT RULE WHICH PROHIBITS RELIANCE ON A FRCS DUMP TO MEET THE ENTRY X CG LIMIT. ALSO, THE INCONSISTENCY BETWEEN THE RCS CRIT AND ABOVE GN&C FMEA SHOULD BE CORRECTED.

REPORT DATE: 21 JULY 1988 C.18-12

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-121  
 NASA FMEA #: 03-2F-101091-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 121  
 ITEM: QUAD CHECK VALVE TEST PORT COUPLINGS A & B

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ NA ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[ N ]	[ N ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ]      [ F ]      [ F ]      [ P ]      [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA AGREES WITH NASA/RI 3/1R FFP ASSIGNMENT. IOA ORIGINALLY IDENTIFIED THIS AS A TWO-SEAL COUPLING RATHER THAN A MULTIPLE SEAL 0032 COUPLING. IOA RECOMMENDS THAT "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS FMEA/CIL. THIS IS A CREDIBLE FAILURE MODE AND IS ADDRESSED ON OTHER QD FMEAS. THE QUANTITY ON THIS FMEA SHOULD BE 12. IOA ALSO RECOMMENDS ADDING A STATEMENT TO THE EFFECTS REGARDING POSSIBLE VIOLATIONS OF ORBITER ENTRY MASS PROPERTIES CONSTRAINTS.

FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA MAINTAINS RECOMMENDATION THE "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS CIL FOR COMPLETENESS, HOWEVER CIL IS ADEQUATE WITHOUT THIS ADDITION.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-128  
 NASA FMEA #: 03-2F-111110-3

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 128  
 ITEM: PROP CHANNEL SCREENS

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 1 / 1 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 1 / 1 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[    /    ]	[    ]	[    ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ] [    ] [    ] [    ] [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA RECOMMENDS THAT THE P.A.D. COMPONENTS BE ITEMIZED IN THE ITEM LIST OR FUNCTIONAL DESCRIPTION SECTIONS TO SHOW SPECIFICALLY WHAT IS COVERED BY THIS FMEA/CIL. IOA ALSO RECOMMENDS THAT THE "HIGH G" DISCUSSION BE REMOVED FROM THE FUNCTIONAL DESCRIPTION.  
FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA RECOMMENDS EDITORIAL REVISIONS AS STATED, HOWEVER NO LONGER CONSIDERS THIS RECOMMENDATION TO BE AN "ISSUE". THE CRITICALITY IS CORRECT FOR THIS FAILURE MODE.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-130  
 NASA FMEA #: 03-2F-101090-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 130  
 ITEM: PROP TK UPPER COMPARTMENT CHANNEL CHECK-OUT  
 COUPLING

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ NA ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[ N ]	[ N ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ]    [ F ]    [ F ]    [ P ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA AGREES WITH NASA/RI 3/1R FFP ASSIGNMENT. IOA ORIGINALLY IDENTIFIED THIS AS A TWO-SEAL COUPLING RATHER THAN A MULTIPLE-SEAL 0032 COUPLING. IOA RECOMMENDS THAT "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS FMEA/CIL. THIS IS A CREDIBLE FAILURE MODE AND IS ADDRESSED ON OTHER QD FMEAS. IOA ALSO RECOMMENDS ADDING STATEMENTS TO THE EFFECTS REGARDING POSSIBLE FIRE HAZARD, HAZARD TO GROUND CREW, AND POSSIBLE VIOLATIONS OF ENTRY MASS PROPERTIES CONSTRAINTS.

FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA MAINTAINS RECOMMENDATION THE "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS CIL FOR COMPLETENESS, HOWEVER CIL IS ADEQUATE WITHOUT THIS ADDITION.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-140  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: FRCS  
MDAC ID: 140  
ITEM: PRESSURE RELIEF ASSEMBLY

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ]
IOA	[ 2 /1R ]	[ P ]	[ NA ]	[ P ]	[ X ] *
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ]    [ P ]    [ F ]    [ P ]    [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (BURST DISK INTERNAL LEAKAGE). IOA CONSIDERS THIS FAILURE MODE TO BE CREDIBLE AND RECOMMENDS IT BE ADDED TO 03-2F-101060-5. THE FAILURE HISTORY OF THE BURST DISK INCLUDES THIS FAILURE.

FINAL RESOLUTION: IOA WITHDRAWS ISSUE. THE WORST-CASE BURST DISK LEAKAGE IS COVERED ON 03-2F-101060-5 (BURST DISK RUPTURES PREMATURELY, 2/1R PFP). THE IOA FAILURE MODE IS A LESS SEVERE CASE OF THE FAILURE MODE COVERED ON 03-2F-101060-5 AND, THEREFORE, NEED NOT BE ADDED TO THE RCS FMEA/CIL. THE FMEA/CIL NEED ONLY ADDRESS THE WORST-CASE FAILURE MODE.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-142  
 NASA FMEA #: 03-2F-101091-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 142  
 ITEM: RELIEF VALVE TEST PORT COUPLING

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ NA ]	[ P ]	[ ]
COMPARE	[ / ]	[ N ]	[ N ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ] [ F ] [ F ] [ P ] [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA AGREES WITH NASA/RI FAILURE OF A AND B SCREENS. IOA RECOMMENDS THAT "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS FMEA/CIL. THIS IS A CREDIBLE FAILURE MODE AND IS ADDRESSED ON OTHER QD FMEAS. THE QUANTITY ON THIS FMEA/CIL SHOULD BE 12. IOA RECOMMENDS ADDING A STATEMENT TO THE EFFECTS REGARDING POSSIBLE VIOLATIONS OF ORBITER ENTRY MASS PROPERTIES CONSTRAINTS. FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA MAINTAINS RECOMMENDATION THE "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS CIL FOR COMPLETENESS, HOWEVER CIL IS ADEQUATE WITHOUT THIS ADDITION.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-146  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [ ]  
NEW [ ]

SUBSYSTEM: FRCS  
MDAC ID: 146  
ITEM: GROUND MANUAL ISOLATION VALVE

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N / N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ] [ ] [ ] [ ] [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (STRUCTURAL FAILURE, RUPTURE, EXTERNAL LEAKAGE).

FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 12/15/87 AGREED TO ADD THIS VALVE BODY TO THE HELIUM LINE EXTERNAL LEAKAGE FMEA (03-2F-101013-1, 1/1) WITH CORRESPONDING RETENTION RATIONALE. THIS WAS ALSO AN ACTION ITEM FROM THE RCS PRCB ON 12/23/87. IOA ALSO RECOMMENDS THAT THIS FMEA INCLUDE PROP LEAKAGE EFFECTS (CORROSION, FIRE, EXPLOSION, EXPOSURE OF EVA AND GROUND CREWS).

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-147  
 NASA FMEA #: 03-2F-102112-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 147  
 ITEM: PROP TK ISOL VLVS 1/2 & 3/4/5

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 1 / 1 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 1 / 1 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[    /    ]	[    ]	[    ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ]    [    ]    [    ]    [    ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

THIS FMEA COVERS ONLY THE BELLOWS LEAKAGE FAILURE MODE FOR THE PROP TANK ISOL VALVES. IOA HAS NO ISSUE WITH THIS FAILURE MODE, HOWEVER DOES RECOMMEND THAT THE EFFECTS INCLUDE THE POSSIBLE EXPOSURE OF EVA AND GROUND CREWS TO PROP OR PROP VAPORS. NASA/RI DO NOT COVER STRUCTURAL FAILURE, RUPTURE, OR EXTERNAL LEAKAGE OF THE VALVE HOUSING ON THIS FMEA OR ELSEWHERE.  
FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 12/15/87 AGREED TO ADD THIS VALVE BODY TO THE PROP LINE EXTERNAL LEAKAGE FMEA (03-2F-102108-1, 1/1) WITH CORRESPONDING RETENTION RATIONALE. THIS WAS ALSO AN ACTION ITEM FROM THE RCS PRCB ON 12/23/87.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-148  
 NASA FMEA #: 03-2F-102120-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 148  
 ITEM: PROP TK ISOL VLVS 1/2 & 3/4/5

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 1 /1 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ]      [ P ]      [ P ]      [ F ]      [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA WITHDRAWS 1/1 CRIT, BUT MAINTAINS CONCERN THAT RESTRICTED FLOW TO A THRUSTER COULD RESULT IN BURN-THROUGH. IOA ALSO WITHDRAWS 1/1 ABORT ISSUE DUE TO LACK OF CURRENT FRCS DUMP CAPABILITY DURING RTLS & TAL, HOWEVER RECOMMENDS A 1/1 ABORT CRIT (BASED ON A POSSIBLE INCOMPLETE DUMP) IF SUCH CAPABILITY EXISTS IN THE FUTURE. IOA RECOMMENDS THAT THE RESTRICTED FLOW MODE BE UPGRADED TO A 2/1R AND PLACED ON THE CIL. INABILITY TO USE OR DEplete FRCS PROP COULD RESULT IN INABILITY TO PERFORM ET SEP, OR VIOLATION OF THE ENTRY X CG LIMIT. ANY UPSTREAM CONTAMINATION CAN AFFECT ALL REDUNDANCY.

FINAL RESOLUTION: IOA MET WITH G. GRUSH (RCS SSM) ON 5/19/88 TO DISCUSS 1R/2 ISSUE. IOA ACCEPTS SSM'S JUDGMENT AND RELUCTANTLY WITHDRAWS ISSUE BASED ON THE NARROW TIME SPAN IN WHICH BOTH VLVS MUST FAIL, AND THE "CONTINGENCY CG ENVELOPE". HOWEVER, IOA STRONGLY RECOMMENDS A 1R/2 PPF FOR THIS FAILURE MODE BASED ON THE ABOVE RATIONALE. IOA CONTENDS THAT RESTRICTED FLOW OF THE TWO PROP TANK ISOL VLVS COULD RESULT IN LOSS ET SEP CAPABILITY OR VIOLATION OF THE ENTRY X CG LIMIT DUE TO INABILITY TO DUMP FRCS PROP AFTER THE DEORBIT BURN. ALSO, THE INCONSISTENCY BETWEEN THIS RCS HDW CRIT (1R/3) AND GN&C FMEA 05-1-FC6242-1 (1R/2) SHOULD BE CORRECTED.

REPORT DATE: 21 JULY 1988      C.18-20

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-150  
NASA FMEA #: 03-2F-102120-1

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: FRCS  
MDAC ID: 150  
ITEM: PROP TK ISOL VLV 1/2

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ]    [ P ]    [ P ]    [ P ]    [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

IOA WITHDRAWS 1/1 ABORT ISSUE DUE TO LACK OF CURRENT FRCS DUMP CAPABILITY DURING RTLS & TAL, HOWEVER RECOMMENDS A 1/1 ABORT CRIT (BASED ON POSSIBLE INADEQUATE DUMP) IF SUCH A CAPABILITY EXISTS IN THE FUTURE. IOA RECOMMENDS THAT THE FAILED CLOSED AND FAILS TO REMAIN OPEN FAILURE MODES BE UPGRADED TO 2/1R AND PLACED ON THE CIL. INABILITY TO USE OR DEplete FRCS PROP COULD RESULT IN INABILITY TO PERFORM ET SEP, OR VIOLATION OF THE ENTRY X CG LIMIT. FINAL RESOLUTION: IOA MET WITH G. GRUSH (RCS SSM) ON 5/19/88 TO DISCUSS 1R/2 ISSUE. IOA ACCEPTS SSM'S JUDGMENT AND RELUCTANTLY WITHDRAWS ISSUE BASED ON THE NARROW TIME SPAN IN WHICH BOTH VALVES MUST FAIL, AND THE "CONTINGENCY CG ENVELOPE". HOWEVER, IOA STRONGLY RECOMMENDS A 1R/2 FOR THIS FAILURE MODE BASED ON THE ABOVE RATIONALE. IOA CONTENDS THAT TWO FAILED CLOSED PROP TANK ISOL VLVS COULD RESULT IN LOSS OF FRCS ET SEP CAPABILITY AND POSSIBLE VIOLATION OF THE ENTRY X CG LIMIT DUE TO INABILITY TO DUMP FRCS PROP AFTER THE DEORBIT BURN. THESE VALVES ARE ALWAYS OPEN DURING FLIGHT, HOWEVER A SWITCH FAILURE COULD CAUSE A VALVE TO GO FROM OPEN TO FAILED CLOSED. THE INCONSISTENCY BETWEEN THIS RCS HDW CRIT (1R/3) AND GN&C FMEA 05-1-FC6242-1 (1R/2) SHOULD BE CORRECTED.

REPORT DATE: 21 JULY 1988    C.18-21

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-152  
 NASA FMEA #: 03-2F-102120-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 152  
 ITEM: PROP TK ISOL VLV 3/4/5

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ]    [ P ]    [ P ]    [ P ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA WITHDRAWS 1/1 ABORT ISSUE DUE TO LACK OF CURRENT FRCS DUMP CAPABILITY DURING RTLS & TAL, HOWEVER RECOMMENDS A 1/1 ABORT CRIT (BASED ON POSSIBLE INADEQUATE DUMP) IF SUCH A CAPABILITY EXISTS IN THE FUTURE. IOA RECOMMENDS THAT THE FAILED CLOSED AND FAILS TO REMAIN OPEN FAILURE MODES BE UPGRADED TO 2/1R AND PLACED ON THE CIL. INABILITY TO USE OR DEplete FRCS PROP COULD RESULT IN INABILITY TO PERFORM ET SEP, OR VIOLATION OF THE ENTRY X CG LIMIT. FINAL RESOLUTION: IOA MET WITH G. GRUSH (RCS SSM) ON 5/19/88 TO DISCUSS 1R/2 ISSUE. IOA ACCEPTS SSM'S JUDGMENT AND RELUCTANTLY WITHDRAWS ISSUE BASED ON THE NARROW TIME SPAN IN WHICH BOTH VALVES MUST FAIL, AND THE "CONTINGENCY CG ENVELOPE". HOWEVER, IOA STRONGLY RECOMMENDS A 1R/2 FOR THIS FAILURE MODE BASED ON THE ABOVE RATIONALE. IOA CONTENDS THAT TWO FAILED CLOSED PROP TANK ISOL VLVS COULD RESULT IN LOSS OF FRCS ET SEP CAPABILITY AND POSSIBLE VIOLATION OF THE ENTRY X CG LIMIT DUE TO INABILITY TO DUMP FRCS PROP AFTER THE DEORBIT BURN. THESE VALVES ARE ALWAYS OPEN DURING FLIGHT, HOWEVER A SWITCH FAILURE COULD CAUSE A VALVE TO GO FROM OPEN TO FAILED CLOSED. THE INCONSISTENCY BETWEEN THIS RCS HDW CRIT (1R/3) AND GN&C FMEA 05-1-FC6242-1 (1R/2) SHOULD BE CORRECTED.

REPORT DATE: 21 JULY 1988    C.18-22

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-158  
NASA FMEA #: 03-2F-102110-1

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: FRCS  
MDAC ID: 158  
ITEM: MANIFOLD 1, ISOL VLV

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / ]	[ ]	[ ]	[ ]	[ N ]
RECOMMENDATIONS:	(If different from NASA)				
	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ A ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

IOA WITHDRAWS 1/1 ABORT ISSUE. IOA RECOMMENDS THESE FAILURE MODES BE UPGRADED TO 1R/2. CERTAIN COMBINATIONS OF TWO FAILURES COULD RESULT IN INABILITY TO DUMP FRCS PROP AND VIOLATION OF ENTRY X CG LIMIT.

FINAL RESOLUTION: IOA HELD MTG ON 6/2/88 WITH RCS SSM, MOD, BOEING, & RSOC PERSONNEL TO DISCUSS IOA 1R/2 ISSUE AND INCONSISTENCY BETWEEN RCS CRIT (1R/3) AND GN&C FMEA 05-1-FC6242-1 (1R/2). SSM STATED THAT USE OF A FRCS DUMP FOR ENTRY X CG MANAGEMENT WASN'T CONSIDERED IN RCS CRIT ASSIGNMENT AS WAS DONE IN IOA AND GNC CRITS. A POST-DEORBIT FRCS DUMP IS USED TO MEET THE FWD X CG LIMIT (1076.7 IN). THEREFORE, IF A PLANNED DUMP ISN'T COMPLETED BECAUSE OF TWO FAILED CLOSED MANIFOLD VLVS, THE X CG LIMIT MAY BE VIOLATED CAUSING LOSS OF CREW/VEHICLE. THE CRIT ASSIGNED TO THIS FAILURE SHOULD REFLECT THE POTENTIAL ENTRY X CG LIMIT VIOLATION. IOA RELUCTANTLY WITHDRAWS ISSUE BASED ON THE NARROW TIME SPAN IN WHICH TWO FAILURES MUST OCCUR, PARTIAL ULLAGE CAPABILITY, THE "CONTINGENCY CG ENVELOPE", AND THE SSM'S JUDGMENT. HOWEVER, IOA STRONGLY RECOMMENDS EITHER A 1R/2 FOR THIS FAILURE, OR A FLIGHT RULE WHICH PROHIBITS RELIANCE ON A FRCS DUMP TO MEET THE ENTRY X CG LIMIT. ALSO, THE INCONSISTENCY BETWEEN THE RCS CRIT AND ABOVE GN&C FMEA SHOULD BE CORRECTED.

REPORT DATE: 21 JULY 1988 C.18-23

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-159  
 NASA FMEA #: 03-2F-101080-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 159  
 ITEM: MANIFOLD 1, GROUND PURGE/DRAIN COUPLING

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ F ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ NA ]	[ P ]	[ X ]
COMPARE	[ / ]	[ N ]	[ N ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ]    [ F ]    [ F ]    [ P ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA AGREES WITH NASA/RI RATIONALE FOR FAILURE OF A AND B SCREENS. IOA RECOMMENDS THAT "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS FMEA/CIL. THIS IS A CREDIBLE FAILURE MODE AND IS ADDRESSED ON OTHER QD FMEAS. IOA ALSO RECOMMENDS ADDING A STATEMENT TO THE EFFECTS ABOUT PROP LEAKAGE EFFECTS (CORROSION, FIRE, EXPLOSION, EXPOSURE OF EVA AND GROUND CREWS).  
FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA MAINTAINS RECOMMENDATION THE "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS CIL FOR COMPLETENESS, HOWEVER CIL IS ADEQUATE WITHOUT THIS ADDITION.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-162  
 NASA FMEA #: 03-2F-102110-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 162  
 ITEM: MANIFOLD 2, ISOL VLV

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / ]	[ ]	[ ]	[ ]	[ N ]
RECOMMENDATIONS:	(If different from NASA)				
	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ A ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA WITHDRAWS 1/1 ABORT ISSUE. IOA RECOMMENDS THESE FAILURE MODES BE UPGRADED TO 1R/2. CERTAIN COMBINATIONS OF TWO FAILURES COULD RESULT IN INABILITY TO DUMP FRCS PROP AND VIOLATION OF ENTRY X CG LIMIT.

FINAL RESOLUTION: IOA HELD MTG ON 6/2/88 WITH RCS SSM, MOD, BOEING, & RSOC PERSONNEL TO DISCUSS IOA 1R/2 ISSUE AND INCONSISTENCY BETWEEN RCS CRIT (1R/3) AND GN&C FMEA 05-1-FC6242-1 (1R/2). SSM STATED THAT USE OF A FRCS DUMP FOR ENTRY X CG MANAGEMENT WASN'T CONSIDERED IN RCS CRIT ASSIGNMENT AS WAS DONE IN IOA AND GNC CRITS. A POST-DEORBIT FRCS DUMP IS USED TO MEET THE FWD X CG LIMIT (1076.7 IN). THEREFORE, IF A PLANNED DUMP ISN'T COMPLETED BECAUSE OF TWO FAILED CLOSED MANIFOLD VLVS, THE X CG LIMIT MAY BE VIOLATED CAUSING LOSS OF CREW/VEHICLE. THE CRIT ASSIGNED TO THIS FAILURE SHOULD REFLECT THE POTENTIAL ENTRY X CG LIMIT VIOLATION. IOA RELUCTANTLY WITHDRAWS ISSUE BASED ON THE NARROW TIME SPAN IN WHICH TWO FAILURES MUST OCCUR, PARTIAL ULLAGE CAPABILITY, THE "CONTINGENCY CG ENVELOPE", AND THE SSM'S JUDGMENT. HOWEVER, IOA STRONGLY RECOMMENDS EITHER A 1R/2 FOR THIS FAILURE, OR A FLIGHT RULE WHICH PROHIBITS RELIANCE ON A FRCS DUMP TO MEET THE ENTRY X CG LIMIT. ALSO, THE INCONSISTENCY BETWEEN THE RCS CRIT AND ABOVE GN&C FMEA SHOULD BE CORRECTED.

REPORT DATE: 21 JULY 1988 C.18-25

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-163  
 NASA FMEA #: 03-2F-101080-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 163  
 ITEM: MANIFOLD 2, GROUND PURGE/DRAIN COUPLING

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ F ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ NA ]	[ P ]	[ X ]
COMPARE	[ / ]	[ N ]	[ N ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ]    [ F ]    [ F ]    [ P ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA AGREES WITH NASA/RI RATIONALE FOR FAILURE OF A AND B SCREENS. IOA RECOMMENDS THAT "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS FMEA/CIL. THIS IS A CREDIBLE FAILURE MODE AND IS ADDRESSED ON OTHER QD FMEAS. IOA ALSO RECOMMENDS ADDING A STATEMENT TO THE EFFECTS ABOUT PROP LEAKAGE EFFECTS (CORROSION, FIRE, EXPLOSION, EXPOSURE OF EVA AND GROUND CREWS).  
FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA MAINTAINS RECOMMENDATION THE "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS CIL FOR COMPLETENESS, HOWEVER CIL IS ADEQUATE WITHOUT THIS ADDITION.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-166  
NASA FMEA #: 03-2F-102110-1

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: FRCS  
MDAC ID: 166  
ITEM: MANIFOLD 3, ISOL VLV

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]
RECOMMENDATIONS:	(If different from NASA)				
	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ A ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

IOA WITHDRAWS 1/1 ABORT ISSUE. IOA RECOMMENDS THESE FAILURE MODES BE UPGRADED TO 1R/2. CERTAIN COMBINATIONS OF TWO FAILURES COULD RESULT IN INABILITY TO DUMP FRCS PROP AND VIOLATION OF ENTRY X CG LIMIT.

FINAL RESOLUTION: IOA HELD MTG ON 6/2/88 WITH RCS SSM, MOD, BOEING, & RSOC PERSONNEL TO DISCUSS IOA 1R/2 ISSUE AND INCONSISTENCY BETWEEN RCS CRIT (1R/3) AND GN&C FMEA 05-1-FC6242-1 (1R/2). SSM STATED THAT USE OF A FRCS DUMP FOR ENTRY X CG MANAGEMENT WASN'T CONSIDERED IN RCS CRIT ASSIGNMENT AS WAS DONE IN IOA AND GNC CRITS. A POST-DEORBIT FRCS DUMP IS USED TO MEET THE FWD X CG LIMIT (1076.7 IN). THEREFORE, IF A PLANNED DUMP ISN'T COMPLETED BECAUSE OF TWO FAILED CLOSED MANIFOLD VLVS, THE X CG LIMIT MAY BE VIOLATED CAUSING LOSS OF CREW/VEHICLE. THE CRIT ASSIGNED TO THIS FAILURE SHOULD REFLECT THE POTENTIAL ENTRY X CG LIMIT VIOLATION. IOA RELUCTANTLY WITHDRAWS ISSUE BASED ON THE NARROW TIME SPAN IN WHICH TWO FAILURES MUST OCCUR, PARTIAL ULLAGE CAPABILITY, THE "CONTINGENCY CG ENVELOPE", AND THE SSM'S JUDGMENT. HOWEVER, IOA STRONGLY RECOMMENDS EITHER A 1R/2 FOR THIS FAILURE, OR A FLIGHT RULE WHICH PROHIBITS RELIANCE ON A FRCS DUMP TO MEET THE ENTRY X CG LIMIT. ALSO, THE INCONSISTENCY BETWEEN THE RCS CRIT AND ABOVE GN&C FMEA SHOULD BE CORRECTED.

REPORT DATE: 21 JULY 1988 C.18-27

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-167  
 NASA FMEA #: 03-2F-101080-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 167  
 ITEM: MANIFOLD 3, GROUND PURGE/DRAIN COUPLING

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ F ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ NA ]	[ P ]	[ X ]
COMPARE	[ / ]	[ N ]	[ N ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ]    [ F ]    [ F ]    [ P ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA AGREES WITH NASA/RI RATIONALE FOR FAILURE OF A AND B SCREENS. IOA RECOMMENDS THAT "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS FMEA/CIL. THIS IS A CREDIBLE FAILURE MODE AND IS ADDRESSED ON OTHER QD FMEAS. IOA ALSO RECOMMENDS ADDING A STATEMENT TO THE EFFECTS ABOUT PROP LEAKAGE EFFECTS (CORROSION, FIRE, EXPLOSION, EXPOSURE OF EVA AND GROUND CREWS).  
FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA MAINTAINS RECOMMENDATION THE "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS CIL FOR COMPLETENESS, HOWEVER CIL IS ADEQUATE WITHOUT THIS ADDITION.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-170  
 NASA FMEA #: 03-2F-102110-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 170  
 ITEM: MANIFOLD 4, ISOL VLV

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]
RECOMMENDATIONS:	(If different from NASA)				
	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ A ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA WITHDRAWS 1/1 ABORT ISSUE. IOA RECOMMENDS THESE FAILURE MODES BE UPGRADED TO 1R/2. CERTAIN COMBINATIONS OF TWO FAILURES COULD RESULT IN INABILITY TO DUMP FRCS PROP AND VIOLATION OF ENTRY X CG LIMIT.

FINAL RESOLUTION: IOA HELD MTG ON 6/2/88 WITH RCS SSM, MOD, BOEING, & RSOC PERSONNEL TO DISCUSS IOA 1R/2 ISSUE AND INCONSISTENCY BETWEEN RCS CRIT (1R/3) AND GN&C FMEA 05-1-FC6242-1 (1R/2). SSM STATED THAT USE OF A FRCS DUMP FOR ENTRY X CG MANAGEMENT WASN'T CONSIDERED IN RCS CRIT ASSIGNMENT AS WAS DONE IN IOA AND GNC CRITS. A POST-DEORBIT FRCS DUMP IS USED TO MEET THE FWD X CG LIMIT (1076.7 IN). THEREFORE, IF A PLANNED DUMP ISN'T COMPLETED BECAUSE OF TWO FAILED CLOSED MANIFOLD VLVS, THE X CG LIMIT MAY BE VIOLATED CAUSING LOSS OF CREW/VEHICLE. THE CRIT ASSIGNED TO THIS FAILURE SHOULD REFLECT THE POTENTIAL ENTRY X CG LIMIT VIOLATION. IOA RELUCTANTLY WITHDRAWS ISSUE BASED ON THE NARROW TIME SPAN IN WHICH TWO FAILURES MUST OCCUR, PARTIAL ULLAGE CAPABILITY, THE "CONTINGENCY CG ENVELOPE", AND THE SSM'S JUDGMENT. HOWEVER, IOA STRONGLY RECOMMENDS EITHER A 1R/2 FOR THIS FAILURE, OR A FLIGHT RULE WHICH PROHIBITS RELIANCE ON A FRCS DUMP TO MEET THE ENTRY X CG LIMIT. ALSO, THE INCONSISTENCY BETWEEN THE RCS CRIT AND ABOVE GN&C FMEA SHOULD BE CORRECTED.

REPORT DATE: 21 JULY 1988 C.18-29

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-171  
 NASA FMEA #: 03-2F-101080-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 171  
 ITEM: MANIFOLD 4, GROUND PURGE/DRAIN COUPLING

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ F ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ NA ]	[ P ]	[ X ]
COMPARE	[ / ]	[ N ]	[ N ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ]      [ F ]      [ F ]      [ P ]      [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA AGREES WITH NASA/RI RATIONALE FOR FAILURE OF A AND B SCREENS. IOA RECOMMENDS THAT "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS FMEA/CIL. THIS IS A CREDIBLE FAILURE MODE AND IS ADDRESSED ON OTHER QD FMEAS. IOA ALSO RECOMMENDS ADDING A STATEMENT TO THE EFFECTS ABOUT PROP LEAKAGE EFFECTS (CORROSION, FIRE, EXPLOSION, EXPOSURE OF EVA AND GROUND CREWS).

FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA MAINTAINS RECOMMENDATION THE "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS CIL FOR COMPLETENESS, HOWEVER CIL IS ADEQUATE WITHOUT THIS ADDITION.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-175  
 NASA FMEA #: 03-2F-101080-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 175  
 ITEM: MANIFOLD 5, GROUND PURGE/DRAIN COUPLING

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ F ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ NA ]	[ P ]	[ X ]
COMPARE	[ / ]	[ N ]	[ N ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ]    [ F ]    [ F ]    [ P ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA AGREES WITH NASA/RI RATIONALE FOR FAILURE OF A AND B SCREENS.  
 IOA RECOMMENDS THAT "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE  
 ON THIS FMEA/CIL. THIS IS A CREDIBLE FAILURE MODE AND IS  
 ADDRESSED ON OTHER QD FMEAS. IOA ALSO RECOMMENDS ADDING A  
 STATEMENT TO THE EFFECTS ABOUT PROP LEAKAGE EFFECTS (CORROSION,  
 FIRE, EXPLOSION, EXPOSURE OF EVA AND GROUND CREWS).  
FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA MAINTAINS  
 RECOMMENDATION THE "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE  
 ON THIS CIL FOR COMPLETENESS, HOWEVER CIL IS ADEQUATE WITHOUT THIS  
 ADDITION.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-177  
 NASA FMEA #: 03-2F-102112-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 177  
 ITEM: MANIFOLD ISOL VLVS

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 1 / 1 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 1 / 1 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[    /    ]	[    ]	[    ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ]    [    ]    [    ]    [    ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

THIS FMEA/CIL COVERS ONLY THE BELLOWS LEAKAGE FAILURE MODE FOR THE PRIMARY MANIFOLD ISOLATION VALVE. IOA HAS NO ISSUE WITH THIS FAILURE MODE, HOWEVER DOES RECOMMEND THAT THE EFFECTS DISCUSS THE POSSIBLE EXPOSURE OF EVA AND GROUND CREWS TO PROP OR PROP VAPORS. NASA/RI DO NOT COVER STRUCTURAL FAILURE, RUPTURE, OR EXTERNAL LEAKAGE OF THE VALVE HOUSING ON THIS FMEA OR ELSEWHERE.  
FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 12/15/87 AGREED TO ADD THIS VALVE BODY TO THE PROP LINE EXTERNAL LEAKAGE FMEA (03-2F-102108-1, 1/1) WITH CORRESPONDING RETENTION RATIONALE. THIS WAS ALSO AN ACTION ITEM FROM THE RCS PRCB ON 12/23/87.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-177A  
 NASA FMEA #: 03-2F-102170-3

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 177  
 ITEM: MANIFOLD ISOL VLVS

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ] [ ] [ ] [ ] [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

THIS FMEA/CIL COVERS ONLY THE BELLOWS LEAKAGE FAILURE MODE FOR THE VERNIER MANIFOLD ISOLATION VALVE. IOA HAS NO ISSUE WITH THIS FAILURE MODE, HOWEVER DOES RECOMMEND THAT THE EFFECTS DISCUSS THE POSSIBLE EXPOSURE OF EVA AND GROUND CREWS TO PROP OR PROP VAPORS. NASA/RI DO NOT COVER STRUCTURAL FAILURE, RUPTURE, OR EXTERNAL LEAKAGE OF THE VALVE HOUSING ON THIS FMEA OR ELSEWHERE.  
FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 12/15/87 AGREED TO ADD THIS VALVE BODY TO THE PROP LINE EXTERNAL LEAKAGE FMEA (03-2F-102108-1, 1/1) WITH CORRESPONDING RETENTION RATIONALE. THIS WAS ALSO AN ACTION ITEM FROM THE RCS PRCB ON 12/23/87.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-178  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: FRCS  
MDAC ID: 178  
ITEM: MANIFOLD ISOL VLVS

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N / N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 2 / 1R ]    [ P ]    [ P ]    [ P ]    [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (RESTRICTED FLOW). IOA WITHDRAWS 1/1 CRIT, BUT MAINTAINS CONCERN THAT RESTRICTED FLOW TO A THRUSTER COULD CAUSE BURN-THROUGH. IOA ALSO WITHDRAWS 1/1 ABORT ISSUE DUE TO LACK OF CURRENT FRCS DUMP CAPABILITY DURING RTLS & TAL, HOWEVER RECOMMENDS A 1/1 ABORT CRIT (BASED ON A POSSIBLE INCOMPLETE DUMP) IF SUCH A CAPABILITY EXISTS IN THE FUTURE. IOA RECOMMENDS THAT THE RESTRICTED FLOW FAILURE MODE BE ADDRESSED ON THE FMEA/CIL.

FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 5/19/88 AGREED TO ADD "RESTRICTED FLOW" TO THE FAILURE MODES ON 03-2F-102110-1 (3/1R PPP, PRIMARY VALVES) AND 03-2F-102170-1 (2/2, VERNIER VALVES). IOA WITHDRAWS 2/1R ISSUE ON PRIMARY VALVES (SEE ASSESSMENT SHEETS RCS-158, 162, 166, & 170 FOR RATIONALE).

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-179  
 NASA FMEA #: 03-2F-121308-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 179  
 ITEM: JET ALIGNMENT BELLOWS, PRIMARY, ALL AXES

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA RECOMMENDS THAT THE "D" EFFECTS BE REVISED. IOA CONSIDERS LEAKAGE OF PROP TO BE CRITICAL AFTER ET SEP ALSO, AS WELL AS A HAZARD TO EVA AND GROUND CREWS. IOA ALSO RECOMMENDS THAT "ISOL VALVE RELIEF DEVICE FAILURE TO RELIEVE" AND "FAILURE OF LINE BELLOWS TO DEFLECT" BE ADDED AS CAUSES ON THIS FMEA.  
FINAL RESOLUTION: IOA NO LONGER CLASSIFIES THIS AS AN "ISSUE" SINCE THE CRITICALITY IS CORRECT. HOWEVER, IOA DOES RECOMMEND THAT THE "D" EFFECTS BE REVISED AS DESCRIBED ABOVE.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-181  
 NASA FMEA #: 03-2F-121310-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 181  
 ITEM: THRUSTER BIPROP SOLENOID VLV, PRIMARY, ALL AXES

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ P ]	[ P ]	[ X ] *
IOA	[ 1 /1 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[ 1 /1 ]    [   ]    [   ]    [   ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA FAILURE MODES ON ANALYSIS SHEET SHOULD NOT INCLUDE "FAILS ON". IOA RECOMMENDS THAT THE FAILED OPEN MODE BE UPGRADED TO A 1/1 BECAUSE IT RESULTS IN LEAKAGE OF PROP. PER NSTS 22206, ANY SINGLE FAILURE RESULTING IN PROP LEAKAGE SHOULD BE CLASSIFIED AS A 1/1. PROP LEAKAGE PRESENTS A HAZARD TO THE GROUND CREW.

FINAL RESOLUTION: IOA WITHDRAWS 1/1 ISSUE AFTER DISCUSSION WITH RCS SSM ON 5/19/88. SSM BELIEVES THAT THE CRIT ASSIGNED TO THIS FAILURE MODE SHOULD REFLECT ONLY THE EFFECTS ON THE MISSION, CREW, AND VEHICLE DURING FLIGHT, AND NOT THE POTENTIAL EFFECTS TO THE GROUND CREW DURING NON-FLIGHT PHASES. IOA ACCEPTS THIS PHILOSOPHY, BUT RECOMMENDS THAT THE CRIT BE UPGRADED TO A 1/1 PER NSTS 22206 GROUND RULES AND BECAUSE THIS FAILURE COULD CAUSE LOSS OF LIFE DURING THE PRE-LAUNCH AND LANDING/SAFING PHASES. FROM A LOSS OF THRUSTER STANDPOINT, IOA RECOMMENDS A 1R/2 FPP CRITICALITY. SEE ASSESSMENT SHEET RCS-186. THE SSM STATES THAT THE WORST-CASE EFFECT OF ZOTS RESULTING FROM THIS FAILURE WOULD BE THRUSTER INTERNAL LEAKAGE. ZOTS WOULD NOT RUPTURE THE THRUSTER HOUSING.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-182  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: FRCS  
MDAC ID: 182  
ITEM: THRUSTER BIPROP SOLENOID VLV, PRIMARY, ALL AXES

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 1 / 1 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N / N ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ]    [    ]    [    ]    [    ]    [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (STRUCTURAL FAILURE, RUPTURE, EXTERNAL LEAKAGE) FOR THE THRUSTER SOLENOID VALVE.  
FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 12/15/87 AGREED TO ADD THIS VALVE BODY TO THE PROP LINE EXTERNAL LEAKAGE FMEA (03-2F-102108-1, 1/1) WITH CORRESPONDING RETENTION RATIONALE. THIS WAS ALSO AN ACTION ITEM FROM THE RCS PRCB ON 12/23/87.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-183  
 NASA FMEA #: NONE

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM: FRCS  
 MDAC ID: 183  
 ITEM: THRUSTER BIPROP SOLENOID VLV, PRIMARY, ALL AXES

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 1 /1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ]    [ F ]    [ P ]    [ P ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (RESTRICTED FLOW). IOA WITHDRAWS 1/1 CRIT, BUT MAINTAINS CONCERN THAT RESTRICTED FLOW TO A THRUSTER COULD RESULT IN BURN-THROUGH. IOA ALSO WITHDRAWS 1/1 ABORT ISSUE DUE TO LACK OF CURRENT FRCS DUMP CAPABILITY DURING RTLS & TAL, HOWEVER RECOMMENDS A 1/1 ABORT CRIT (BASED ON A POSSIBLE INCOMPLETE DUMP) IF SUCH A CAPABILITY EXISTS IN THE FUTURE. IOA RECOMMENDS THAT THE RESTRICTED FLOW FAILURE MODE BE ADDRESSED ON THE FMEA/CIL.

FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 5/19/88 AGREED TO ADD "RESTRICTED FLOW" TO THE FAILURE MODES ON 03-2F-121310-3 (3/1R FPP, FAILS CLOSED) DURING THE NEXT FMEA UPDATE ACTIVITY. IOA WITHDRAWS 2/1R ISSUE FOR YAW THRUSTERS (SEE ASSESSMENT SHEET RCS-186 FOR RATIONALE).

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-185  
 NASA FMEA #: 03-2F-121310-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 185  
 ITEM: THRUSTER BIPROP SOLENOID VLV, PRIMARY, -X AXIS

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ P ]	[ P ]	[ X ] *
IOA	[ 1 /1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 1 /1 ] [ ] [ ] [ ] [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA RECOMMENDS THAT THE INTERNAL LEAKAGE FAILURE MODE BE UPGRADED TO A 1/1 BECAUSE IT RESULTS IN LEAKAGE OF PROP. PER NSTS-22206, ANY SINGLE FAILURE RESULTING IN PROP LEAKAGE SHOULD BE CLASSIFIED AS A 1/1. PROP LEAKAGE PRESENTS A HAZARD TO THE GROUND CREW.  
FINAL RESOLUTION: IOA WITHDRAWS 1/1 ISSUE AFTER DISCUSSION WITH RCS SSM ON 5/19/88. SSM BELIEVES THAT THE CRIT ASSIGNED TO THIS FAILURE MODE SHOULD REFLECT ONLY THE EFFECTS ON THE MISSION, CREW, AND VEHICLE DURING FLIGHT, AND NOT THE POTENTIAL EFFECTS TO THE GROUND CREW DURING NON-FLIGHT PHASES. IOA ACCEPTS THIS PHILOSOPHY, BUT RECOMMENDS THAT THE CRIT BE UPGRADED TO A 1/1 PER NSTS 22206 GROUNDRULES AND BECAUSE THIS FAILURE COULD CAUSE LOSS OF LIFE DURING THE PRE-LAUNCH AND LANDING/SAFING PHASES. PER THE SSM'S PHILOSOPHY, THE NASA CRITICALITY IS CORRECT. THE SSM STATES THAT THE WORST-CASE EFFECT OF ZOTS RESULTING FROM THIS FAILURE WOULD BE THRUSTER INTERNAL LEAKAGE. ZOTS WOULD NOT RUPTURE THE THRUSTER HOUSING.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-186  
NASA FMEA #: 03-2F-121310-3

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: FRCS  
MDAC ID: 186  
ITEM: THRUSTER BIPROP SOLENOID VLV, PRIMARY, Y AXIS

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ P ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[ N ]	[    ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ]    [ F ]    [ P ]    [ P ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

IOA WITHDRAWS 1/1 ABORT CRIT. IOA RECOMMENDS THAT THE FAILED CLOSED MODE FOR PRIMARY +/-Y JETS BE UPGRADED TO 1R/2. LOSS OF BOTH +Y OR -Y JETS MAY CAUSE INABILITY TO DUMP FRCS PROP AND VIOLATION OF THE ENTRY X CG LIMIT.

FINAL RESOLUTION: IOA HELD MTG ON 6/2/88 WITH SSM, MOD, BOEING, & RSOC PERSONNEL TO DISCUSS 1R/2 ISSUE AND INCONSISTENCY BETWEEN RCS CRIT (1R/3) AND GNC FMEA 05-1-FC6242-1 (1R/2). SSM STATED THAT USE OF A FRCS DUMP FOR ENTRY X CG MANAGEMENT WAS NOT CONSIDERED IN RCS CRIT ASSIGNMENT AS WAS DONE IN IOA AND GN&C CRITS. A POST-DEORBIT FRCS DUMP IS USED TO MEET THE FWD X CG LIMIT. THEREFORE, IF A PLANNED DUMP ISN'T COMPLETED BECAUSE TWO YAW JETS ON SAME SIDE ARE FAILED, THE X CG LIMIT MAY BE VIOLATED CAUSING LOSS OF CREW/VEHICLE. THE CRIT ASSIGNED TO THIS FAILURE SHOULD REFLECT THE POTENTIAL ENTRY X CG LIMIT VIOLATION. IOA RELUCTANTLY WITHDRAWS ISSUE BASED ON THE NARROW TIME SPAN IN WHICH TWO JETS MUST FAIL, THE "CONTINGENCY CG ENVELOPE", AND THE SSM'S JUDGMENT. HOWEVER, IOA STRONGLY RECOMMENDS EITHER A 1R/2 FOR THIS FAILURE, OR A FLIGHT RULE WHICH PROHIBITS RELIANCE ON A FRCS DUMP TO MEET THE ENTRY X CG LIMIT. ALSO, THE INCONSISTENCY BETWEEN THE RCS CRIT AND ABOVE GN&C FMEA SHOULD BE CORRECTED.

REPORT DATE: 21 JULY 1988    C.18-40

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-187  
 NASA FMEA #: 03-2F-121310-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 187  
 ITEM: THRUSTER BIPROP SOLENOID VLV, PRIMARY, Y AXIS

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ P ]	[ P ]	[ X ] *
IOA	[ 1 /1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 1 /1 ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA RECOMMENDS THAT THE INTERNAL LEAKAGE FAILURE MODE BE UPGRADED TO A 1/1 BECAUSE IT RESULTS IN LEAKAGE OF PROP. PER NSTS-22206, ANY SINGLE FAILURE RESULTING IN PROP LEAKAGE SHOULD BE CLASSIFIED AS A 1/1. PROP LEAKAGE PRESENTS A HAZARD TO THE GROUND CREW.

FINAL RESOLUTION: IOA WITHDRAWS 1/1 ISSUE AFTER DISCUSSION WITH RCS SSM ON 5/19/88. SSM BELIEVES THAT THE CRIT ASSIGNED TO THIS FAILURE MODE SHOULD REFLECT ONLY THE EFFECTS ON THE MISSION, CREW, AND VEHICLE DURING FLIGHT, AND NOT THE POTENTIAL EFFECTS TO THE GROUND CREW DURING NON-FLIGHT PHASES. IOA ACCEPTS THIS PHILOSOPHY, BUT RECOMMENDS THAT THE CRIT BE UPGRADED TO A 1/1 PER NSTS 22206 GROUND RULES AND BECAUSE THIS FAILURE COULD CAUSE LOSS OF LIFE DURING THE PRE-LAUNCH AND LANDING/SAFING PHASES. FROM A LOSS OF THRUSTER STANDPOINT, IOA RECOMMENDS A 1R/2 FPP CRITICALITY. SEE ASSESSMENT SHEET RCS-186. THE SSM STATES THAT THE WORST-CASE EFFECT OF ZOTS RESULTING FROM THIS FAILURE WOULD BE THRUSTER INTERNAL LEAKAGE. ZOTS WOULD NOT RUPTURE THE THRUSTER HOUSING.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-189  
NASA FMEA #: 03-2F-121310-2

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: FRCS  
MDAC ID: 189  
ITEM: THRUSTER BIPROP SOLENOID VLV, PRIMARY, Z AXIS

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ P ]	[ P ]	[ X ] *
IOA	[ 1 /1 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[ 1 /1 ] [   ] [   ] [   ] [   ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
INADEQUATE [   ]

REMARKS:

IOA RECOMMENDS THAT THE INTERNAL LEAKAGE FAILURE MODE BE UPGRADED TO A 1/1 BECAUSE IT RESULTS IN LEAKAGE OF PROP. PER NSTS-22206, ANY SINGLE FAILURE RESULTING IN PROP LEAKAGE SHOULD BE CLASSIFIED AS A 1/1. PROP LEAKAGE PRESENTS A HAZARD TO THE GROUND CREW.  
FINAL RESOLUTION: IOA WITHDRAWS 1/1 ISSUE AFTER DISCUSSION WITH RCS SSM ON 5/19/88. SSM BELIEVES THAT THE CRIT ASSIGNED TO THIS FAILURE MODE SHOULD REFLECT ONLY THE EFFECTS ON THE MISSION, CREW, AND VEHICLE DURING FLIGHT, AND NOT THE POTENTIAL EFFECTS TO THE GROUND CREW DURING NON-FLIGHT PHASES. IOA ACCEPTS THIS PHILOSOPHY, BUT RECOMMENDS THAT THE CRIT BE UPGRADED TO A 1/1 PER NSTS 22206 GROUND RULES AND BECAUSE THIS FAILURE COULD CAUSE LOSS OF LIFE DURING THE PRE-LAUNCH AND LANDING/SAFING PHASES. PER THE SSM'S PHILOSOPHY, THE NASA CRITICALITY IS CORRECT. THE SSM STATES THAT THE WORST-CASE EFFECT OF ZOTS RESULTING FROM THIS FAILURE WOULD BE THRUSTER INTERNAL LEAKAGE. ZOTS WOULD NOT RUPTURE THE THRUSTER HOUSING.

REPORT DATE: 21 JULY 1988 C.18-42

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-192  
 NASA FMEA #: 03-2F-131310-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 192  
 ITEM: THRUSTER BIPROP SOLENOID VLV, VERNIERS, ALL AXES

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N / N ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA FAILURE MODES ON ANALYSIS SHEET SHOULD NOT INCLUDE "FAILS ON".  
 IOA RECOMMENDS THAT THE FAILED OPEN MODE BE UPGRADED TO A 1/1  
 BECAUSE IT RESULTS IN LEAKAGE OF PROP. PER NSTS 22206, ANY SINGLE  
 FAILURE RESULTING IN PROP LEAKAGE SHOULD BE CLASSIFIED AS A 1/1.  
 PROP LEAKAGE PRESENTS A HAZARD TO THE GROUND CREW. IOA ALSO  
 RECOMMENDS THAT THE SUBASSEMBLY ITEMS INCLUDED ON THIS FMEA BE  
 SEPARATED ONTO INDIVIDUAL FMEAS.

FINAL RESOLUTION: IOA WITHDRAWS 1/1 ISSUE AFTER DISCUSSION WITH  
 RCS SSM ON 5/19/88. SSM BELIEVES THAT THE CRIT ASSIGNED TO THIS  
 FAILURE MODE SHOULD REFLECT ONLY THE EFFECTS ON THE MISSION, CREW,  
 AND VEHICLE DURING FLIGHT, AND NOT THE POTENTIAL EFFECTS TO THE  
 GROUND CREW DURING NON-FLIGHT PHASES. IOA ACCEPTS THIS  
 PHILOSOPHY, BUT RECOMMENDS THAT THE CRIT BE UPGRADED TO A 1/1 PER  
 NSTS 22206 GROUND RULES AND BECAUSE THIS FAILURE COULD CAUSE LOSS  
 OF LIFE DURING THE PRE-LAUNCH AND LANDING/SAFING PHASES. PER THE  
 SSM'S PHILOSOPHY, THE NASA CRITICALITY IS CORRECT.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-194  
 NASA FMEA #: NONE

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM: FRCS  
 MDAC ID: 194  
 ITEM: THRUSTER BIPROP SOLENOID VLV, VERNIERS, ALL AXES

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N / N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ]    [ ]    [ ]    [ ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (STRUCTURAL FAILURE, RUPTURE, EXTERNAL LEAKAGE).

FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 12/15/87 AGREED TO ADD THIS VALVE BODY TO THE PROP LINE EXTERNAL LEAKAGE FMEA (03-2F-102108-1, 1/1) WITH CORRESPONDING RETENTION RATIONALE. THIS WAS ALSO AN ACTION ITEM FROM THE RCS PRCB ON 12/23/87.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-195  
 NASA FMEA #: 03-2F-131310-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 195  
 ITEM: THRUSTER BIPROP SOLENOID VLV, VERNIERS, ALL AXES

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 1 / 1 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N / N ]	[    ]	[    ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA RECOMMENDS THAT THE INTERNAL LEAKAGE FAILURE MODE BE UPGRADED TO A 1/1 BECAUSE IT RESULTS IN LEAKAGE OF PROP. PER NSTS 22206, ANY SINGLE FAILURE WHICH RESULTS IN PROP LEAKAGE SHOULD BE CLASSIFIED AS A 1/1. PROP LEAKAGE PRESENTS A HAZARD TO THE GROUND CREW. IOA ALSO RECOMMENDS THAT THE SUBASSEMBLY COMPONENTS INCLUDED ON THIS FMEA BE SEPARATED ONTO INDIVIDUAL FMEAS.

FINAL RESOLUTION: IOA WITHDRAWS 1/1 ISSUE AFTER DISCUSSION WITH RCS SSM ON 5/19/88. SSM BELIEVES THAT THE CRIT ASSIGNED TO THIS FAILURE MODE SHOULD REFLECT ONLY THE EFFECTS ON THE MISSION, CREW, AND VEHICLE DURING FLIGHT, AND NOT THE POTENTIAL EFFECTS TO THE GROUND CREW DURING NON-FLIGHT PHASES. IOA ACCEPTS THIS PHILOSOPHY, BUT RECOMMENDS THAT THE CRIT BE UPGRADED TO A 1/1 PER NSTS 22206 GROUNDRULES AND BECAUSE THIS FAILURE COULD CAUSE LOSS OF LIFE DURING THE PRE-LAUNCH AND LANDING/SAFING PHASES. PER THE SSM'S PHILOSOPHY, THE NASA CRITICALITY IS CORRECT.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-200  
 NASA FMEA #: 03-2A-201070-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 200  
 ITEM: HELIUM FILL COUPLING

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ F ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ NA ]	[ P ]	[ X ]
COMPARE	[ / ]	[ N ]	[ N ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ]    [ F ]    [ F ]    [ P ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA AGREES WITH NASA/RI FAILURE OF A AND B SCREENS. IOA RECOMMENDS THAT "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS FMEA. THIS IS A CREDIBLE FAILURE MODE AND IS ADDRESSED ON OTHER QD FMEAS.

FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA MAINTAINS RECOMMENDATION THE "POPPET FAILS OPEN" BE ADDED TO THE FAILURE MODES ON THIS CIL FOR COMPLETENESS, HOWEVER CIL IS ADEQUATE WITHOUT THIS ADDITION.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-202  
NASA FMEA #: 03-2A-201020-2

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: ARCS  
MDAC ID: 202  
ITEM: HE ISOL A & B VLVS

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ / ]	[    ]	[    ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ]    [ P ]    [ F ]    [ P ]    [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

IOA NOW RECOMMENDS THAT THE B SCREEN BE FAILED AND THAT THIS ITEM AND FAILURE MODE BE ADDED TO THE CIL. A FAILURE OF THE REDUNDANT SECONDARY REG IS NOT DETECTABLE DURING FLIGHT.  
FINAL RESOLUTION: IOA WITHDRAWS ISSUE BASED ON NSTS 22206 GROUNDRULE (8/21/87, P. 2-13, 2.3.4.c). A FAILED OPEN ISOL VALVE IS DETECTABLE DURING FLIGHT VIA TALKBACK DISPLAY. THE REDUNDANCY SCREEN B TEST SHOULD BE APPLIED ONLY TO THE ISOL VALVE SINCE THE UNLIKE REDUNDANT REGULATOR IS IDENTIFIED SEPARATELY IN THE FMEA/CIL. THAT IS, AN UNDETECTABLE REG FAILURE SHOULD NOT CAUSE A B SCREEN FAILURE FOR THE DETECTABLE ISOL VALVE FAILURE. HOWEVER, IOA RECOMMENDS THAT THE B SCREEN BE FAILED SINCE ONE LEVEL OF REDUNDANCY (REG) CAN BE LOST WITHOUT BEING DETECTED. ALSO, THE NASA RCS FMEA/CIL ANALYSIS CONSIDERED THE DETECTABILITY OF ALL REDUNDANT ITEMS IN DETERMINING B SCREEN PASSAGE OR FAILURE. IOA AGREES WITH THIS PRACTICE. FOR CONSISTENCY WITHIN THE RCS FMEA/CIL, THIS B SCREEN SHOULD BE FAILED.

REPORT DATE: 21 JULY 1988    C.18-47

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-202A  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: ARCS  
MDAC ID: 202  
ITEM: HE ISOL A & B VLVS

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ] [ P ] [ F ] [ P ] [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (INTERNAL LEAKAGE).  
FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 5/19/88 AGREED TO ADD  
"INTERNAL LEAKAGE" TO THE FAILURE MODES ON 03-2A-201020-2 (3/1R  
PPP, FAILS OPEN) DURING THE NEXT FMEA UPDATE ACTIVITY. IOA  
WITHDRAWS B SCREEN ISSUE. WITH ONE HELIUM ISOL VALVE OPEN,  
INTERNAL LEAKAGE OF THE CLOSED PARALLEL VALVE IS UNDETECTABLE, BUT  
HAS NO EFFECT. IF BOTH VALVES ARE CLOSED AND ONE VALVE IS LEAKING  
INTERNALLY, THE EFFECTS ARE DETECTABLE VIA PRESSURE SENSORS IN THE  
HELIUM TANK AND/OR THE PROPELLANT TANK.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-208  
 NASA FMEA #: 03-2A-201091-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 208  
 ITEM: HIGH PRESSURE HELIUM TEST PORT COUPLINGS A & B

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ NA ]	[ P ]	[    ]
COMPARE	[ / ]	[ N ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ]    [ F ]    [ F ]    [ P ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA AGREES WITH NASA/RI RATIONALE FOR FAILURE OF A AND B SCREENS.  
 IOA RECOMMENDS THAT "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE  
 ON THIS FMEA. THIS IS A CREDIBLE FAILURE MODE AND IS ADDRESSED ON  
 03-2F-101070-1. IOA ALSO RECOMMENDS ADDING A STATEMENT TO THE  
 EFFECTS REGARDING POSSIBLE VIOLATIONS OF ORBITER ENTRY MASS  
 PROPERTIES CONSTRAINTS AND PROP TANK LANDING WEIGHT CONSTRAINTS.  
 THE QUANTITY ON THIS FMEA IS INCORRECT.  
FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA MAINTAINS  
 RECOMMENDATION THE "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE  
 ON THIS CIL FOR COMPLETENESS, HOWEVER CIL IS ADEQUATE WITHOUT THIS  
 ADDITION.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-212  
 NASA FMEA #: 03-2A-201030-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 212  
 ITEM: HELIUM PRESSURE REGULATOR ASSEMBLY

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ F ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ NA ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ] [ P ] [ F ] [ F ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA AGREES WITH NASA/RI FAILURE OF C SCREEN. HOWEVER, IOA RECOMMENDS THAT THE B SCREEN BE FAILED. A FAILED CLOSED REG WOULD NOT BE DETECTABLE DURING DUAL LEG OPERATION (ASCENT). IOA ALSO RECOMMENDS ADDING A STATEMENT TO THE EFFECTS ABOUT POSSIBLE VIOLATIONS OF ORBITER ENTRY MASS PROPERTIES CONSTRAINTS.  
FINAL RESOLUTION: IOA WITHDRAWS ISSUE. LOSS OF FLOW THROUGH ONE REGULATOR WOULD NOT BE DETECTABLE WHEN BOTH FLOW PATHS ARE OPEN (AS DURING ASCENT AND ENTRY). HOWEVER, ONLY ONE OF THE PARALLEL FLOW PATHS IS USED AT A TIME FOR PAD PRE-PRESS AND ON-ORBIT. THEREFORE, THESE FAILURES WOULD BE DETECTABLE BEFORE LAUNCH OR AT SOME POINT DURING THE MISSION ON-ORBIT. HOWEVER, IOA RECOMMENDS THAT THE B SCREEN BE FAILED FOR PHASES WHEN BOTH PATHS ARE USED SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-213  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: ARCS  
MDAC ID: 213  
ITEM: HELIUM PRESSURE REGULATOR ASSEMBLY

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 1 /1 ] [ ] [ ] [ ] [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (EXTERNAL LEAKAGE).  
IOA ORIGINALLY CONSIDERED THE PARALLEL HELIUM FLOW PATHS TO BE  
REDUNDANT FOR THIS FAILURE (2/1R), BUT NOW CLASSIFIES THIS FAILURE  
AS A 1/1.

FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 12/15/87 AGREED TO ADD  
THIS VALVE BODY TO THE HELIUM LINE EXTERNAL LEAKAGE FMEA (03-2A-  
201013-1, 1/1) WITH CORRESPONDING RETENTION RATIONALE. THIS WAS  
ALSO AN ACTION ITEM FROM THE RCS PRCB ON 12/23/87.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-214  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: ARCS  
MDAC ID: 214  
ITEM: HELIUM PRESSURE REGULATOR PRIMARY SENSING PORT

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /2R ]    [ P ]    [ F ]    [ P ]    [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (EXTERNAL LEAKAGE THROUGH SENSING PORT). HOWEVER, THIS FAILURE MODE IS COVERED BY NASA/RI IN THE OMS SUBSYSTEM ON FMEA 03-3-1004-3 (3/2R PFP). IOA RECOMMENDS THAT THIS FAILURE MODE ALSO BE COVERED FOR THE RCS REGULATOR WITH THE SAME RATIONALE USED IN OMS. IOA WITHDRAWS 2/1R PPP CRIT.

FINAL RESOLUTION: IOA WITHDRAWS ISSUE. THE WORST CASE REGULATOR EXTERNAL LEAKAGE IS COVERED ON 03-2F-101013-1 (1/1). THE PROPOSED IOA FAILURE MODE IS A LESS SEVERE CASE OF THE FAILURE MODE COVERED ON 03-2F-101013-1 AND, THEREFORE, NEED NOT BE ADDED TO THE RCS FMEA/CIL. HOWEVER, FOR CONSISTENCY BETWEEN RCS AND OMS IDENTICAL ITEMS, IOA RECOMMENDS THAT THIS FAILURE MODE SHOULD ALSO BE ADDRESSED IN THE RCS FMEA/CIL.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-218  
NASA FMEA #: 03-2A-201095-1

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: ARCS  
MDAC ID: 218  
ITEM: QUAD CHECK VALVE ASSEMBLY

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]
RECOMMENDATIONS:	(If different from NASA)				
	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ A ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

IOA RECOMMENDS THAT THIS ITEM AND FAILURE MODE BE UPGRADED TO A 2/1R PFP AND PLACED ON THE CIL. WITH SERIES POPPETS FAILED OPEN, THE CONTAMINATION OF REGULATORS BY PROP OR PROP VAPORS COULD RESULT IN LOSS OF PROP TANK REPRESS CAPABILITY AND INABILITY TO USE OR DEplete ARCS PROP. THIS COULD RESULT IN LOSS OF ET SEP CONTROL, LOSS OF ENTRY CONTROL, AND POSSIBLE VIOLATIONS OF ENTRY MASS PROPERTIES CONSTRAINTS AND PROP TANK LANDING WEIGHT CONSTRAINTS. FAILURE OF ONE POPPET IS UNDETECTABLE DURING FLIGHT (FAIL B SCREEN).

FINAL RESOLUTION: IOA ACCEPTS 3/3 BASED ON INPUTS FROM OMS & RCS SSMS: THE REGS ARE DESIGNED TO BE PROP COMPATIBLE AND HAVE PASSED 90 DAY PROP EXPOSURE TEST. ALSO, ENOUGH TIME DOESN'T EXIST DURING A MISSION FOR PROP EXPOSURE TO CAUSE A REG FAILURE. ANY PROBLEM RESULTING FROM PROP EXPOSURE ON THE GROUND WOULD BE DETECTED DURING PRELAUNCH OPS. THE SSMS AGREED THAT THE IOA CONCERNS WERE NOT IMPOSSIBLE, BUT CONSIDER THE PROBABILITY OF SUCH OCCURRENCES TO BE "INFINITESIMALLY SMALL". IOA STILL RECOMMENDS 2/1R BASED ON ULTIMATE WORST CASE EFFECTS, BUT ACCEPTS THE JUDGMENT OF THE SSMS. SINCE THESE FAILURE MODES CAN CAUSE 1R REG FAILURES (SEE CAUSES ON 03-2F-101030-1, 03-2A-201030-1, & 03-2A-201030-2), THEY SHOULD BE CLASSIFIED AS 1R's.

REPORT DATE: 21 JULY 1988 C.18-55

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-220  
 NASA FMEA #: 03-2A-201091-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 220  
 ITEM: QUAD CHECK VALVE TEST PORT COUPLINGS A & B

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ NA ]	[ P ]	[    ]
COMPARE	[ / ]	[ N ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ]      [ F ]      [ F ]      [ P ]      [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA AGREES WITH NASA/RI RATIONALE FOR FAILURE OF A AND B SCREENS. IOA RECOMMENDS THAT "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS FMEA. THIS IS A CREDIBLE FAILURE MODE AND IS ADDRESSED ON 03-2F-101070-1. IOA ALSO RECOMMENDS ADDING A STATEMENT TO THE EFFECTS REGARDING POSSIBLE VIOLATIONS OF ORBITER ENTRY MASS PROPERTIES CONSTRAINTS AND PROP TANK LANDING WEIGHT CONSTRAINTS. THE QUANTITY ON THIS FMEA IS INCORRECT.

FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA MAINTAINS RECOMMENDATION THE "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS CIL FOR COMPLETENESS, HOWEVER CIL IS ADEQUATE WITHOUT THIS ADDITION.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-227  
 NASA FMEA #: 03-2A-211110-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 227  
 ITEM: PROP CHANNEL SCREENS

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 1 / 1 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 1 / 1 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[    /    ]	[    ]	[    ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA RECOMMENDS THAT THE P.A.D. COMPONENTS INCLUDED ON THIS FMEA BE ITEMIZED IN THE ITEM LIST OR FUNCTIONAL DESCRIPTIONS SECTIONS TO SHOW SPECIFICALLY WHAT IS COVERED ON THIS FMEA.  
FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA RECOMMENDS EDITORIAL REVISIONS TO THE EFFECTS AS SHOWN, HOWEVER NO LONGER CONSIDERS THESE RECOMMENDATIONS TO BE AN "ISSUE". THE CRITICALITY ASSIGNED IS CORRECT FOR THIS FAILURE MODE.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-229  
 NASA FMEA #: 03-2A-201090-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 229  
 ITEM: PROP TK UPPER COMPARTMENT CHANNEL CHECK-OUT  
 COUPLING

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ NA ]	[ P ]	[    ]
COMPARE	[ / ]	[ N ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ]    [ F ]    [ F ]    [ P ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA AGREES WITH NASA/RI RATIONALE FOR FAILURE OF A AND B SCREENS. IOA RECOMMENDS THAT "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS FMEA. THIS IS A CREDIBLE MODE AND IS ADDRESSED ON OTHER QD FMEAS. IOA ALSO RECOMMENDS ADDING A STATEMENT TO THE EFFECTS REGARDING POSSIBLE FIRE/EXPLOSION HAZARD AND HAZARD TO GROUND AND EVA CREWS.

FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA MAINTAINS RECOMMENDATION THE "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS CIL FOR COMPLETENESS, HOWEVER CIL IS ADEQUATE WITHOUT THIS ADDITION.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-233  
 NASA FMEA #: 03-2A-201090-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 233  
 ITEM: PROP TK LOWER COMPARTMENT CHECK-OUT COUPLING

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ NA ]	[ P ]	[ ]
COMPARE	[ / ]	[ N ]	[ N ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ] [ F ] [ F ] [ P ] [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA AGREES WITH NASA/RI RATIONALE FOR FAILURE OF A AND B SCREENS.  
 IOA RECOMMENDS THAT "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE  
 ON THIS FMEA. THIS IS A CREDIBLE MODE AND IS ADDRESSED ON OTHER  
 QD FMEAS. IOA ALSO RECOMMENDS ADDING A STATEMENT TO THE EFFECTS  
 REGARDING POSSIBLE FIRE/EXPLOSION HAZARD AND HAZARD TO GROUND AND  
 EVA CREWS.

FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA MAINTAINS  
 RECOMMENDATION THE "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE  
 ON THIS CIL FOR COMPLETENESS, HOWEVER CIL IS ADEQUATE WITHOUT THIS  
 ADDITION.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-235  
 NASA FMEA #: 03-2A-201090-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 235  
 ITEM: PROP TK PLENUM SCREEN CHECK-OUT COUPLING

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ NA ]	[ P ]	[    ]
COMPARE	[    /    ]	[ N ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ]    [ F ]    [ F ]    [ P ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA AGREES WITH NASA/RI RATIONALE FOR FAILURE OF A AND B SCREENS. IOA RECOMMENDS THAT "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS FMEA. THIS IS A CREDIBLE MODE AND IS ADDRESSED ON OTHER QD FMEAS. IOA ALSO RECOMMENDS ADDING A STATEMENT TO THE EFFECTS REGARDING POSSIBLE FIRE/EXPLOSION HAZARD AND HAZARD TO GROUND AND EVA CREWS.

FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA MAINTAINS RECOMMENDATION THE "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS CIL FOR COMPLETENESS, HOWEVER CIL IS ADEQUATE WITHOUT THIS ADDITION.

REPORT DATE: 21 JULY 1988    C.18-60

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-241  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: ARCS  
MDAC ID: 241  
ITEM: PRESSURE RELIEF ASSEMBLY

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ]    [ P ]    [ F ]    [ P ]    [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (BURST DISK INTERNAL LEAKAGE). IOA CONSIDERS THIS FAILURE MODE TO BE CREDIBLE AND RECOMMENDS IT BE ADDED TO 03-2F-101060-5. THE FAILURE HISTORY OF THE BURST DISK INCLUDES THIS FAILURE.  
FINAL RESOLUTION: IOA WITHDRAWS ISSUE. THE WORST-CASE BURST DISK LEAKAGE IS COVERED ON 03-2F-101060-5 (BURST DISK RUPTURES PREMATURELY, 2/1R PFP). THE IOA FAILURE MODE IS A LESS SEVERE CASE OF THE FAILURE MODE COVERED ON 03-2F-101060-5 AND, THEREFORE, NEED NOT BE ADDED TO THE RCS FMEA/CIL. THE FMEA/CIL NEED ONLY ADDRESS THE WORST-CASE FAILURE MODE.

REPORT DATE: 21 JULY 1988    C.18-61

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-243  
 NASA FMEA #: 03-2A-201091-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 243  
 ITEM: RELIEF VALVE TEST PORT COUPLING

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ NA ]	[ P ]	[    ]
COMPARE	[ / ]	[ N ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ]    [ F ]    [ F ]    [ P ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA AGREES WITH NASA/RI RATIONALE FOR FAILURE OF A AND B SCREENS. IOA RECOMMENDS THAT "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS FMEA. THIS IS A CREDIBLE FAILURE MODE AND IS ADDRESSED ON 03-2F-101070-1. IOA ALSO RECOMMENDS ADDING A STATEMENT TO THE EFFECTS REGARDING POSSIBLE VIOLATIONS OF ORBITER ENTRY MASS PROPERTIES CONSTRAINTS AND PROP TANK LANDING WEIGHT CONSTRAINTS. THE QUANTITY ON THIS FMEA IS INCORRECT.

FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA MAINTAINS RECOMMENDATION THE "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS CIL FOR COMPLETENESS, HOWEVER CIL IS ADEQUATE WITHOUT THIS ADDITION.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-247  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: ARCS  
MDAC ID: 247  
ITEM: GROUND MANUAL ISOLATION VALVE

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N / N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ] [ ] [ ] [ ] [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (EXTERNAL LEAKAGE).  
FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 12/15/87 AGREED TO ADD THIS VALVE BODY TO THE HELIUM LINE EXTERNAL LEAKAGE FMEA (03-2A-201013-1, 1/1) WITH CORRESPONDING RETENTION RATIONALE. THIS WAS ALSO AN ACTION ITEM FROM THE RCS PRCB ON 12/23/87. IOA ALSO RECOMMENDS THAT THE POSSIBLE PROP LEAKAGE EFFECTS OF THIS FAILURE BE INCLUDED IN THE EFFECTS (CORROSION, FIRE, EXPLOSION, EXPOSURE OF EVA AND GROUND CREWS).

REPORT DATE: 21 JULY 1988 C.18-63

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-248  
 NASA FMEA #: 03-2A-202112-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 248  
 ITEM: PROP TANK ISOL VLVS 1/2 & 3/4/5

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 1 / 1 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 1 / 1 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[    /    ]	[    ]	[    ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ]    [    ]    [    ]    [    ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

THIS FMEA COVERS ONLY THE BELLOWS LEAKAGE FAILURE MODE FOR THE PROP TANK ISOL VALVES. IOA HAS NO ISSUE WITH THIS FAILURE MODE, HOWEVER DOES RECOMMEND THAT THE EFFECTS INCLUDE THE POSSIBLE EXPOSURE OF EVA AND GROUND CREWS TO PROP OR PROP VAPORS. NASA/RI DO NOT COVER STRUCTURAL FAILURE, RUPTURE, OR EXTERNAL LEAKAGE OF THE VALVE HOUSING ON THIS FMEA OR ELSEWHERE.

FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 12/15/87 AGREED TO ADD THIS VALVE BODY TO THE PROP LINE EXTERNAL LEAKAGE FMEA (03-2A-202108-1, 1/1) WITH CORRESPONDING RETENTION RATIONALE. THIS WAS ALSO AN ACTION ITEM FROM THE RCS PRCB ON 12/23/87.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-249  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: ARCS  
MDAC ID: 249  
ITEM: PROP TANK ISOL VLVS 1/2 & 3/4/5

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N / N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 / 1R ]    [ P ]    [ P ]    [ P ]    [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

IOA ITEM LIST SHOULD NOT INCLUDE THE 3/4/5 VALVES. NASA/RI DO NOT COVER THIS FAILURE MODE (RESTRICTED FLOW). IOA WITHDRAWS 1/1 ISSUE, BUT MAINTAINS CONCERN THAT RESTRICTED FLOW OF PROP TO A THRUSTER COULD RESULT IN BURN-THROUGH. IOA RECOMMENDS A 3/1R PPP, 1/1 ABORT FMEA AND CIL FOR RESTRICTED FLOW OF THE PROP TANK ISOL 1/2 VALVES. LOSS OF PROP FLOW THROUGH THE 1/2 VALVE WOULD RESULT IN THE LOSS OF ONE +X THRUSTER USED TO DUMP ARCS PROP DURING RTLS & TAL ABORTS. INABILITY TO COMPLETE A PLANNED ARCS DUMP COULD RESULT IN VIOLATIONS OF ENTRY MASS PROPERTIES CONSTRAINTS AND TANK LANDING WEIGHT CONSTRAINTS.

FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 5/19/88 AGREED TO ADD "RESTRICTED FLOW" TO THE FAILURE MODES ON 03-2A-202110-1 (3/1R PPP, FAILS CLOSED) DURING THE NEXT FMEA UPDATE ACTIVITY. IOA WITHDRAWS 1/1 ABORT ISSUE (SEE ASSESSMENT SHEET RCS-251 FOR RATIONALE).

REPORT DATE: 21 JULY 1988    C.18-65

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-251  
 NASA FMEA #: 03-2A-202110-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 251  
 ITEM: PROP TANK ISOL VLV 1/2

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ]    [ P ]    [ P ]    [ P ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA RECOMMENDS THAT THIS PROP TANK ISOL 1/2 VALVE FAILURE BE UPGRADED TO A 3/1R PPP, 1/1 ABORT AND PLACED ON THE CIL. LOSS OF FLOW THROUGH THE 1/2 VALVE WOULD RESULT IN THE LOSS OF ONE +X THRUSTER USED TO DUMP ARCS PROP DURING RTLS & TAL ABORTS. INABILITY TO COMPLETE A PLANNED ARCS DUMP COULD RESULT IN VIOLATION OF ENTRY MASS PROPERTIES CONSTRAINTS.

FINAL RESOLUTION: IOA WITHDRAWS 1/1 ABORT ISSUE BECAUSE OF THE UNIQUE SET OF CIRCUMSTANCES REQUIRED FOR A 1/1 ABORT CRIT TO BE POSSIBLE. FOR THE LOSS OF ONE +X THRUSTER TO CAUSE POSSIBLE LOSS OF CREW/VEHICLE DURING RTLS & TAL ABORTS, THE PLANNED ENTRY X CG OF THE ORBITER MUST BE AT OR NEAR THE AFT X CG LIMIT (1109.0 INCHES) SUCH THAT THE EXTRA AMOUNT OF ARCS PROP REMAINING IN THE TANKS, WHICH COULD NOT BE DUMPED DUE TO THIS VALVE FAILURE, CAUSES THE AFT X CG LIMIT TO BE VIOLATED. THE AFT LIMIT IS BASED ON ORBITER THERMAL CONSTRAINTS. IOA ESTIMATES THIS FAILURE COULD MOVE THE X CG AFT BY A MAXIMUM OF LESS THAN 1 INCH. IOA STILL RECOMMENDS A 1/1 ABORT CRIT TO COVER THIS WORST-CASE SCENARIO, AND FURTHER RECOMMENDS THAT SUCH AN OCCURRENCE BE PROTECTED AGAINST IN PRE-FLIGHT CG PLANNING. HOWEVER, IOA RECOGNIZES THAT THE SCENARIO REQUIRED FOR A 1/1 ABORT CRIT IS VERY UNIQUE.

REPORT DATE: 21 JULY 1988    C.18-66

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-254  
 NASA FMEA #: 03-2A-201080-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 254  
 ITEM: MANIFOLD 1/2 GROUND PURGE COUPLING

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ F ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ NA ]	[ P ]	[ X ]
COMPARE	[ / ]	[ N ]	[ N ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ]    [ F ]    [ F ]    [ P ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA AGREES WITH NASA/RI RATIONALE FOR FAILURE OF A AND B SCREENS. IOA RECOMMENDS THAT "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS FMEA. THIS IS A CREDIBLE MODE AND IS ADDRESSED ON OTHER QD FMEAS. IOA ALSO RECOMMENDS ADDING STATEMENTS TO THE EFFECTS REGARDING FIRE/EXPLOSION HAZARD AND HAZARD TO GROUND AND EVA CREWS. THE QUANTITY ON THIS FMEA APPEARS TO BE INCORRECT. FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA MAINTAINS RECOMMENDATION THE "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS CIL FOR COMPLETENESS, HOWEVER CIL IS ADEQUATE WITHOUT THIS ADDITION.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-256  
 NASA FMEA #: 03-2A-201080-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 256  
 ITEM: MANIFOLD 3/4/5 GROUND PURGE COUPLING

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ F ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ NA ]	[ P ]	[ X ]
COMPARE	[ / ]	[ N ]	[ N ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ]    [ F ]    [ F ]    [ P ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA AGREES WITH NASA/RI RATIONALE FOR FAILURE OF A AND B SCREENS. IOA RECOMMENDS THAT "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS FMEA. THIS IS A CREDIBLE MODE AND IS ADDRESSED ON OTHER QD FMEAS. IOA ALSO RECOMMENDS ADDING STATEMENTS TO THE EFFECTS REGARDING FIRE/EXPLOSION HAZARD AND HAZARD TO GROUND AND EVA CREWS. THE QUANTITY ON THIS FMEA APPEARS TO BE INCORRECT. FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA MAINTAINS RECOMMENDATION THE "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS CIL FOR COMPLETENESS, HOWEVER CIL IS ADEQUATE WITHOUT THIS ADDITION.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-258  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [ ]  
NEW [ ]

SUBSYSTEM: ARCS  
MDAC ID: 258  
ITEM: RCS CROSSFEED VLV 1/2 OR 3/4/5

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N / N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 2 / 2 ] [ ] [ ] [ ] [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (RESTRICTED FLOW).  
IOA WITHDRAWS 1/1 CRIT ISSUE, BUT MAINTAINS CONCERN THAT  
RESTRICTED FLOW OF PROP TO A THRUSTER COULD RESULT IN BURN-  
THROUGH.

FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 5/19/88 AGREED TO ADD  
"RESTRICTED FLOW" TO THE FAILURE MODES ON 03-2A-202111-2 (2/2, 1/1  
ABORT, FAILS CLOSED) DURING THE NEXT FMEA UPDATE ACTIVITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-259  
 NASA FMEA #: 03-2A-202112-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 259  
 ITEM: RCS CROSSFEED VLV 1/2 OR 3/4/5

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 1 / 1 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 1 / 1 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[    /    ]	[    ]	[    ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ]    [    ]    [    ]    [    ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

THIS FMEA COVERS ONLY THE BELLOWS LEAKAGE FAILURE MODE FOR THE CROSSFEED VALVES. IOA HAS NO ISSUE WITH THIS FAILURE MODE, HOWEVER DOES RECOMMEND THAT THE EFFECTS INCLUDE THE POSSIBLE EXPOSURE OF EVA AND GROUND CREWS TO PROP OR PROP VAPORS. NASA/RI DO NOT COVER STRUCTURAL FAILURE, RUPTURE, OR EXTERNAL LEAKAGE OF THE VALVE HOUSING ON THIS FMEA OR ELSEWHERE.

FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 12/15/87 AGREED TO ADD THIS VALVE BODY TO THE PROP LINE EXTERNAL LEAKAGE FMEA (03-2A-202108-1, 1/1) WITH CORRESPONDING RETENTION RATIONALE. THIS WAS ALSO AN ACTION ITEM FROM THE RCS PRCB ON 12/23/87.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-267  
 NASA FMEA #: 03-2A-202120-3

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 267  
 ITEM: MANIFOLD 1, ISOL VLV

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ] [ P ] [ P ] [ P ] [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA RECOMMENDS THAT THIS ITEM AND FAILURE MODE BE UPGRADED TO A 3/1R PPP, 1/1 ABORT AND PLACED ON THE CIL. LOSS OF ALL THRUSTERS ON ONE MANIFOLD MAY RESULT IN THE INABILITY TO COMPLETE OMS OR ARCS DUMPS DURING RTLS OR TAL, RESULTING IN POSSIBLE VIOLATION OF ENTRY MASS PROPERTIES CONSTRAINTS OR OMS PROP TANK LANDING WEIGHT CONSTRAINTS.

FINAL RESOLUTION: IOA WITHDRAWS 1/1 ABORT ISSUE BECAUSE OF THE UNIQUE SET OF CIRCUMSTANCES REQUIRED FOR A 1/1 ABORT CRIT TO BE POSSIBLE. FOR THE LOSS OF THREE PRIMARY THRUSTERS TO CAUSE POSSIBLE LOSS OF CREW/VEHICLE DURING RTLS & TAL ABORTS, THE PLANNED ENTRY X CG OF THE ORBITER MUST BE AT OR NEAR THE AFT X CG LIMIT (1109.0 INCHES) SUCH THAT THE EXTRA AMOUNT OF ARCS AND OMS PROP REMAINING IN THE TANKS, WHICH COULD NOT BE DUMPED DUE TO THIS VALVE FAILURE, CAUSES THE AFT X CG LIMIT TO BE VIOLATED. THE AFT LIMIT IS BASED ON ORBITER THERMAL CONSTRAINTS. IOA STILL RECOMMENDS A 1/1 ABORT CRIT TO COVER THIS WORST-CASE SCENARIO, AND FURTHER RECOMMENDS THAT SUCH AN OCCURRENCE BE PROTECTED AGAINST IN PRE-FLIGHT CG PLANNING. HOWEVER, IOA RECOGNIZES THAT THE SCENARIO REQUIRED FOR A 1/1 ABORT CRIT IS VERY UNIQUE.

REPORT DATE: 21 JULY 1988 C.18-71

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-268  
NASA FMEA #: 03-2A-201080-1

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: ARCS  
MDAC ID: 268  
ITEM: MANIFOLD 1, GROUND PURGE/DRAIN COUPLING

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ F ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ NA ]	[ P ]	[ X ]
COMPARE	[ / ]	[ N ]	[ N ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ] [ F ] [ F ] [ P ] [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

IOA AGREES WITH NASA/RI RATIONALE FOR FAILURE OF A AND B SCREENS. IOA RECOMMENDS THAT "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS FMEA. THIS IS A CREDIBLE MODE AND IS ADDRESSED ON OTHER QD FMEAS. IOA ALSO RECOMMENDS ADDING STATEMENTS TO THE EFFECTS REGARDING FIRE/EXPLOSION HAZARD AND HAZARD TO GROUND AND EVA CREWS. THE QUANTITY ON THIS FMEA APPEARS TO BE INCORRECT.  
FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA MAINTAINS RECOMMENDATION THE "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS CIL FOR COMPLETENESS, HOWEVER CIL IS ADEQUATE WITHOUT THIS ADDITION.

REPORT DATE: 21 JULY 1988 C.18-72

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-271  
 NASA FMEA #: 03-2A-202120-3

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 271  
 ITEM: MANIFOLD 2, ISOL VLV

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ]    [ P ]    [ P ]    [ P ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA RECOMMENDS THAT THIS ITEM AND FAILURE MODE BE UPGRADED TO A 3/1R PPP, 1/1 ABORT AND PLACED ON THE CIL. LOSS OF ALL THRUSTERS ON ONE MANIFOLD MAY RESULT IN THE INABILITY TO COMPLETE OMS OR ARCS DUMPS DURING RTLS OR TAL, RESULTING IN POSSIBLE VIOLATION OF ENTRY MASS PROPERTIES CONSTRAINTS OR OMS PROP TANK LANDING WEIGHT CONSTRAINTS.

FINAL RESOLUTION: IOA WITHDRAWS 1/1 ABORT ISSUE BECAUSE OF THE UNIQUE SET OF CIRCUMSTANCES REQUIRED FOR A 1/1 ABORT CRIT TO BE POSSIBLE. FOR THE LOSS OF THREE PRIMARY THRUSTERS TO CAUSE POSSIBLE LOSS OF CREW/VEHICLE DURING RTLS & TAL ABORTS, THE PLANNED ENTRY X CG OF THE ORBITER MUST BE AT OR NEAR THE AFT X CG LIMIT (1109.0 INCHES) SUCH THAT THE EXTRA AMOUNT OF ARCS AND OMS PROP REMAINING IN THE TANKS, WHICH COULD NOT BE DUMPED DUE TO THIS VALVE FAILURE, CAUSES THE AFT X CG LIMIT TO BE VIOLATED. THE AFT LIMIT IS BASED ON ORBITER THERMAL CONSTRAINTS. IOA STILL RECOMMENDS A 1/1 ABORT CRIT TO COVER THIS WORST-CASE SCENARIO, AND FURTHER RECOMMENDS THAT SUCH AN OCCURENCS BE PROTECTED AGAINST IN PRE-FLIGHT CG PLANNING. HOWEVER, IOA RECOGNIZES THAT THE SCENARIO REQUIRED FOR A 1/1 ABORT CRIT IS VERY UNIQUE.

REPORT DATE: 21 JULY 1988    C.18-73

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-272  
 NASA FMEA #: 03-2A-201080-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 272  
 ITEM: MANIFOLD 2, GROUND PURGE/DRAIN COUPLING

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ F ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ NA ]	[ P ]	[ X ]
COMPARE	[ / ]	[ N ]	[ N ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ]    [ F ]    [ F ]    [ P ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA AGREES WITH NASA/RI RATIONALE FOR FAILURE OF A AND B SCREENS. IOA RECOMMENDS THAT "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS FMEA. THIS IS A CREDIBLE MODE AND IS ADDRESSED ON OTHER QD FMEAS. IOA ALSO RECOMMENDS ADDING STATEMENTS TO THE EFFECTS REGARDING FIRE/EXPLOSION HAZARD AND HAZARD TO GROUND AND EVA CREWS. THE QUANTITY ON THIS FMEA APPEARS TO BE INCORRECT.  
FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA MAINTAINS RECOMMENDATION THE "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS CIL FOR COMPLETENESS, HOWEVER CIL IS ADEQUATE WITHOUT THIS ADDITION.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-275  
 NASA FMEA #: 03-2A-202120-3

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 275  
 ITEM: MANIFOLD 3, ISOL VLV

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ] [ P ] [ P ] [ P ] [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA RECOMMENDS THAT THIS ITEM AND FAILURE MODE BE UPGRADED TO A 3/1R PPP, 1/1 ABORT AND PLACED ON THE CIL. LOSS OF ALL THRUSTERS ON ONE MANIFOLD MAY RESULT IN THE INABILITY TO COMPLETE OMS OR ARCS DUMPS DURING RTLS OR TAL, RESULTING IN POSSIBLE VIOLATION OF ENTRY MASS PROPERTIES CONSTRAINTS OR OMS PROP TANK LANDING WEIGHT CONSTRAINTS.

FINAL RESOLUTION: IOA WITHDRAWS 1/1 ABORT ISSUE BECAUSE OF THE UNIQUE SET OF CIRCUMSTANCES REQUIRED FOR A 1/1 ABORT CRIT TO BE POSSIBLE. FOR THE LOSS OF THREE PRIMARY THRUSTERS TO CAUSE POSSIBLE LOSS OF CREW/VEHICLE DURING RTLS & TAL ABORTS, THE PLANNED ENTRY X CG OF THE ORBITER MUST BE AT OR NEAR THE AFT X CG LIMIT (1109.0 INCHES) SUCH THAT THE EXTRA AMOUNT OF ARCS AND OMS PROP REMAINING IN THE TANKS, WHICH COULD NOT BE DUMPED DUE TO THIS VALVE FAILURE, CAUSES THE AFT X CG LIMIT TO BE VIOLATED. THE AFT LIMIT IS BASED ON ORBITER THERMAL CONSTRAINTS. IOA STILL RECOMMENDS A 1/1 ABORT CRIT TO COVER THIS WORST-CASE SCENARIO, AND FURTHER RECOMMENDS THAT SUCH AN OCCURRENCE BE PROTECTED AGAINST IN PRE-FLIGHT CG PLANNING. HOWEVER, IOA RECOGNIZES THAT THE SCENARIO REQUIRED FOR A 1/1 ABORT CRIT IS VERY UNIQUE.

REPORT DATE: 21 JULY 1988 C.18-75

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88	NASA DATA:
ASSESSMENT ID: RCS-276	BASELINE [    ]
NASA FMEA #: 03-2A-201080-1	NEW [ X ]

SUBSYSTEM: ARCS  
MDAC ID: 276  
ITEM: MANIFOLD 3, GROUND PURGE/DRAIN COUPLING  
LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ F ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ NA ]	[ P ]	[ X ]
COMPARE	[ / ]	[ N ]	[ N ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ]	[ F ]	[ F ]	[ P ]	[ A ]
				(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE	[    ]
INADEQUATE	[    ]

REMARKS:  
IOA AGREES WITH NASA/RI RATIONALE FOR FAILURE OF A AND B SCREENS. IOA RECOMMENDS THAT "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS FMEA. THIS IS A CREDIBLE MODE AND IS ADDRESSED ON OTHER QD FMEAS. IOA ALSO RECOMMENDS ADDING STATEMENTS TO THE EFFECTS REGARDING FIRE/EXPLOSION HAZARD AND HAZARD TO GROUND AND EVA CREWS. THE QUANTITY ON THIS FMEA APPEARS TO BE INCORRECT.  
FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA MAINTAINS RECOMMENDATION THE "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS CIL FOR COMPLETENESS, HOWEVER CIL IS ADEQUATE WITHOUT THIS ADDITION.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-279  
 NASA FMEA #: 03-2A-202120-3

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 279  
 ITEM: MANIFOLD 4, ISOL VLV

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ]    [ P ]    [ P ]    [ P ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA RECOMMENDS THAT THIS ITEM AND FAILURE MODE BE UPGRADED TO A 3/1R PPP, 1/1 ABORT AND PLACED ON THE CIL. LOSS OF ALL THRUSTERS ON ONE MANIFOLD MAY RESULT IN THE INABILITY TO COMPLETE OMS OR ARCS DUMPS DURING RTLS OR TAL, RESULTING IN POSSIBLE VIOLATION OF ENTRY MASS PROPERTIES CONSTRAINTS OR OMS PROP TANK LANDING WEIGHT CONSTRAINTS.

FINAL RESOLUTION: IOA WITHDRAWS 1/1 ABORT ISSUE BECAUSE OF THE UNIQUE SET OF CIRCUMSTANCES REQUIRED FOR A 1/1 ABORT CRIT TO BE POSSIBLE. FOR THE LOSS OF THREE PRIMARY THRUSTERS TO CAUSE POSSIBLE LOSS OF CREW/VEHICLE DURING RTLS & TAL ABORTS, THE PLANNED ENTRY X CG OF THE ORBITER MUST BE AT OR NEAR THE AFT X CG LIMIT (1109.0 INCHES) SUCH THAT THE EXTRA AMOUNT OF ARCS AND OMS PROP REMAINING IN THE TANKS, WHICH COULD NOT BE DUMPED DUE TO THIS VALVE FAILURE, CAUSES THE AFT X CG LIMIT TO BE VIOLATED. THE AFT LIMIT IS BASED ON ORBITER THERMAL CONSTRAINTS. IOA STILL RECOMMENDS A 1/1 ABORT CRIT TO COVER THIS WORST-CASE SCENARIO, AND FURTHER RECOMMENDS THAT SUCH AN OCCURRENCE BE PROTECTED AGAINST IN PRE-FLIGHT CG PLANNING. HOWEVER, IOA RECOGNIZES THAT THE SCENARIO REQUIRED FOR A 1/1 ABORT CRIT IS VERY UNIQUE.

REPORT DATE: 21 JULY 1988    C.18-77

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-280  
NASA FMEA #: 03-2A-201080-1

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: ARCS  
MDAC ID: 280  
ITEM: MANIFOLD 4, GROUND PURGE/DRAIN COUPLING

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ F ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ NA ]	[ P ]	[ X ]
COMPARE	[ / ]	[ N ]	[ N ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ]    [ F ]    [ F ]    [ P ]    [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

IOA AGREES WITH NASA/RI RATIONALE FOR FAILURE OF A AND B SCREENS. IOA RECOMMENDS THAT "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS FMEA. THIS IS A CREDIBLE MODE AND IS ADDRESSED ON OTHER QD FMEAS. IOA ALSO RECOMMENDS ADDING STATEMENTS TO THE EFFECTS REGARDING FIRE/EXPLOSION HAZARD AND HAZARD TO GROUND AND EVA CREWS. THE QUANTITY ON THIS FMEA APPEARS TO BE INCORRECT. FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA MAINTAINS RECOMMENDATION THE "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS CIL FOR COMPLETENESS, HOWEVER CIL IS ADEQUATE WITHOUT THIS ADDITION.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-284  
 NASA FMEA #: 03-2A-201080-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 284  
 ITEM: MANIFOLD 5, GROUND PURGE/DRAIN COUPLING

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ F ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ NA ]	[ P ]	[ X ]
COMPARE	[ / ]	[ N ]	[ N ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ] [ F ] [ F ] [ P ] [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA AGREES WITH NASA/RI RATIONALE FOR FAILURE OF A AND B SCREENS. IOA RECOMMENDS THAT "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS FMEA. THIS IS A CREDIBLE MODE AND IS ADDRESSED ON OTHER QD FMEAS. IOA ALSO RECOMMENDS ADDING STATEMENTS TO THE EFFECTS REGARDING FIRE/EXPLOSION HAZARD AND HAZARD TO GROUND AND EVA CREWS. THE QUANTITY ON THIS FMEA APPEARS TO BE INCORRECT. FINAL RESOLUTION: IOA WITHDRAWS ISSUE. IOA MAINTAINS RECOMMENDATION THE "POPPET FAILS OPEN" BE ADDED AS A FAILURE MODE ON THIS CIL FOR COMPLETENESS, HOWEVER CIL IS ADEQUATE WITHOUT THIS ADDITION.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-286  
 NASA FMEA #: 03-2A-202112-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 286  
 ITEM: MANIFOLD ISOL VLVS

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ] [ ] [ ] [ ] [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

THIS FMEA/CIL COVERS ONLY THE BELLOWS LEAKAGE FAILURE MODE FOR THE PRIMARY MANIFOLD ISOLATION VALVES. IOA HAS NO ISSUE WITH THIS FAILURE MODE, HOWEVER DOES RECOMMEND THAT THE EFFECTS DISCUSS THE POSSIBLE EXPOSURE OF EVA AND GROUND CREWS TO PROP OR PROP VAPORS. NASA/RI DO NOT COVER STRUCTURAL FAILURE, RUPTURE, OR EXTERNAL LEAKAGE OF THE VALVE HOUSING ON THIS FMEA OR ELSEWHERE.

FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 12/15/87 AGREED TO ADD THIS VALVE BODY TO THE PROP LINE EXTERNAL LEAKAGE FMEA (03-2A-202108-1, 1/1) WITH CORRESPONDING RETENTION RATIONALE. THIS WAS ALSO AN ACTION ITEM FROM THE RCS PRCB ON 12/23/87.

REPORT DATE: 21 JULY 1988 C.18-80

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-286A  
 NASA FMEA #: 03-2A-202140-3

NASA DATA:  
 BASELINE [ ]  
 NEW [ ]

SUBSYSTEM: ARCS  
 MDAC ID: 286  
 ITEM: MANIFOLD ISOL VLVS

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ] [ ] [ ] [ ] [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

THIS FMEA/CIL COVERS ONLY THE BELLOWS LEAKAGE FAILURE MODE FOR THE VERNIER MANIFOLD ISOLATION VALVE. IOA HAS NO ISSUE WITH THIS FAILURE MODE, HOWEVER DOES RECOMMEND THAT THE EFFECTS DISCUSS THE POSSIBLE EXPOSURE OF EVA AND GROUND CREWS TO PROP OR PROP VAPORS. NASA/RI DO NOT COVER STRUCTURAL FAILURE, RUPTURE, OR EXTERNAL LEAKAGE OF THE VALVE HOUSING ON THIS FMEA OR ELSEWHERE.  
FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 12/15/87 AGREED TO ADD THIS VALVE BODY TO THE PROP LINE EXTERNAL LEAKAGE FMEA (03-2A-202108-1, 1/1) WITH CORRESPONDING RETENTION RATIONALE. THIS WAS ALSO AN ACTION ITEM FROM THE RCS PRCB ON 12/23/87.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-287  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: ARCS  
MDAC ID: 287  
ITEM: MANIFOLD ISOL VLVS

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 1 / 1 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N / N ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 / 1R ]    [ P ]    [ P ]    [ P ]    [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (RESTRICTED FLOW). IOA WITHDRAWS 1/1 CRIT, BUT MAINTAINS CONCERN THAT RESTRICTED FLOW OF PROP TO A THRUSTER COULD RESULT IN BURN-THROUGH. IOA RECOMMENDS THAT THE RESTRICTED FLOW FAILURE MODE BE ADDRESSED ON THE FMEA/CIL.

FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 5/19/88 AGREED TO ADD "RESTRICTED FLOW" TO THE FAILURE MODES ON 03-2A-202140-1 (2/2, FAILS CLOSED, VERNIER MANIFOLD ISOL VALVE) AND 03-2A-202120-3 (3/1R PPP, FAILS CLOSED, PRIMARY MANIFOLD ISOL VALVES) DURING THE NEXT FMEA UPDATE ACTIVITY. IOA WITHDRAWS 1/1 ABORT ISSUE ON THE PRIMARY MANIFOLD ISOL VALVES (SEE ASSESSMENT SHEETS RCS-267, 271, 275, & 279 FOR RATIONALE).

REPORT DATE: 21 JULY 1988    C.18-82

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-290  
NASA FMEA #: 03-2A-221310-1

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: ARCS  
MDAC ID: 290  
ITEM: THRUSTER BIPROP SOLENOID VLVS, PRIMARY, ALL AXES

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ P ]	[ P ]	[ X ] *
IOA	[ 1 /1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 1 /1 ] [ ] [ ] [ ] [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

IOA FAILURE MODES ON ANALYSIS SHEET SHOULD NOT INCLUDE "FAILS ON".  
IOA RECOMMENDS THAT THE FAILED OPEN MODE BE UPGRADED TO A 1/1  
BECAUSE IT RESULTS IN LEAKAGE OF PROP. PER NSTS 22206, ANY SINGLE  
FAILURE RESULTING IN PROP LEAKAGE SHOULD BE CLASSIFIED AS A 1/1.  
PROP LEAKAGE PRESENTS A HAZARD TO THE GROUND CREW.  
FINAL RESOLUTION: IOA WITHDRAWS 1/1 ISSUE AFTER DISCUSSION WITH  
RCS SSM ON 5/19/88. SSM BELIEVES THAT THE CRIT ASSIGNED TO THIS  
FAILURE MODE SHOULD REFLECT ONLY THE EFFECTS ON THE MISSION, CREW,  
AND VEHICLE DURING FLIGHT, AND NOT THE POTENTIAL EFFECTS TO THE  
GROUND CREW DURING NON-FLIGHT PHASES. IOA ACCEPTS THIS  
PHILOSOPHY, BUT RECOMMENDS THAT THE CRIT BE UPGRADED TO A 1/1 PER  
NSTS 22206 GROUND RULES AND BECAUSE THIS FAILURE COULD CAUSE LOSS  
OF LIFE DURING THE PRE-LAUNCH AND LANDING/SAFING PHASES. FROM A  
LOSS OF THRUSTER STANDPOINT, IOA CONCURS WITH THE NASA  
CRITICALITY, BUT RECOMMENDS A 1/1 ABORT CRIT. SEE ASSESSMENT  
SHEETS RCS-293, 295, & 297. THE SSM STATES THAT THE WORST-CASE  
EFFECT OF ZOTS RESULTING FROM THIS FAILURE WOULD BE THRUSTER  
INTERNAL LEAKAGE. ZOTS WOULD NOT RUPTURE THE THRUSTER HOUSING.

REPORT DATE: 21 JULY 1988 C.18-83

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-291  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: ARCS  
MDAC ID: 291  
ITEM: THRUSTER BIPROP SOLENOID VLVS, PRIMARY, ALL AXES

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N / N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ] [ ] [ ] [ ] [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (STRUCTURAL FAILURE, RUPTURE, EXTERNAL LEAKAGE).

FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 12/15/87 AGREED TO ADD THIS VALVE BODY TO THE PROP LINE EXTERNAL LEAKAGE FMEA (03-2A-202108-1, 1/1) WITH CORRESPONDING RETENTION RATIONALE. THIS WAS ALSO AN ACTION ITEM FROM THE RCS PRCB ON 12/23/87.

REPORT DATE: 21 JULY 1988 C.18-84

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-292  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: ARCS  
MDAC ID: 292  
ITEM: THRUSTER BIPROP SOLENOID VLVS, PRIMARY, ALL AXES

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N / N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 / 1R ]    [ F ]    [ P ]    [ P ]    [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:  
NASA/RI DO NOT COVER THIS FAILURE MODE (RESTRICTED FLOW). IOA WITHDRAWS 1/1 CRIT, BUT MAINTAINS CONCERN THAT RESTRICTED FLOW OF PROP COULD RESULT IN BURN-THROUGH. IOA RECOMMENDS THAT THE RESTRICTED FLOW FAILURE MODE BE ADDRESSED ON THE FMEA/CIL.  
FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 5/19/88 AGREED TO ADD "RESTRICTED FLOW" TO THE FAILURE MODES ON 03-2A-221310-4 (3/1R FPP, FAILS CLOSED) DURING THE NEXT FMEA UPDATE ACTIVITY. IOA WITHDRAWS 1/1 ABORT ISSUE (SEE ASSESSMENT SHEETS RCS-293, 295, & 297 FOR RATIONALE).

REPORT DATE: 21 JULY 1988    C.18-85

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-293  
 NASA FMEA #: 03-2A-221310-4

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 293  
 ITEM: THRUSTER BIPROP SOLENOID VLVS, PRIMARY, +X AXIS

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ / ]	[ N ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ]    [ F ]    [ P ]    [ P ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA RECOMMENDS THAT THIS FAILURE MODE BE UPGRADED TO A 3/1R FPP, 1/1 ABORT. THE LOSS OF ONE PRIMARY THRUSTER DURING AN RTLS OR TAL ABORT WOULD RESULT IN REDUCED OMS AND RCS PROP DUMPING CAPABILITY. INABILITY TO COMPLETE PLANNED OMS AND RCS PROP DUMPS COULD RESULT IN VIOLATION OF ENTRY MASS PROPERTIES CONSTRAINTS AND OMS PROP TANK LANDING WT CONSTRAINTS.

FINAL RESOLUTION: IOA WITHDRAWS 1/1 ABORT ISSUE BECAUSE OF THE UNIQUE SET OF CIRCUMSTANCES REQUIRED FOR A 1/1 ABORT CRIT TO BE POSSIBLE. FOR THE LOSS OF ONE THRUSTER TO CAUSE POSSIBLE LOSS OF CREW/VEHICLE DURING RTLS & TAL ABORTS, THE PLANNED ENTRY X CG OF THE ORBITER MUST BE AT OR NEAR THE AFT X CG LIMIT (1109.0 INCHES) SUCH THAT THE EXTRA AMOUNT OF ARCS AND OMS PROP REMAINING IN THE TANKS, WHICH COULD NOT BE DUMPED DUE TO THIS THRUSTER FAILURE, CAUSES THE AFT X CG LIMIT TO BE VIOLATED. THE AFT LIMIT IS BASED ON ORBITER THERMAL CONSTRAINTS. IOA STILL RECOMMENDS A 1/1 ABORT CRIT TO COVER THIS WORST-CASE SCENARIO, AND FURTHER RECOMMENDS THAT SUCH AN OCCURRENCE BE PROTECTED AGAINST IN PRE-FLIGHT CG PLANNING. HOWEVER, IOA RECOGNIZES THAT THE SCENARIO REQUIRED FOR A 1/1 ABORT CRIT IS VERY UNIQUE.

REPORT DATE: 21 JULY 1988    C.18-86

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-294  
 NASA FMEA #: 03-2A-221310-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 294  
 ITEM: THRUSTER BIPROP SOLENOID VLVS, PRIMARY, +X AXIS

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ P ]	[ P ]	[ X ] *
IOA	[ 1 /1 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[ 1 /1 ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

IOA RECOMMENDS THAT THE INTERNAL LEAKAGE FAILURE MODE BE UPGRADED TO A 1/1 BECAUSE IT RESULTS IN THE LEAKAGE OF PROP. PER NSTS 22206, A SINGLE FAILURE WHICH RESULTS IN PROP LEAKAGE SHOULD BE CLASSIFIED AS A 1/1. PROP LEAKAGE IS A HAZARD TO THE GROUND CREW.

FINAL RESOLUTION: IOA WITHDRAWS 1/1 ISSUE AFTER DISCUSSION WITH RCS SSM ON 5/19/88. SSM BELIEVES THAT THE CRIT ASSIGNED TO THIS FAILURE MODE SHOULD REFLECT ONLY THE EFFECTS ON THE MISSION, CREW, AND VEHICLE DURING FLIGHT, AND NOT THE POTENTIAL EFFECTS TO THE GROUND CREW DURING NON-FLIGHT PHASES. IOA ACCEPTS THIS PHILOSOPHY, BUT RECOMMENDS THAT THE CRIT BE UPGRADED TO A 1/1 PER NSTS 22206 GROUND RULES AND BECAUSE THIS FAILURE COULD CAUSE LOSS OF LIFE DURING THE PRE-LAUNCH AND LANDING/SAFING PHASES. FROM A LOSS OF THRUSTER STANDPOINT, IOA CONCURS WITH THE NASA CRITICALITY, BUT RECOMMENDS A 1/1 ABORT CRIT. SEE ASSESSMENT SHEET RCS-293. THE SSM STATES THAT THE WORST-CASE EFFECT OF ZOTS RESULTING FROM THIS FAILURE WOULD BE THRUSTER INTERNAL LEAKAGE. ZOTS WOULD NOT RUPTURE THE THRUSTER HOUSING.

REPORT DATE: 21 JULY 1988    C.18-87

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-295  
 NASA FMEA #: 03-2A-221310-4

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 295  
 ITEM: THRUSTER BIPROP SOLENOID VLVS, PRIMARY, Y AXIS  
 LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ / ]	[ N ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ] [ F ] [ P ] [ P ] [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA RECOMMENDS THAT THIS FAILURE MODE BE UPGRADED TO A 3/1R FPP, 1/1 ABORT. THE LOSS OF ONE PRIMARY THRUSTER DURING AN RTLS OR TAL ABORT WOULD RESULT IN REDUCED OMS AND RCS PROP DUMPING CAPABILITY. INABILITY TO COMPLETE PLANNED OMS AND RCS PROP DUMPS COULD RESULT IN VIOLATION OF ENTRY MASS PROPERTIES CONSTRAINTS AND OMS PROP TANK LANDING WT CONSTRAINTS.

FINAL RESOLUTION: IOA WITHDRAWS 1/1 ABORT ISSUE BECAUSE OF THE UNIQUE SET OF CIRCUMSTANCES REQUIRED FOR A 1/1 ABORT CRIT TO BE POSSIBLE. FOR THE LOSS OF ONE THRUSTER TO CAUSE POSSIBLE LOSS OF CREW/VEHICLE DURING RTLS & TAL ABORTS, THE PLANNED ENTRY X CG OF THE ORBITER MUST BE AT OR NEAR THE AFT X CG LIMIT (1109.0 INCHES) SUCH THAT THE EXTRA AMOUNT OF ARCS AND OMS PROP REMAINING IN THE TANKS, WHICH COULD NOT BE DUMPED DUE TO THIS THRUSTER FAILURE, CAUSES THE AFT X CG LIMIT TO BE VIOLATED. THE AFT LIMIT IS BASED ON ORBITER THERMAL CONSTRAINTS. IOA STILL RECOMMENDS A 1/1 ABORT CRIT TO COVER THIS WORST-CASE SCENARIO, AND FURTHER RECOMMENDS THAT SUCH AN OCCURRENCE BE PROTECTED AGAINST IN PRE-FLIGHT CG PLANNING. HOWEVER, IOA RECOGNIZES THAT THE SCENARIO REQUIRED FOR A 1/1 ABORT CRIT IS VERY UNIQUE.

REPORT DATE: 21 JULY 1988 C.18-88

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-296  
 NASA FMEA #: 03-2A-221310-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 296  
 ITEM: THRUSTER BIPROP SOLENOID VLVS, PRIMARY, Y AXIS

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ P ]	[ P ]	[ X ] *
IOA	[ 1 /1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 1 /1 ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA RECOMMENDS THAT THE INTERNAL LEAKAGE FAILURE MODE BE UPGRADED TO A 1/1 BECAUSE IT RESULTS IN THE LEAKAGE OF PROP. PER NSTS 22206, A SINGLE FAILURE WHICH RESULTS IN PROP LEAKAGE SHOULD BE CLASSIFIED AS A 1/1. PROP LEAKAGE IS A HAZARD TO THE GROUND CREW.

FINAL RESOLUTION: IOA WITHDRAWS 1/1 ISSUE AFTER DISCUSSION WITH RCS SSM ON 5/19/88. SSM BELIEVES THAT THE CRIT ASSIGNED TO THIS FAILURE MODE SHOULD REFLECT ONLY THE EFFECTS ON THE MISSION, CREW, AND VEHICLE DURING FLIGHT, AND NOT THE POTENTIAL EFFECTS TO THE GROUND CREW DURING NON-FLIGHT PHASES. IOA ACCEPTS THIS PHILOSOPHY, BUT RECOMMENDS THAT THE CRIT BE UPGRADED TO A 1/1 PER NSTS 22206 GROUNDRULES AND BECAUSE THIS FAILURE COULD CAUSE LOSS OF LIFE DURING THE PRE-LAUNCH AND LANDING/SAFING PHASES. FROM A LOSS OF THRUSTER STANDPOINT, IOA CONCURS WITH THE NASA CRITICALITY, BUT RECOMMENDS A 1/1 ABORT CRIT. SEE ASSESSMENT SHEET RCS-295. THE SSM STATES THAT THE WORST-CASE EFFECT OF ZOTS RESULTING FROM THIS FAILURE WOULD BE THRUSTER INTERNAL LEAKAGE. ZOTS WOULD NOT RUPTURE THE THRUSTER HOUSING.

REPORT DATE: 21 JULY 1988 C.18-89

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-297  
NASA FMEA #: 03-2A-221310-4

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: ARCS  
MDAC ID: 297  
ITEM: THRUSTER BIPROP SOLENOID VLVS, PRIMARY, Z AXIS

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ / ]	[ N ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ]    [ F ]    [ P ]    [ P ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

IOA RECOMMENDS THAT THIS FAILURE MODE BE UPGRADED TO A 3/1R FPP, 1/1 ABORT. THE LOSS OF ONE PRIMARY THRUSTER DURING AN RTLS OR TAL ABORT WOULD RESULT IN REDUCED OMS AND RCS PROP DUMPING CAPABILITY. INABILITY TO COMPLETE PLANNED OMS AND RCS PROP DUMPS COULD RESULT IN VIOLATION OF ENTRY MASS PROPERTIES CONSTRAINTS AND OMS PROP TANK LANDING WT CONSTRAINTS.

FINAL RESOLUTION: IOA WITHDRAWS 1/1 ABORT ISSUE BECAUSE OF THE UNIQUE SET OF CIRCUMSTANCES REQUIRED FOR A 1/1 ABORT CRIT TO BE POSSIBLE. FOR THE LOSS OF ONE THRUSTER TO CAUSE POSSIBLE LOSS OF CREW/VEHICLE DURING RTLS & TAL ABORTS, THE PLANNED ENTRY X CG OF THE ORBITER MUST BE AT OR NEAR THE AFT X CG LIMIT (1109.0 INCHES) SUCH THAT THE EXTRA AMOUNT OF ARCS AND OMS PROP REMAINING IN THE TANKS, WHICH COULD NOT BE DUMPED DUE TO THIS THRUSTER FAILURE, CAUSES THE AFT X CG LIMIT TO BE VIOLATED. THE AFT LIMIT IS BASED ON ORBITER THERMAL CONSTRAINTS. IOA STILL RECOMMENDS A 1/1 ABORT CRIT TO COVER THIS WORST-CASE SCENARIO, AND FURTHER RECOMMENDS THAT SUCH AN OCCURRENCE BE PROTECTED AGAINST IN PRE-FLIGHT CG PLANNING. HOWEVER, IOA RECOGNIZES THAT THE SCENARIO REQUIRED FOR A 1/1 ABORT CRIT IS VERY UNIQUE.

REPORT DATE: 21 JULY 1988    C.18-90

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-298  
 NASA FMEA #: 03-2A-221310-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 298  
 ITEM: THRUSTER BIPROP SOLENOID VLVS, PRIMARY, Z AXIS

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ P ]	[ P ]	[ X ] *
IOA	[ 1 /1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 1 /1 ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA RECOMMENDS THAT THE INTERNAL LEAKAGE FAILURE MODE BE UPGRADED TO A 1/1 BECAUSE IT RESULTS IN THE LEAKAGE OF PROP. PER NSTS 22206, A SINGLE FAILURE WHICH RESULTS IN PROP LEAKAGE SHOULD BE CLASSIFIED AS A 1/1. PROP LEAKAGE IS A HAZARD TO THE GROUND CREW.

FINAL RESOLUTION: IOA WITHDRAWS 1/1 ISSUE AFTER DISCUSSION WITH RCS SSM ON 5/19/88. SSM BELIEVES THAT THE CRIT ASSIGNED TO THIS FAILURE MODE SHOULD REFLECT ONLY THE EFFECTS ON THE MISSION, CREW, AND VEHICLE DURING FLIGHT, AND NOT THE POTENTIAL EFFECTS TO THE GROUND CREW DURING NON-FLIGHT PHASES. IOA ACCEPTS THIS PHILOSOPHY, BUT RECOMMENDS THAT THE CRIT BE UPGRADED TO A 1/1 PER NSTS 22206 GROUND RULES AND BECAUSE THIS FAILURE COULD CAUSE LOSS OF LIFE DURING THE PRE-LAUNCH AND LANDING/SAFING PHASES. FROM A LOSS OF THRUSTER STANDPOINT, IOA CONCURS WITH THE NASA CRITICALITY, BUT RECOMMENDS A 1/1 ABORT CRIT. SEE ASSESSMENT SHEET RCS-297. THE SSM STATES THAT THE WORST-CASE EFFECT OF ZOTS RESULTING FROM THIS FAILURE WOULD BE THRUSTER INTERNAL LEAKAGE. ZOTS WOULD NOT RUPTURE THE THRUSTER HOUSING.

REPORT DATE: 21 JULY 1988 C.18-91

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-301  
 NASA FMEA #: 03-2A-231310-3

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 301  
 ITEM: THRUSTER BIPROP SOLENOID VLVS, VERNIERS, ALL AXES  
 LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ P ]	[ P ]	[ X ] *
IOA	[ 1 /1 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[ 1 /1 ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

IOA FAILURE MODES ON ANALYSIS SHEET SHOULD NOT INCLUDE "FAILS ON". IOA RECOMMENDS THAT THE FAILED OPEN MODE BE UPGRADED TO A 1/1 BECAUSE IT RESULTS IN LEAKAGE OF PROP. PER NSTS 22206, ANY SINGLE FAILURE RESULTING IN PROP LEAKAGE SHOULD BE CLASSIFIED AS A 1/1. PROP LEAKAGE PRESENTS A HAZARD TO THE GROUND CREW. IOA ALSO RECOMMENDS THAT THE SUBASSEMBLY ITEMS INCLUDED ON THIS FMEA BE SEPARATED ONTO INDIVIDUAL FMEAS.

FINAL RESOLUTION: IOA WITHDRAWS 1/1 ISSUE AFTER DISCUSSION WITH RCS SSM ON 5/19/88. SSM BELIEVES THAT THE CRIT ASSIGNED TO THIS FAILURE MODE SHOULD REFLECT ONLY THE EFFECTS ON THE MISSION, CREW, AND VEHICLE DURING FLIGHT, AND NOT THE POTENTIAL EFFECTS TO THE GROUND CREW DURING NON-FLIGHT PHASES. IOA ACCEPTS THIS PHILOSOPHY, BUT RECOMMENDS THAT THE CRIT BE UPGRADED TO A 1/1 PER NSTS 22206 GROUNDRULES AND BECAUSE THIS FAILURE COULD CAUSE LOSS OF LIFE DURING THE PRE-LAUNCH AND LANDING/SAFING PHASES. FROM A LOSS OF VERNIERS STANDPOINT, IOA RECOMMENDS A CRIT 2/2. HOWEVER, IOA ACCEPTS NASA 1R CRIT SINCE IT IS ON THE CIL. THE NASA CRITS ASSIGNED TO THIS FAILURE MODE ARE INCONSISTENT BETWEEN THE FORWARD AND AFT RCS SYSTEMS.

REPORT DATE: 21 JULY 1988    C.18-92

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-303  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [ ]  
NEW [ ]

SUBSYSTEM: ARCS  
MDAC ID: 303  
ITEM: THRUSTER BIPROP SOLENOID VLVS, VERNIERS, ALL AXES

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N / N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (STRUCTURAL FAILURE, RUPTURE, EXTERNAL LEAKAGE).

FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 12/15/87 AGREED TO ADD THIS VALVE BODY TO THE PROP LINE EXTERNAL LEAKAGE FMEA (03-2A-202108-1, 1/1) WITH CORRESPONDING RETENTION RATIONALE. THIS WAS ALSO AN ACTION ITEM FROM THE RCS PRCB ON 12/23/87.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-304  
 NASA FMEA #: 03-2A-231310-3

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 304  
 ITEM: THRUSTER BIPROP SOLENOID VLVS, VERNIERS, ALL AXES

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ F ]	[ P ]	[ P ]	[ X ] *
IOA	[ 1 /1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 1 /1 ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA RECOMMENDS THAT THE INTERNAL LEAKAGE FAILURE MODE BE UPGRADED TO A 1/1 BECAUSE IT RESULTS IN LEAKAGE OF PROP. PER NSTS 22206, ANY SINGLE FAILURE RESULTING IN PROP LEAKAGE SHOULD BE CLASSIFIED AS A 1/1. PROP LEAKAGE PRESENTS A HAZARD TO THE GROUND CREW. IOA ALSO RECOMMENDS THAT THE SUBASSEMBLY ITEMS INCLUDED ON THIS FMEA BE SEPARATED ONTO INDIVIDUAL FMEAS.

FINAL RESOLUTION: IOA WITHDRAWS 1/1 ISSUE AFTER DISCUSSION WITH RCS SSM ON 5/19/88. SSM BELIEVES THAT THE CRIT ASSIGNED TO THIS FAILURE MODE SHOULD REFLECT ONLY THE EFFECTS ON THE MISSION, CREW, AND VEHICLE DURING FLIGHT, AND NOT THE POTENTIAL EFFECTS TO THE GROUND CREW DURING NON-FLIGHT PHASES. IOA ACCEPTS THIS PHILOSOPHY, BUT RECOMMENDS THAT THE CRIT BE UPGRADED TO A 1/1 PER NSTS 22206 GROUND RULES AND BECAUSE THIS FAILURE COULD CAUSE LOSS OF LIFE DURING THE PRE-LAUNCH AND LANDING/SAFING PHASES. FROM A LOSS OF VERNIERS STANDPOINT, IOA RECOMMENDS A CRIT 2/2. HOWEVER, IOA ACCEPTS NASA 1R CRIT SINCE IT IS ON THE CIL. THE NASA CRITS ASSIGNED TO THIS FAILURE MODE ARE INCONSISTENT BETWEEN THE FORWARD AND AFT RCS SYSTEMS.

REPORT DATE: 21 JULY 1988 C.18-94

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-10002X  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [ ]  
NEW [ ]

SUBSYSTEM: FRCS  
MDAC ID: 10002  
ITEM: HE ISOL VLV

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ F ]	[ F ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]
RECOMMENDATIONS:	(If different from NASA)				
	[ 2 /1R ]	[ P ]	[ F ]	[ F ]	[ A ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (RESTRICTED FLOW). IOA RECOMMENDS THAT THE RESTRICTED FLOW MODE BE ADDRESSED ON THE FMEA/CIL AS A 2/1R PFF. INABILITY TO REPRESS FRCS PROP TANK AND SUBSEQUENT INABILITY TO USE OR DEplete FRCS PROP COULD RESULT IN VIOLATIONS OF ENTRY MASS PROPERTIES CONSTRAINTS. LOSS OF FLOW THROUGH ONE VALVE NOT DETECTABLE DURING DUAL LEG OPERATION. CONTAMINATION CAN EFFECT BOTH VALVES.

FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 5/19/88 AGREED TO ADD "RESTRICTED FLOW" TO THE FAILURE MODES ON 03-2F-101020-4 (3/1R PPP, FAILS CLOSED) DURING THE NEXT FMEA UPDATE ACTIVITY. IOA WITHDRAWS 2/1R ISSUE (SEE ASSESSMENT SHEET RCS-104 FOR RATIONALE). IOA ALSO WITHDRAWS B AND C SCREEN ISSUES. THIS FAILURE WOULD BE DETECTABLE BEFORE LAUNCH AND ON-ORBIT SINCE ONLY ONE VALVE IS OPEN AT A TIME DURING PAD PRE-PRESS AND ON-ORBIT. HOWEVER, IOA RECOMMENDS THAT THE B SCREEN BE FAILED FOR PHASES WHEN BOTH VALVES ARE USED SIMULTANEOUSLY (ASCENT AND ENTRY), WHEN THIS FAILURE WOULD NOT BE DETECTABLE. IOA ACCEPTS C SCREEN PASSAGE BASED ON THE QUESTIONABLE CREDIBILITY OF AN AMOUNT OF CONTAMINATION SUFFICIENT TO BLOCK BOTH VALVES. HOWEVER, ANY UPSTREAM CONTAMINATION COULD AFFECT ALL REDUNDANCY, AND IOA RECOMMENDS FAILURE OF THE C SCREEN.

REPORT DATE: 21 JULY 1988 C.18-95

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-10003X  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: FRCS  
MDAC ID: 10003  
ITEM: HE ISOL VLV

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N / N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ] [ ] [ ] [ ] [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (STRUCTURAL FAILURE, RUPTURE, EXTERNAL LEAKAGE).

FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 12/15/87 AGREED TO ADD THIS VALVE BODY TO THE HELIUM LINE EXTERNAL LEAKAGE FMEA (03-2F-101013-1, 1/1) WITH CORRESPONDING RETENTION RATIONALE. THIS WAS ALSO AN ACTION ITEM FROM THE RCS PRCB ON 12/23/87.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-10005X  
 NASA FMEA #: 03-2F-101095-3

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 10005  
 ITEM: QUAD CHECK VALVE ASSEMBLY

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 1 /1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ 1 /1 ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA ORIGINALLY DID NOT COVER THIS FAILURE (SINGLE INLET FILTER BLOCKAGE), BUT ADDED CIL PER IOA ISSUE. IOA RECOMMENDS CRIT 1/1. INABILITY TO REPRESS FRCS PROP TANK AND DEplete PROP COULD RESULT IN VIOLATION OF THE ENTRY X CG LIMIT.  
FINAL RESOLUTION: IOA HELD MTG ON 6/2/88 WITH RCS SSM, AND MOD, BOEING, & RSOC PERSONNEL TO DISCUSS IOA ISSUE AND INCONSISTENCY BETWEEN RCS HDW CRIT AND GN&C FMEA 05-1-FC6242-1. SSM STATED THAT USE OF A FRCS DUMP FOR ENTRY X CG MANAGEMENT WAS NOT CONSIDERED IN RCS CRIT ASSIGNMENT AS WAS DONE IN IOA AND GN&C CRITS. A POST-DEORBIT FRCS DUMP IS USED TO MEET THE FWD X CG LIMIT (1076.7 IN). THEREFORE, IF A PLANNED DUMP IS NOT COMPLETED BECAUSE OF A BLOCKED CHECK VLV FILTER, THE X CG LIMIT MAY BE VIOLATED RESULTING IN LOSS OF CREW/VEHICLE. THE CRIT ASSIGNED TO THIS FAILURE MODE SHOULD REFLECT THE POTENTIAL ENTRY X CG LIMIT VIOLATION. IOA RELUCTANTLY WITHDRAWS ISSUE BASED ON PARTIAL ULLAGE CAPABILITY, THE "CONTINGENCY CG ENVELOPE", AND THE SSM'S JUDGMENT. HOWEVER, IOA STRONGLY RECOMMENDS EITHER A 1/1 FOR THIS FAILURE MODE, OR A FLIGHT RULE WHICH PROHIBITS RELIANCE ON A FRCS DUMP TO MEET THE ENTRY X CG LIMIT. ALSO, THE INCONSISTENCY BETWEEN THE RCS CRIT AND ABOVE GN&C FMEA SHOULD BE CORRECTED.

REPORT DATE: 21 JULY 1988 C.18-97

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-10006X  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: FRCS  
MDAC ID: 10006  
ITEM: QUAD CHECK VALVE ASSEMBLY

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N / N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ] [ ] [ ] [ ] [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (STRUCTURAL FAILURE, RUPTURE, EXTERNAL LEAKAGE).

FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 12/15/87 AGREED TO ADD THIS VALVE BODY TO THE HELIUM LINE EXTERNAL LEAKAGE FMEA (03-2F-101013-1, 1/1) WITH CORRESPONDING RETENTION RATIONALE. THIS WAS ALSO AN ACTION ITEM FROM THE RCS PRCB ON 12/23/87. IOA ALSO RECOMMENDS THAT THE EFFECTS OF POSSIBLE PROP LEAKAGE BE INCLUDED ON THIS CIL (CORROSION, FIRE, EXPLOSION, EXPOSURE OF EVA AND GROUND CREWS).

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-10008X  
 NASA FMEA #: NONE

NASA DATA:  
 BASELINE [ ]  
 NEW [ ]

SUBSYSTEM: FRCS  
 MDAC ID: 10008  
 ITEM: PRESSURE RELIEF ASSEMBLY

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 3 /1R ]	[ F ]	[ NA ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ] [ F ] [ NA ] [ P ] [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (RESTRICTED FLOW).  
FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 5/19/88 AGREED TO ADD  
 "RESTRICTED FLOW" TO THE FAILURE MODES ON 03-2F-101060-3 (3/1R  
 FNP, BURST DISK FAILS TO BURST) DURING THE NEXT FMEA UPDATE  
 ACTIVITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-10009X  
 NASA FMEA #: 03-2F-101060-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 10009  
 ITEM: PRESSURE RELIEF ASSEMBLY

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 1 /1 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 1 /1 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[    /    ]	[    ]	[    ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ 1 /1 ]    [    ]    [    ]    [    ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

THIS FMEA COVERS ONLY THE BELLOWS LEAKAGE FAILURE MODE. IOA HAS NO ISSUE WITH THIS FAILURE MODE, HOWEVER DOES RECOMMEND ADDING STATEMENTS TO THE EFFECTS ABOUT POSSIBLE VIOLATION OF ENTRY MASS PROPERTIES CONSTRAINTS AND THE HAZARDS OF PROP LEAKAGE TO EVA CREW, VEHICLE, AND GROUND CREW. NASA/RI DO NOT COVER STRUCTURAL FAILURE, RUPTURE, OR EXTERNAL LEAKAGE OF THE VALVE HOUSING ON THIS FMEA OR ELSEWHERE.

FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 12/15/87 AGREED TO ADD THIS VALVE BODY TO THE HELIUM LINE EXTERNAL LEAKAGE FMEA (03-2F-101013-1, 1/1) WITH CORRESPONDING RETENTION RATIONALE. THIS WAS ALSO AN ACTION ITEM FROM THE RCS PRCB ON 12/23/87.

REPORT DATE: 21 JULY 1988    C.18-100

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-10010X  
 NASA FMEA #: 03-2F-102120-3

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 10010  
 ITEM: PROP TANK ISOL VLVS 1/2 & 3/4/5

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 1 / 1 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N / N ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 2 / 1R ]    [ P ]    [ NA ]    [ P ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA RECOMMENDS THAT THIS ITEM AND FAILURE MODE (RELIEF DEVICE FAILS CLOSED) BE UPGRADED TO A 2/1R PNP AND PLACED ON THE CIL. THIS FAILURE COULD RESULT IN OVERPRESSURIZATION AND RUPTURE OF DOWNSTREAM PROP LINES. IOA NOW CLASSIFIES THIS FAILURE AS A 2/1R PNP SINCE A PREVIOUS FAILURE IS REQUIRED BEFORE THE VALVE WILL BE CLOSED.

FINAL RESOLUTION: G. GRUSH (RCS SSM) STATED ON 5/19/88 THAT THIS 3/3 FMEA WAS DELETED, AND THE FAILURE MODE LISTED AS A CAUSE ON THE PROP LINE EXTERNAL LEAKAGE FMEA (03-2F-102108-1, 1/1). IOA ACCEPTS THIS AS ADEQUATE AND WITHDRAWS ISSUE, BUT RECOMMENDS THAT THIS FAILURE MODE BE ADDRESSED INDIVIDUALLY ON A SEPARATE FMEA TO ENSURE THAT IT RECEIVES PROPER ATTENTION (SUCH AS 03-2A-202140-3, 1/1, WHICH ADDRESSES "INTERNAL RELIEF SECTION OF VALVE FAILS CLOSED" AS A FAILURE MODE FOR THE VERNIER MANIFOLD ISOLATION VALVE).

REPORT DATE: 21 JULY 1988    C.18-101

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-10012X  
 NASA FMEA #: 03-2F-102110-3

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 10012  
 ITEM: MANIFOLD 1-4 ISOLATION VALVES

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 1 / 1 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N / N ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ]    [    ]    [    ]    [    ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA RECOMMENDS THAT THIS ITEM AND FAILURE MODE (RELIEF DEVICE FAILS CLOSED) BE UPGRADED TO A 1/1 AND PLACED ON THE CIL. THIS FAILURE COULD RESULT IN OVERPRESSURIZATION AND RUPTURE OF DOWNSTREAM PROP LINES.

FINAL RESOLUTION: G. GRUSH (RCS SSM) STATED ON 5/19/88 THAT THIS 3/3 FMEA WAS DELETED, AND THE FAILURE MODE LISTED AS A CAUSE ON THE PROP LINE EXTERNAL LEAKAGE FMEA (03-2F-102108-1, 1/1). IOA ACCEPTS THIS AS ADEQUATE AND WITHDRAWS ISSUE, BUT RECOMMENDS THAT THIS FAILURE MODE BE ADDRESSED INDIVIDUALLY ON A SEPARATE FMEA TO ENSURE THAT IT RECEIVES PROPER ATTENTION (SUCH AS 03-2A-202140-3, 1/1, WHICH ADDRESSES "INTERNAL RELIEF SECTION OF VALVE FAILS CLOSED" AS A FAILURE MODE FOR THE VERNIER MANIFOLD ISOLATION VALVE).

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-10014X  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: FRCS  
MDAC ID: 10014  
ITEM: MANIFOLD 5 ISOLATION VALVE

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N / N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 2 / 1R ]    [ P ]    [ NA ]    [ P ]    [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (RELIEF DEVICE FAILS TO RELIEVE). IOA RECOMMENDS THAT A 2/1R PNP CIL BE CREATED FOR THIS ITEM AND FAILURE MODE. THIS FAILURE COULD RESULT IN OVERPRESSURIZATION AND RUPTURE OF DOWNSTREAM PROP LINES. IOA NOW CLASSIFIES THIS FAILURE AS A 2/1R PNP SINCE A PREVIOUS FAILURE IS REQUIRED BEFORE THE VALVE WOULD BE CLOSED.  
FINAL RESOLUTION: IOA WITHDRAWS ISSUE. THIS FAILURE MODE IS LISTED AS A CAUSE ON THE PROP LINE EXTERNAL LEAKAGE FMEA (03-2F-102108-1, 1/1). IOA ACCEPTS THIS AS ADEQUATE, BUT RECOMMENDS THAT THIS FAILURE MODE BE ADDRESSED INDIVIDUALLY ON A SEPARATE FMEA TO ENSURE THAT IT RECEIVES PROPER ATTENTION (SUCH AS 03-2A-202140-3, WHICH ADDRESSES "INTERNAL RELIEF SECTION OF VALVE FAILS CLOSED" AS A FAILURE MODE FOR THE VERNIER MANIFOLD ISOLATION VALVE).

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-10018X  
 NASA FMEA #: NONE

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM: FRCS  
 MDAC ID: 10018  
 ITEM: THRUSTER INJECTOR HEAD ASSEMBLY, PRIMARY

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N / N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ] [ ] [ ] [ ] [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS ITEM AND FAILURE MODE (RESTRICTED FLOW), HOWEVER, NOTE ON 03-2F-121312-1 SAYS THAT THE INJECTOR FMEA WAS DELETED AND ADDED AS A CAUSE ON 03-2F-121312-1. IOA RECOMMENDS THAT THIS ITEM AND FAILURE MODE BE ADDRESSED INDEPENDENTLY ON THE CIL WITH A 1/1 CRITICALITY. THE INJECTOR IS AT THE SAME LEVEL OF DETAIL WITH OTHER THRUSTER COMPONENTS COVERED ON INDIVIDUAL FMEAS, AND SHOULD ALSO RECEIVE 1/1 ATTENTION. RESTRICTED FLOW OF THE INJECTOR COULD RESULT IN THRUSTER BURN-THROUGH.

FINAL RESOLUTION: IOA WITHDRAWS ISSUE. RESTRICTED FLOW OF THE INJECTOR HEAD ASSEMBLY IS ADEQUATELY COVERED ON 03-2F-121312-1 (1/1) WHICH INCLUDES "BLOCKED INJ ORIFICES" AS A CAUSE FOR THRUST CHAMBER BURN-THROUGH. HOWEVER, IOA RECOMMENDS THAT THIS ITEM AND FAILURE MODE BE ADDRESSED ON A SEPARATE 1/1 CIL TO ENSURE THAT THEY RECEIVE PROPER ATTENTION. IOA CONSIDERS THIS ITEM TO BE AT THE SAME LEVEL OF DETAIL AS OTHER THRUSTER COMPONENTS ADDRESSED INDIVIDUALLY ON FMEAS.

REPORT DATE: 21 JULY 1988 C.18-104

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-10019X  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: FRCS  
MDAC ID: 10019  
ITEM: THRUSTER INJECTOR HEAD ASSEMBLY, PRIMARY

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N / N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ] [ ] [ ] [ ] [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS ITEM AND FAILURE MODE (STRUCTURAL FAILURE, BURN-THROUGH), HOWEVER, NOTE ON 03-2F-121312-1 SAYS THAT THE INJECTOR FMEA WAS DELETED AND ADDED AS A CAUSE ON 03-2F-121312-1. IOA RECOMMENDS THAT THIS ITEM AND FAILURE MODE BE ADDRESSED INDEPENDENTLY ON THE CIL WITH A 1/1 CRITICALITY. THE INJECTOR IS AT THE SAME LEVEL OF DETAIL WITH OTHER THRUSTER COMPONENTS COVERED ON INDIVIDUAL FMEAS, AND SHOULD ALSO RECEIVE 1/1 ATTENTION.

FINAL RESOLUTION: IOA WITHDRAWS ISSUE. STRUCTURAL FAILURE/BURN-THROUGH OF THE INJECTOR ASSEMBLY IS COVERED ON 03-2F-121312-1 (1/1) WHICH INCLUDES "INJECTOR FRACTURE" AS A CAUSE FOR THRUST CHAMBER BURN-THROUGH. HOWEVER, IOA RECOMMENDS THAT THIS ITEM AND FAILURE MODE BE ADDRESSED ON A SEPARATE 1/1 CIL TO ENSURE THAT THEY RECEIVE PROPER ATTENTION. IOA CONSIDERS THIS ITEM TO BE AT THE SAME LEVEL OF DETAIL AS OTHER THRUSTER COMPONENTS ADDRESSED INDIVIDUALLY ON FMEAS.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-10020X  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [ ]  
NEW [ ]

SUBSYSTEM: ARCS  
MDAC ID: 10020  
ITEM: HE ISOL VLV

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ F ]	[ F ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ] [ P ] [ F ] [ F ] [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (RESTRICTED FLOW). IOA RECOMMENDS THAT THE RESTRICTED FLOW MODE BE ADDRESSED ON THE FMEA/CIL AS A 2/1R PFF. INABILITY TO REPRESS ARCS PROP TANK AND INABILITY TO USE OR DEplete ARCS PROP COULD RESULT IN LOSS OF ENTRY CONTROL AND VIOLATIONS OF ENTRY MASS PROPERTIES CONSTRAINTS. LOSS OF FLOW THROUGH ONE VALVE NOT DETECTABLE DURING DUAL LEG OPERATION, AND CONTAMINATION CAN AFFECT BOTH VALVES SIMULTANEOUSLY.

FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 5/19/88 AGREED TO ADD "RESTRICTED FLOW" TO THE FAILURE MODES ON 03-2A-201020-1 (2/1R PPP, FAILS CLOSED) DURING THE NEXT FMEA UPDATE ACTIVITY. IOA WITHDRAWS B AND C SCREEN ISSUES. THIS FAILURE WOULD BE DETECTABLE BEFORE LAUNCH AND ON ORBIT SINCE ONLY ONE VALVE IS OPEN AT A TIME DURING PAD PRE-PRESS AND ON ORBIT. HOWEVER, IOA RECOMMENDS THAT THE B SCREEN BE FAILED FOR PHASES WHEN BOTH VALVES ARE USED SIMULTANEOUSLY (ASCENT AND ENTRY), WHEN THIS FAILURE WOULD NOT BE DETECTABLE. IOA ACCEPTS C SCREEN PASSAGE BASED ON THE QUESTIONABLE CREDIBILITY OF AN AMOUNT OF CONTAMINATION SUFFICIENT TO BLOCK BOTH VALVES. HOWEVER, ANY UPSTREAM CONTAMINATION COULD AFFECT ALL REDUNDANCY, AND IOA RECOMMENDS FAILURE OF THE C SCREEN.

REPORT DATE: 21 JULY 1988 C.18-106

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-10021X  
 NASA FMEA #: NONE

SUBSYSTEM: ARCS  
 MDAC ID: 10021  
 ITEM: HE ISOL VLV

LEAD ANALYST: C.D. PRUST

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[    ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N / N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ]    [    ]    [    ]    [    ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (STRUCTURAL FAILURE, RUPTURE, EXTERNAL LEAKAGE).

FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 12/15/87 AGREED TO ADD THIS VALVE BODY TO THE HELIUM LINE EXTERNAL LEAKAGE FMEA (03-2A-201013-1, 1/1) WITH CORRESPONDING RETENTION RATIONALE. THIS WAS ALSO AN ACTION ITEM FROM THE RCS PRCB ON 12/23/87.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-10024X  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: ARCS  
MDAC ID: 10024  
ITEM: QUAD CHECK VALVE ASSEMBLY

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N / N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ]    [ ]    [ ]    [ ]    [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (STRUCTURAL FAILURE, RUPTURE, EXTERNAL LEAKAGE).

FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 12/15/87 AGREED TO ADD THIS VALVE BODY TO THE HELIUM LINE EXTERNAL LEAKAGE FMEA (03-2A-201013-1, 1/1) WITH CORRESPONDING RETENTION RATIONALE. THIS WAS ALSO AN ACTION ITEM FROM THE RCS PRCB ON 12/23/87. IOA ALSO RECOMMENDS THAT THE EFFECTS OF POSSIBLE PROP LEAKAGE BE INCLUDED ON THE FMEA (CORROSION, FIRE, EXPLOSION, EXPOSURE OF EVA AND GROUND CREWS).

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-10026X  
 NASA FMEA #: NONE

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM: ARCS  
 MDAC ID: 10026  
 ITEM: PRESSURE RELIEF ASSEMBLY

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 3 /1R ]	[ F ]	[ NA ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ]    [ F ]    [ NA ]    [ P ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (RESTRICTED FLOW).  
FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 5/19/88 AGREED TO ADD  
 "RESTRICTED FLOW" TO THE FAILURE MODES ON 03-2A-201060-3 (3/1R  
 FNP, BURST DISK FAILS TO RUPTURE) DURING THE NEXT FMEA UPDATE  
 ACTIVITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-10027X  
NASA FMEA #: 03-2A-201060-1

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: ARCS  
MDAC ID: 10027  
ITEM: PRESSURE RELIEF ASSEMBLY

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 1 / 1 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 1 / 1 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[    /    ]	[    ]	[    ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ]    [    ]    [    ]    [    ]    [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

THIS FMEA COVERS ONLY THE BELLOWS LEAKAGE FAILURE MODE. IOA HAS NO ISSUE WITH THIS FAILURE MODE, HOWEVER DOES RECOMMEND ADDING STATEMENTS TO THE EFFECTS ABOUT POSSIBLE VIOLATION OF ENTRY MASS PROPERTIES CONSTRAINTS AND THE HAZARDS OF PROP LEAKAGE TO EVA CREW, VEHICLE, AND GROUND CREW. NASA/RI DO NOT COVER STRUCTURAL FAILURE, RUPTURE, OR EXTERNAL LEAKAGE OF THE VALVE HOUSING ON THIS FMEA OR ELSEWHERE..

FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 12/15/87 AGREED TO ADD THIS VALVE BODY TO THE HELIUM LINE EXTERNAL LEAKAGE FMEA (03-2A-201013-1, 1/1) WITH CORRESPONDING RETENTION RATIONALE. THIS WAS ALSO AN ACTION ITEM FROM THE RCS PRCB ON 12/23/87.

REPORT DATE: 21 JULY 1988    C.18-110

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-10028X  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: ARCS  
MDAC ID: 10028  
ITEM: PROP TANK ISOL VLVS 3/4/5

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ F ]	[ F ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ]    [ P ]    [ F ]    [ P ]    [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

IOA NOW CLASSIFIES C SCREEN AS "PASS". NASA/RI DO NOT COVER THIS FAILURE MODE (RESTRICTED FLOW). IOA RECOMMENDS A 3/1R PFP FOR RESTRICTED FLOW OF THE PROP TANK ISOL 3/4/5 VALVES. RESTRICTED FLOW THROUGH ONE 3/4/5 VALVE WOULD NOT BE DETECTABLE DURING DUAL LEG OPERATION. IOA WITHDRAWS 2/1R CRIT, BUT MAINTAINS CONCERN THAT RESTRICTED FLOW OF PROP TO A THRUSTER COULD RESULT IN BURN-THROUGH.

FINAL RESOLUTION: G. GRUSH (RCS SSM) ON 5/19/88 AGREED TO ADD "RESTRICTED FLOW" TO THE FAILURE MODES ON 03-2A-202110-1 (3/1R PPP, FAILS CLOSED), AND TO UPGRADE THE B SCREEN TO "FAIL" DURING THE NEXT FMEA UPDATE ACTIVITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-10029X  
NASA FMEA #: 03-2A-202110-2

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: ARCS  
MDAC ID: 10029  
ITEM: PROP TANK ISOL VLV 1/2

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 1 /1 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ]    [ P ]    [ NA ]    [ P ]    [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

IOA RECOMMENDS THAT THIS FAILURE MODE (RELIEF DEVICE FAILS CLOSED) BE UPGRADED TO A 2/1R PNP FOR THE 1/2 VALVE AND PLACED ON THE CIL. THIS FAILURE COULD RESULT IN OVERPRESSURIZATION AND RUPTURE OF THE DOWNSTREAM PROP LINES. IOA NOW CLASSIFIES THIS FAILURE AS A 2/1R PNP SINCE A PREVIOUS FAILURE IS REQUIRED BEFORE THE VALVE WOULD BE CLOSED.

FINAL RESOLUTION: IOA WITHDRAWS ISSUE. THIS FAILURE MODE IS LISTED AS A CAUSE ON THE PROP LINE EXTERNAL LEAKAGE FMEA (03-2F-102108-1, 1/1). IOA ACCEPTS THIS AS ADEQUATE, BUT RECOMMENDS THAT THIS FAILURE MODE BE ADDRESSED INDIVIDUALLY ON A SEPARATE FMEA TO ENSURE THAT IT RECEIVES PROPER ATTENTION (SUCH AS 03-2A-202140-3, WHICH ADDRESSES "INTERNAL RELIEF SECTION OF VALVE FAILS CLOSED" AS A FAILURE MODE FOR THE VERNIER MANIFOLD ISOLATION VALVE).

REPORT DATE: 21 JULY 1988    C.18-112

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-10035X  
 NASA FMEA #: 03-2A-202120-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 10035  
 ITEM: MANIFOLD 1-4 ISOL VALVES

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N / N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 2 / 1R ] [ P ] [ NA ] [ P ] [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA RECOMMENDS THAT THIS FAILURE MODE (RELIEF DEVICE FAILS CLOSED) BE UPGRADED TO A 2/1R PNP AND PLACED ON THE CIL. THIS FAILURE COULD RESULT IN OVERPRESSURIZATION AND RUPTURE OF THE DOWNSTREAM PROP LINES. IOA NOW CLASSIFIES THIS FAILURE AS A 2/1R PNP SINCE A PREVIOUS FAILURE IS REQUIRED BEFORE THE VALVE WOULD BE CLOSED.  
FINAL RESOLUTION: IOA WITHDRAWS ISSUE. THIS FAILURE MODE IS LISTED AS A CAUSE ON THE PROP LINE EXTERNAL LEAKAGE FMEA (03-2F-102108-1, 1/1). IOA ACCEPTS THIS AS ADEQUATE, BUT RECOMMENDS THAT THIS FAILURE MODE BE ADDRESSED INDIVIDUALLY ON A SEPARATE FMEA TO ENSURE THAT IT RECEIVES PROPER ATTENTION (SUCH AS 03-2A-202140-3, WHICH ADDRESSES "INTERNAL RELIEF SECTION OF VALVE FAILS CLOSED" AS A FAILURE MODE FOR THE VERNIER MANIFOLD ISOLATION VALVE).

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-10040X  
 NASA FMEA #: NONE

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM: ARCS  
 MDAC ID: 10040  
 ITEM: THRUSTER INJECTOR HEAD ASSY, PRIMARY

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N / N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ] [ ] [ ] [ ] [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS ITEM AND FAILURE (RESTRICTED FLOW). IOA RECOMMENDS THAT THIS ITEM AND FAILURE MODE BE ADDRESSED ON THE FMEA/CIL WITH A 1/1 CRITICALITY. THE INJECTOR IS AT THE SAME LEVEL OF DETAIL AS OTHER THRUSTER COMPONENTS WHICH ARE COVERED ON INDIVIDUAL FMEA, AND SHOULD ALSO RECEIVE 1/1 ATTENTION. RESTRICTED FLOW OF THE INJECTOR COULD RESULT IN THRUSTER BURN-THROUGH.

FINAL RESOLUTION: IOA WITHDRAWS ISSUE. RESTRICTED FLOW OF THE INJECTOR ASSEMBLY IS COVERED ON 03-2A-221312-1 (1/1) WHICH INCLUDES "BLOCKED INJ ORIFICES" AS A CAUSE FOR THRUST CHAMBER BURN-THROUGH. HOWEVER, IOA RECOMMENDS THAT THIS ITEM AND FAILURE MODE BE ADDRESSED ON A SEPARATE 1/1 CIL TO ENSURE THAT THEY RECEIVE PROPER ATTENTION. IOA CONSIDERS THIS ITEM TO BE AT THE SAME LEVEL OF DETAIL AS OTHER THRUSTER COMPONENTS ADDRESSED INDIVIDUALLY ON FMEAS.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-10041X  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: ARCS  
MDAC ID: 10041  
ITEM: THRUSTER INJECTOR HEAD ASSY, PRIMARY

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N / N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ] [ ] [ ] [ ] [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS ITEM AND FAILURE (STRUCTURAL FAILURE, BURN-THROUGH). IOA RECOMMENDS THAT THIS ITEM AND FAILURE MODE BE ADDRESSED ON THE FMEA/CIL WITH A 1/1 CRITICALITY. THE INJECTOR IS AT THE SAME LEVEL OF DETAIL AS OTHER THRUSTER COMPONENTS WHICH ARE COVERED ON INDIVIDUAL FMEA, AND SHOULD ALSO RECEIVE 1/1 ATTENTION. FINAL RESOLUTION: IOA WITHDRAWS ISSUE. STRUCTURAL FAILURE/BURN-THROUGH OF THE INJECTOR ASSEMBLY IS COVERED ON 03-2A-221312-1 (1/1) WHICH INCLUDES "INJECTOR FRACTURE" AS A CAUSE FOR THRUST CHAMBER BURN-THROUGH. HOWEVER, IOA RECOMMENDS THAT THIS ITEM AND FAILURE MODE BE ADDRESSED ON A SEPARATE 1/1 CIL TO ENSURE THAT THEY RECEIVE PROPER ATTENTION. IOA CONSIDERS THIS ITEM TO BE AT THE SAME LEVEL OF DETAIL AS OTHER THRUSTER COMPONENTS ADDRESSED INDIVIDUALLY ON FMEAS.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-10042X  
 NASA FMEA #: NONE

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM: FRCS  
 MDAC ID: 10042  
 ITEM: THRUSTER BIPROP SOLENOID VALVE, PRIMARY, ALL AXES

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N / N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ]      [    ]      [    ]      [    ]      [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (DELAYED OPERATION, ONE VALVE OPENS SLOWLY OR LATE). IOA RECOMMENDS THAT THIS ITEM AND FAILURE MODE BE ADDRESSED ON THE FMEA/CIL WITH A 1/1 CRIT. SUCH A FAILURE COULD RESULT IN ZOTS CAUSING THRUSTER RUPTURE AND LEAKAGE OF PROP.

FINAL RESOLUTION: IOA WITHDRAWS ISSUE. THE WORST CASES OF THE IOA FAILURE MODE ARE EITHER "FAILS CLOSED" OR "INTERNAL LEAKAGE". THEREFORE, IOA NO LONGER RECOMMENDS THAT THIS "LESS THAN WORST CASE" FAILURE MODE BE ADDRESSED. THE FMEA/CIL NEED ONLY ADDRESS THE WORST-CASE. IOA'S ZOTS CONCERNS ARE NOW TRANSFERRED TO THE ISSUE ON THE THRUSTER "INTERNAL LEAKAGE" CIL (03-2F-121310-2 VS. RCS-181, 185, 187, & 189).

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-10043X  
 NASA FMEA #: NONE

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM: ARCS  
 MDAC ID: 10043  
 ITEM: THRUSTER BIPROP SOLENOID VALVE, PRIMARY, ALL AXES

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[    ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N / N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ]    [    ]    [    ]    [    ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA/RI DO NOT COVER THIS FAILURE MODE (DELAYED OPERATION, ONE VALVE OPENS SLOWLY OR LATE). IOA RECOMMENDS THAT THIS ITEM AND FAILURE MODE BE ADDRESSED ON THE FMEA/CIL WITH A 1/1 CRIT. SUCH A FAILURE COULD RESULT IN ZOTS CAUSING THRUSTER RUPTURE AND LEAKAGE OF PROP.

FINAL RESOLUTION: IOA WITHDRAWS ISSUE. THE WORST CASES OF THE IOA FAILURE MODE ARE EITHER "FAILS CLOSED" OR "INTERNAL LEAKAGE". THEREFORE, IOA NO LONGER RECOMMENDS THAT THIS "LESS THAN WORST CASE" FAILURE MODE BE ADDRESSED. THE FMEA/CIL NEED ONLY ADDRESS THE WORST-CASE. IOA'S ZOTS CONCERNS ARE NOW TRANSFERRED TO THE ISSUE ON THE THRUSTER "INTERNAL LEAKAGE" CIL (03-2A-221310-1 VS. RCS-290, 294, 296, & 298).

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
 ASSESSMENT ID: RCS-10116X  
 NASA FMEA #: 03-2F-121310-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: FRCS  
 MDAC ID: 10116  
 ITEM: THRUSTER BIPROP SOLENOID VLV, PRIMARY, ALL AXES  
 LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 1 / 1 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N / N ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ]    [    ]    [    ]    [    ]    [ A ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA RECOMMENDS THAT THIS ITEM AND FAILURE MODE (PREMATURE OPERATION DURING GROUND C/O TRICKLE CURRENT TEST) BE UPGRADED TO A 1/1 AND PLACED ON THE CIL. FIRING OF A THRUSTER ON THE GROUND COULD RESULT IN LOSS OF LIFE DUE TO EXPOSURE TO PROP, PROP VAPORS, OR THRUSTER PLUME.

FINAL RESOLUTION: IOA WITHDRAWS 1/1 ISSUE AFTER DISCUSSION WITH G. GRUSH (RCS SSM) ON 5/19/88. SSM IS NOT CONCERNED THAT THE RCS FMEA/CIL COVER FAILURES WHICH AFFECT ONLY GROUND TURNAROUND PHASES AND, THEREFORE, DOES NOT AGREE WITH A CRIT 1/1 UPGRADE FOR THIS FAILURE. SSM IS ONLY CONCERNED THAT THE RCS FMEA/CIL SHOULD COVER FAILURES WHICH AFFECT MISSION, CREW, AND VEHICLE DURING FLIGHT PHASES. IOA WILL ACCEPT SSM'S PHILOSOPHY. HOWEVER, PER IOA'S INTERPRETATION, NSTS 22206 WOULD REQUIRE THAT THIS FAILURE BE CLASSIFIED AS A 1/1. THIS TEST IS PERFORMED DURING OPS-9, WHICH OVERLAPS THE IOA DEFINITION OF THE PRE-LAUNCH PHASE. THEREFORE, IOA RECOMMENDS THAT THIS FAILURE, WHICH COULD RESULT IN LOSS OF LIFE ON THE GROUND, BE CLASSIFIED AS A 1/1.

REPORT DATE: 21 JULY 1988    C.18-118

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/01/88  
ASSESSMENT ID: RCS-10138X  
NASA FMEA #: 03-2A-221310-3

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: ARCS  
MDAC ID: 10138  
ITEM: THRUSTER BIPROP SOLENOID VALVE, PRIMARY, ALL AXES

LEAD ANALYST: C.D. PRUST

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 1 / 1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N / N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ 1 / 1 ] [ ] [ ] [ ] [ A ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

IOA RECOMMENDS THAT THIS ITEM AND FAILURE MODE (PREMATURE OPERATION DURING GROUND C/O TRICKLE CURRENT TEST) BE UPGRADED TO A 1/1 AND PLACED ON THE CIL. FIRING OF A THRUSTER ON THE GROUND COULD RESULT IN LOSS OF LIFE DUE TO EXPOSURE TO PROP, PROP VAPORS, OR THRUSTER PLUME.

FINAL RESOLUTION: IOA WITHDRAWS 1/1 ISSUE AFTER DISCUSSION WITH G. GRUSH (RCS SSM) ON 5/19/88. SSM IS NOT CONCERNED THAT THE RCS FMEA/CIL COVER FAILURES WHICH AFFECT ONLY GROUND TURNAROUND PHASES AND, THEREFORE, DOES NOT AGREE WITH A CRIT 1/1 UPGRADE FOR THIS FAILURE. SSM IS ONLY CONCERNED THAT THE RCS FMEA/CIL SHOULD COVER FAILURES WHICH AFFECT MISSION, CREW, AND VEHICLE DURING FLIGHT PHASES. IOA WILL ACCEPT SSM'S PHILOSOPHY. HOWEVER, PER IOA'S INTERPRETATION, NSTS 22206 WOULD REQUIRE THAT THIS FAILURE BE CLASSIFIED AS A 1/1. THIS TEST IS PERFORMED DURING OPS-9, WHICH OVERLAPS THE IOA DEFINITION OF THE PRE-LAUNCH PHASE. THEREFORE, IOA RECOMMENDS THAT THIS FAILURE, WHICH COULD RESULT IN LOSS OF LIFE ON THE GROUND, BE CLASSIFIED AS A 1/1.

REPORT DATE: 21 JULY 1988 C.18-119

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-321  
 NASA FMEA #: 05-6KF-2252 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 321  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ F ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[ N ]	[ N ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. DIODE FAILING SHORT ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-323  
 NASA FMEA #: 05-6KF-2252 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 323  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ F ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[ N ]	[ N ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. DIODE FAILING SHORT ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-388  
 NASA FMEA #: 05-6KF-2253 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 388  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-406  
 NASA FMEA #: 05-6KF-2253 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 406  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-410  
 NASA FMEA #: 05-6KF-2253 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 410  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDROLES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-420  
 NASA FMEA #: 05-6KF-2253 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 420  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDRULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-424  
 NASA FMEA #: 05-6KF-2254 -1

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 424  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-442  
 NASA FMEA #: 05-6KF-2254 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 442  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-446  
 NASA FMEA #: 05-6KF-2254 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 446  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDROLES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-456  
 NASA FMEA #: 05-6KF-2254 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 456  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-472  
 NASA FMEA #: 05-6KF-2126 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 472  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

WITH THE LOSS OF THIS RELAY, VALVE CANNOT BE OPENED. INABILITY TO OPEN VALVE PREVENTS OPERATION OF JETS REQUIRED FOR TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (TANK ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-473  
 NASA FMEA #: 05-6KF-2126 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 473  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS, COUPLED WITH THE LOSS OF ALL HARDWARE REDUNDANCY PREVENTS ISOLATION OF A THRUSTER LEAK.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING THE HIGHER NASA CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-475  
 NASA FMEA #: 05-6KF-2126A-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 475  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (TANK ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-477  
 NASA FMEA #: 05-6KF-2126A-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 477  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE CAUSES INABILITY TO OPEN THE VALVE. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY CAUSES INABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (TANK ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-478  
 NASA FMEA #: 05-6KF-2126 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 478  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

WITH THE LOSS OF THIS RELAY, VALVE CANNOT BE OPENED. INABILITY TO OPEN VALVE PREVENTS OPERATION OF JETS REQUIRED FOR TO EXPEL PROPELLANTS TO MEET CG LIMITS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (TANK ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-479  
 NASA FMEA #: 05-6KF-2126 -2

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 479  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS, COUPLED WITH THE LOSS OF ALL HARDWARE REDUNDANCY PREVENTS ISOLATION OF A THRUSTER LEAK.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-481  
 NASA FMEA #: 05-6KF-2126A-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 481  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILED ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (TANK ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-483  
 NASA FMEA #: 05-6KF-2126A-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 483  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

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 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE CAUSES INABILITY TO OPEN THE VALVE. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY CAUSES INABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (TANK ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-484  
 NASA FMEA #: 05-6KF-2127A-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 484  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

WITH THE LOSS OF THIS RELAY, VALVE CANNOT BE OPENED. INABILITY TO OPEN VALVE PREVENTS OPERATION OF JETS REQUIRED TO EXPEL PROPELLANTS TO MEET LANDING CG LIMITS. ALSO THERE IS NO REDUNDANCY FOR MANIFOLD 5 (VERNIERS - 2/2). IOA ORIGINALLY FAILED THIS B SCREEN SINCE CREW CANNOT DETECT FAILURE (EXCEPT VIA MCA STATUS) UNTIL AFTER CLOSING THE VALVE, WHICH IS TOO LATE TO RECOVER BY NOT CLOSING THE VALVE.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (TANK ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN, AND SINCE ANOTHER FAILURE IS REQUIRED TO CAUSE THE CREW TO CLOSE THE VALVE IN THE FIRST PLACE. ALSO, NSTS 22206 (2.3.4.B.2.B) SAYS THAT AN ITEM NOT USED DURING ANY NOMINAL MISSION PHASE SHOULD HAVE AN "NA" B SCREEN. THIS ITEM IS SINCE THE VALVE IS NOT NOMINALLY CLOSED. SO IOA CONCURS WITH A "PASS" B SCREEN, SINCE "P" AND "NA" ARE NON-CILS.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-485  
 NASA FMEA #: 05-6KF-2127A-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 485  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, LOSS OF ALL  
 REDUNDANCY PREVENTS ISOLATION OF A THRUSTER LEAK.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING THE HIGHER  
 NASA CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS  
 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW  
 PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA  
 WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-487  
 NASA FMEA #: 05-6KF-2127 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 487  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILED ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING THE HIGHER NASA CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDROLES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-489  
 NASA FMEA #: 05-6KF-2127 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 489  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE CAUSES INABILITY TO OPEN THE VALVE. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY CAUSES INABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING THE HIGHER NASA CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-490  
 NASA FMEA #: 05-6KF-2127A-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 490  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

WITH THE LOSS OF THIS RELAY, VALVE CANNOT BE OPENED. INABILITY TO OPEN VALVE PREVENTS OPERATION OF JETS REQUIRED TO EXPEL PROPELLANTS TO MEET LANDING CG LIMITS. ALSO THEIR IS NO REDUNDANCY FOR MANIFOLD 5 (VERNIERS - 2/2). IOA ORIGINALLY FAILED THIS B SCREEN SINCE CREW CANNOT DETECT FAILURE (EXCEPT VIA MCA STATUS) UNTIL AFTER CLOSING THE VALVE, WHICH IS TOO LATE TO RECOVER BY NOT CLOSING THE VALVE. FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (TANK ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN, AND SINCE ANOTHER FAILURE IS REQUIRED TO CAUSE THE CREW TO CLOSE THE VALVE IN THE FIRST PLACE. ALSO, NSTS 22206 (2.3.4.B.2.B) SAYS THAT AN ITEM NOT USED DURING ANY NOMINAL MISSION PHASE SHOULD HAVE AN "NA" B SCREEN. THIS ITEM IS SINCE THE VALVE IS NOT NOMINALLY CLOSED. SO IOA CONCURS WITH A "PASS" B SCREEN, SINCE "P" AND "NA" ARE NON-CILS.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-491  
 NASA FMEA #: 05-6KF-2127A-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 491  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS, COUPLED WITH THE LOSS OF ALL HARDWARE REDUNDANCY PREVENTS ISOLATION OF A THRUSTER LEAK.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING THE HIGHER NASA CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-493  
 NASA FMEA #: 05-6KF-2127 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 493  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILED ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING THE HIGHER NASA CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDROLES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-495  
 NASA FMEA #: 05-6KF-2127 -2

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 495  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE CAUSES INABILITY TO OPEN THE VALVE. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY CAUSES INABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING THE HIGHER NASA CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-496  
 NASA FMEA #: 05-6KF-2083 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 496  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, LOSS OF ALL REDUNDANCY TO MONITOR VALVE POSITION MAY LEAD TO FALSELY FAILING THE VALVE CLOSED.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDRULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-498  
 NASA FMEA #: 05-6KF-2083 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 498  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, LOSS OF ALL REDUNDANCY TO MONITOR VALVE POSITION MAY LEAD TO FALSELY FAILING THE VALVE CLOSED.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-500  
 NASA FMEA #: 05-6KF-2083 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 500  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, LOSS OF ALL REDUNDANCY TO MONITOR VALVE POSITION MAY LEAD TO FALSELY FAILING THE VALVE CLOSED.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-514  
 NASA FMEA #: 05-6KF-2084 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 514  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [   ] [   ] [   ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, LOSS OF ALL REDUNDANCY TO MONITOR VALVE POSITION MAY LEAD TO FALSELY FAILING THE VALVE CLOSED.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-516  
 NASA FMEA #: 05-6KF-2084 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 516  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, LOSS OF ALL REDUNDANCY TO MONITOR VALVE POSITION MAY LEAD TO FALSELY FAILING THE VALVE CLOSED.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-518  
 NASA FMEA #: 05-6KF-2084 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 518  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, LOSS OF ALL REDUNDANCY TO MONITOR VALVE POSITION MAY LEAD TO FALSELY FAILING THE VALVE CLOSED.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-568  
 NASA FMEA #: 05-6KF-2255F-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 568  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDROLES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-569  
 NASA FMEA #: 05-6KF-2255F-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 569  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILED SHORT DIODE CAUSES EXCESSIVE MOTOR OPERATION (CONTINUOUS POWER THAT OPENS THE VALVE SLIGHTLY THEN CLOSES IT, CONSTANTLY REPEATING ITSELF). MOTOR DAMAGE WOULD LIKELY CAUSE THE VALVE TO CLOSE, CAUSING LOSS OF JETS ON ASSOCIATED MANIFOLD. REDUNDANCY PROVIDED BY JETS ON ANOTHER MANIFOLD. LOSS OF REDUNDANCY CAUSES THE INABILITY TO EXPEL PROPELLANTS TO MEET CG CONSTRAINTS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (MANIFOLD ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-572  
 NASA FMEA #: 05-6KF-2255 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 572  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-576  
 NASA FMEA #: 05-6KF-2255E-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 576  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-577  
 NASA FMEA #: 05-6KF-2255E-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 577  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILED SHORT DIODE CAUSES EXCESSIVE MOTOR OPERATION (CONTINUOUS POWER THAT OPENS THE VALVE SLIGHTLY THEN CLOSES IT, CONSTANTLY REPEATING ITSELF). MOTOR DAMAGE WOULD LIKELY CAUSE THE VALVE TO CLOSE, CAUSING LOSS OF JETS ON ASSOCIATED MANIFOLD. REDUNDANCY PROVIDED BY JETS ON ANOTHER MANIFOLD. LOSS OF REDUNDANCY CAUSES THE INABILITY TO EXPEL PROPELLANTS TO MEET CG CONSTRAINTS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (MANIFOLD ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-578  
 NASA FMEA #: 05-6KF-2255 -1

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 578  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-581  
 NASA FMEA #: 05-6KF-2268 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 581  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDROLES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-583  
 NASA FMEA #: 05-6KF-2268 -2

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 583  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-590  
 NASA FMEA #: 05-6KF-2255F-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 590  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-591  
 NASA FMEA #: 05-6KF-2255F-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 591  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILED SHORT DIODE CAUSES EXCESSIVE MOTOR OPERATION (CONTINUOUS POWER THAT OPENS THE VALVE SLIGHTLY THEN CLOSES IT, CONSTANTLY REPEATING ITSELF). MOTOR DAMAGE WOULD LIKELY CAUSE THE VALVE TO CLOSE, CAUSING LOSS OF JETS ON ASSOCIATED MANIFOLD. REDUNDANCY PROVIDED BY JETS ON ANOTHER MANIFOLD. LOSS OF REDUNDANCY CAUSES THE INABILITY TO EXPEL PROPELLANTS TO MEET CG CONSTRAINTS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (MANIFOLD ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-594  
 NASA FMEA #: 05-6KF-2255 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 594  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-598  
 NASA FMEA #: 05-6KF-2255E-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 598  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-599  
 NASA FMEA #: 05-6KF-2255E-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 599  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILED SHORT DIODE CAUSES EXCESSIVE MOTOR OPERATION (CONTINUOUS POWER THAT OPENS THE VALVE SLIGHTLY THEN CLOSES IT, CONSTANTLY REPEATING ITSELF). MOTOR DAMAGE WOULD LIKELY CAUSE THE VALVE TO CLOSE, CAUSING LOSS OF JETS ON ASSOCIATED MANIFOLD. REDUNDANCY PROVIDED BY JETS ON ANOTHER MANIFOLD. LOSS OF REDUNDANCY CAUSES THE INABILITY TO EXPEL PROPELLANTS TO MEET CG CONSTRAINTS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (MANIFOLD ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-600  
 NASA FMEA #: 05-6KF-2255 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 600  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-603  
 NASA FMEA #: 05-6KF-2268 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 603  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDROLES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-605  
 NASA FMEA #: 05-6KF-2268 -2

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 605  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-612  
 NASA FMEA #: 05-6KF-2255F-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 612  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-613  
 NASA FMEA #: 05-6KF-2255F-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 613  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILED SHORT DIODE CAUSES EXCESSIVE MOTOR OPERATION (CONTINUOUS POWER THAT OPENS THE VALVE SLIGHTLY THEN CLOSES IT, CONSTANTLY REPEATING ITSELF). MOTOR DAMAGE WOULD LIKELY CAUSE THE VALVE TO CLOSE, CAUSING LOSS OF JETS ON ASSOCIATED MANIFOLD. REDUNDANCY PROVIDED BY JETS ON ANOTHER MANIFOLD. LOSS OF REDUNDANCY CAUSES THE INABILITY TO EXPEL PROPELLANTS TO MEET CG CONSTRAINTS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (MANIFOLD ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-616  
 NASA FMEA #: 05-6KF-2255 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 616  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-620  
 NASA FMEA #: 05-6KF-2255E-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 620  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-621  
 NASA FMEA #: 05-6KF-2255E-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 621  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILED SHORT DIODE CAUSES EXCESSIVE MOTOR OPERATION (CONTINUOUS POWER THAT OPENS THE VALVE SLIGHTLY THEN CLOSES IT, CONSTANTLY REPEATING ITSELF). MOTOR DAMAGE WOULD LIKELY CAUSE THE VALVE TO CLOSE, CAUSING LOSS OF JETS ON ASSOCIATED MANIFOLD. REDUNDANCY PROVIDED BY JETS ON ANOTHER MANIFOLD. LOSS OF REDUNDANCY CAUSES THE INABILITY TO EXPEL PROPELLANTS TO MEET CG CONSTRAINTS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (MANIFOLD ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-622  
 NASA FMEA #: 05-6KF-2255 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 622  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-625  
 NASA FMEA #: 05-6KF-2268 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 625  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [   ] [   ] [   ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDROLES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-627  
 NASA FMEA #: 05-6KF-2268 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 627  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-634  
 NASA FMEA #: 05-6KF-2255F-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 634  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDROLES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-635  
 NASA FMEA #: 05-6KF-2255F-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 635  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILED SHORT DIODE CAUSES EXCESSIVE MOTOR OPERATION (CONTINUOUS POWER THAT OPENS THE VALVE SLIGHTLY THEN CLOSES IT, CONSTANTLY REPEATING ITSELF). MOTOR DAMAGE WOULD LIKELY CAUSE THE VALVE TO CLOSE, CAUSING LOSS OF JETS ON ASSOCIATED MANIFOLD. REDUNDANCY PROVIDED BY JETS ON ANOTHER MANIFOLD. LOSS OF REDUNDANCY CAUSES THE INABILITY TO EXPEL PROPELLANTS TO MEET CG CONSTRAINTS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (MANIFOLD ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-638  
 NASA FMEA #: 05-6KF-2255 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 638  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-642  
 NASA FMEA #: 05-6KF-2255E-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 642  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILED SHORT DIODE CAUSES EXCESSIVE MOTOR OPERATION (CONTINUOUS POWER THAT OPENS THE VALVE SLIGHTLY THEN CLOSES IT, CONSTANTLY REPEATING ITSELF). MOTOR DAMAGE WOULD LIKELY CAUSE THE VALVE TO CLOSE, CAUSING FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-643  
 NASA FMEA #: 05-6KF-2255E-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 643  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILED SHORT DIODE CAUSES EXCESSIVE MOTOR OPERATION (CONTINUOUS POWER THAT OPENS THE VALVE SLIGHTLY THEN CLOSES IT, CONSTANTLY REPEATING ITSELF). MOTOR DAMAGE WOULD LIKELY CAUSE THE VALVE TO CLOSE, CAUSING LOSS OF JETS ON ASSOCIATED MANIFOLD. REDUNDANCY PROVIDED BY JETS ON ANOTHER MANIFOLD. LOSS OF REDUNDANCY CAUSES THE INABILITY TO EXPEL PROPELLANTS TO MEET CG CONSTRAINTS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (MANIFOLD ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-644  
 NASA FMEA #: 05-6KF-2255 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 644  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-647  
 NASA FMEA #: 05-6KF-2268 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 647  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [   ] [   ] [   ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-649  
 NASA FMEA #: 05-6KF-2268 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 649  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-668  
 NASA FMEA #: 05-6KF-2208 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 668  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, IF DRIVER FAILS OPEN, LOSE CAPABILITY TO MONITOR VALVE STATUS WITH THE SWITCH TALKBACK. MDM DISCRETES PROVIDE REDUNDANCY. LOSS OF THIS REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-669  
 NASA FMEA #: 05-6KF-2208 -2

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 669  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ N / ]	[ ]	[ N ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSE CAPABILITY TO OPEN ISOLATION VALVE. THIS COUPLED WITH THE  
 LOSS OF HARDWARE REDUNDANCY MAY CAUSE LOSS OF JETS REQUIRED TO  
 EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (MANIFOLD ISO VALVE STUCK CLOSED) HAS  
 BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-670  
 NASA FMEA #: 05-6KF-2208 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 670  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, IF DRIVER FAILS OPEN, LOSE CAPABILITY TO MONITOR VALVE STATUS WITH THE SWITCH TALKBACK. MDM DISCRETES PROVIDE REDUNDANCY. LOSS OF THIS REDUNDANCY MAY LEAD TO FALSELY FAILING TRHE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-672  
 NASA FMEA #: 05-6KF-2208 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 672  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, IF DRIVER FAILS OPEN, LOSE CAPABILITY TO MONITOR VALVE STATUS WITH THE SWITCH TALKBACK. MDM DISCRETES PROVIDE REDUNDANCY. LOSS OF THIS REDUNDANCY MAY LEAD TO FALSELY FAILING TRHE VALVE CLOSED, POSSIBLY

EFFECTING MISSION OPERATIONS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-673  
 NASA FMEA #: 05-6KF-2208 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 673  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE CAPABILITY TO OPEN ISOLATION VALVE. THIS COUPLED WITH THE LOSS OF HARDWARE REDUNDANCY MAY CAUSE LOSS OF JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (MANIFOLD ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-674  
 NASA FMEA #: 05-6KF-2208 -1

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 674  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, IF DRIVER FAILS OPEN, LOSE CAPABILITY TO MONITOR VALVE STATUS WITH THE SWITCH TALKBACK. MDM DISCRETES PROVIDE REDUNDANCY. LOSS OF THIS REDUNDANCY MAY LEAD TO FALSELY FAILING TRHE VALVE CLOSED, POSSIBLY

EFFECTING MISSION OPERATIONS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-676  
 NASA FMEA #: 05-6KF-2208 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 676  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, IF DRIVER FAILS OPEN, LOSE CAPABILITY TO MONITOR VALVE STATUS WITH THE SWITCH TALKBACK. MDM DISCRETES PROVIDE REDUNDANCY. LOSS OF THIS REDUNDANCY MAY LEAD TO FALSELY FAILING TRHE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDROLES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-677  
 NASA FMEA #: 05-6KF-2208 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 677  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE CAPABILITY TO OPEN ISOLATION VALVE. THIS COUPLED WITH THE  
 LOSS OF HARDWARE REDUNDANCY MAY CAUSE LOSS OF JETS REQUIRED TO  
 EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (MANIFOLD ISO VALVE STUCK CLOSED) HAS  
 BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-678  
 NASA FMEA #: 05-6KF-2208 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 678  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, IF DRIVER FAILS OPEN, LOSE CAPABILITY TO MONITOR VALVE STATUS WITH THE SWITCH TALKBACK. MDM DISCRETES PROVIDE REDUNDANCY. LOSS OF THIS REDUNDANCY MAY LEAD TO FALSELY FAILING TRHE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDROLES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-680  
 NASA FMEA #: 05-6KF-2208 -1

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 680  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, IF DRIVER FAILS OPEN, LOSE CAPABILITY TO MONITOR VALVE STATUS WITH THE SWITCH TALKBACK. MDM DISCRETES PROVIDE REDUNDANCY. LOSS OF THIS REDUNDANCY MAY LEAD TO FALSELY FAILING TRHE VALVE CLOSED, POSSIBLY

EFFECTING MISSION OPERATIONS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

5-3

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-681  
 NASA FMEA #: 05-6KF-2208 -2

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 681  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ N / ]	[ ]	[ N ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSE CAPABILITY TO OPEN ISOLATION VALVE. THIS COUPLED WITH THE LOSS OF HARDWARE REDUNDANCY MAY CAUSE LOSS OF JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (MANIFOLD ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-682  
 NASA FMEA #: 05-6KF-2208 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 682  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, IF DRIVER FAILS OPEN, LOSE CAPABILITY TO MONITOR VALVE STATUS WITH THE SWITCH TALKBACK. MDM DISCRETES PROVIDE REDUNDANCY. LOSS OF THIS REDUNDANCY MAY LEAD TO FALSELY FAILING TRHE VALVE CLOSED, POSSIBLY

EFFECTING MISSION OPERATIONS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-702  
 NASA FMEA #: 05-6KF-2128A-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 702  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE CAPABILITY TO OPEN ISOLATION VALVE. THIS, COUPLED WITH THE LOSS OF HARDWARE REDUNDANCY MAY CAUSE INABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (MANIFOLD ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-703  
 NASA FMEA #: 05-6KF-2128A-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 703  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, RELAY FAILING HIGH CREATES INABILITY TO CLOSE THE VALVE. THIS, COUPLED WITH THE LOSS OF ALL HARDWARE REDUNDANCY PREVENTS ISOLATION OF A THRUSTER LEAK.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING THE HIGHER NASA CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-705  
 NASA FMEA #: 05-6KF-2128 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 705  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ N ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. LOSE CAPABILITY TO OPEN THE VALVE. THIS, COUPLED WITH THE LOSS OF ALL HARDWARE REDUNDANCY MAY CAUSE LOSS OF JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING THE HIGHER NASA CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-706  
 NASA FMEA #: 05-6KF-2128A-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 706  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSE CAPABILITY TO OPEN ISOLATION VALVE. THIS, COUPLED WITH THE LOSS OF HARDWARE REDUNDANCY MAY CAUSE INABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (MANIFOLD ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-707  
 NASA FMEA #: 05-6KF-2128A-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 707  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, RELAY FAILING HIGH CREATES INABILITY TO CLOSE THE VALVE. THIS, COUPLED WITH THE LOSS OF ALL HARDWARE REDUNDANCY PREVENTS ISOALTION OF A THRUSTER LEAK.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING THE HIGHER NASA CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-709  
 NASA FMEA #: 05-6KF-2128 -2

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 709  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ N ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. LOSE CAPABILITY TO OPEN THE VALVE. THIS, COUPLED WITH THE LOSS OF ALL HARDWARE REDUNDANCY MAY CAUSE LOSS OF JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING THE HIGHER NASA CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-710  
 NASA FMEA #: 05-6KF-2128A-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 710  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSE CAPABILITY TO OPEN ISOLATION VALVE. THIS, COUPLED WITH THE LOSS OF HARDWARE REDUNDANCY MAY CAUSE INABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (MANIFOLD ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-711  
 NASA FMEA #: 05-6KF-2128A-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 711  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, RELAY FAILING HIGH CREATES INABILITY TO CLOSE THE VALVE. THIS, COUPLED WITH THE LOSS OF ALL HARDWARE REDUNDANCY PREVENTS ISOLATION OF A THRUSTER LEAK.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING THE HIGHER NASA CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-713  
 NASA FMEA #: 05-6KF-2128 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 713  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ N ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. LOSE CAPABILITY TO OPEN THE VALVE. THIS, COUPLED WITH THE LOSS OF ALL HARDWARE REDUNDANCY MAY CAUSE LOSS OF JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING THE HIGHER NASA CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-714  
 NASA FMEA #: 05-6KF-2128A-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 714  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSE CAPABILITY TO OPEN ISOLATION VALVE. THIS, COUPLED WITH THE  
 LOSS OF HARDWARE REDUNDANCY MAY CAUSE INABILITY TO EXPEL  
 PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (MANIFOLD ISO VALVE STUCK CLOSED) HAS  
 BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-715  
 NASA FMEA #: 05-6KF-2128A-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 715  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, RELAY FAILING HIGH CREATES INABILITY TO CLOSE THE VALVE. THIS, COUPLED WITH THE LOSS OF ALL HARDWARE REDUNDANCY PREVENTS ISOLATION OF A THRUSTER LEAK.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING THE HIGHER NASA CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-717  
 NASA FMEA #: 05-6KF-2128 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 717  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ N ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. LOSE CAPABILITY TO OPEN THE VALVE. THIS, COUPLED WITH THE LOSS OF ALL HARDWARE REDUNDANCY MAY CAUSE LOSS OF JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING THE HIGHER NASA CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-718  
 NASA FMEA #: 05-6KF-2089 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 718  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, LOSS OF CAPABILITY TO MONITOR VALVE STATUS MAY LEAD TO FALSELY FAILING THE VALVE CLOSED POSSIBLY EFFECTING MISSION OPERATIONS. FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDROLES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-732  
 NASA FMEA #: 05-6KF-2089 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 732  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, LOSS OF CAPABILITY TO MONITOR VALVE STATUS MAY LEAD TO FALSELY FAILING THE VALVE CLOSED POSSIBLY EFFECTING MISSION OPERATIONS. FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDRULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-746  
 NASA FMEA #: 05-6KF-2089 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 746  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, LOSS OF CAPABILITY TO MONITOR VALVE STATUS MAY LEAD TO FALSELY FAILING THE VALVE CLOSED POSSIBLY EFFECTING MISSION OPERATIONS. FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-760  
 NASA FMEA #: 05-6KF-2089 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 760  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, LOSS OF CAPABILITY TO MONITOR VALVE STATUS MAY LEAD TO FALSELY FAILING THE VALVE CLOSED POSSIBLY EFFECTING MISSION OPERATIONS. FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-880  
 NASA FMEA #: 05-6KF-2155 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 880  
 ITEM: MANIFOLD 1, OX & FU ISOL VLV SWITCH TALKBACK

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /    ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, LOSS OF ACCURATE INDICATION OF VALVE STATUS WITH SWITCH TALKBACK COUPLED WITH THE LOSS OF REDUNDANCY (MDM DISCRETES) MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS. FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-881  
 NASA FMEA #: 05-6KF-2155 -1

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 881  
 ITEM: MANIFOLD 2, OX & FU ISOL VLV SWITCH TALKBACK

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ N / ]	[ ]	[ N ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, LOSS OF ACCURATE INDICATION OF VALVE STATUS WITH SWITCH TALKBACK COUPLED WITH THE LOSS OF REDUNDANCY (MDM DISCRETES) MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING THE HIGHER NASA CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-882  
 NASA FMEA #: 05-6KF-2155 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 882  
 ITEM: MANIFOLD 3, OX & FU ISOL VLV SWITCH TALKBACK

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /    ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, LOSS OF ACCURATE INDICATION OF VALVE STATUS WITH SWITCH TALKBACK COUPLED WITH THE LOSS OF REDUNDANCY (MDM DISCRETES) MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS. FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING THE HIGHER NASA CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-883  
 NASA FMEA #: 05-6KF-2155 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 883  
 ITEM: MANIFOLD 4, OX & FU ISOL VLV SWITCH TALKBACK

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /    ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. HOWEVER, LOSS OF ACCURATE INDICATION OF VALVE STATUS WITH SWITCH TALKBACK COUPLED WITH THE LOSS OF REDUNDANCY (MDM DISCRETES) MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING THE HIGHER NASA CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-885  
 NASA FMEA #: 05-6KF-2179 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 885  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE JETS ON MANIFOLD 1. REDUNDANCY PROVIDED BY JETS ON MANIFOLD 3. JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-886  
 NASA FMEA #: 05-6KF-2179 -2

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 886  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING THE HIGHER NASA CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-887  
 NASA FMEA #: 05-6KF-2180 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 887  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE JETS ON MANIFOLD 1. REDUNDANCY PROVIDED BY JETS ON MANIFOLD 3. JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-889  
 NASA FMEA #: 05-6KF-2179 -1

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 889  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSE JETS ON MANIFOLD 2. REDUNDANCY PROVIDED BY JETS ON MANIFOLD  
 4. JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN  
 WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-890  
 NASA FMEA #: 05-6KF-2179 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 890  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING THE HIGHER NASA CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-891  
 NASA FMEA #: 05-6KF-2180 -1

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 891  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSE JETS ON MANIFOLD 2. REDUNDANCY PROVIDED BY JETS ON MANIFOLD  
 4. JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN  
 WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-894  
 NASA FMEA #: 05-6KF-2179 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 894  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING THE HIGHER NASA CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-901  
 NASA FMEA #: 05-6KF-2179 -2

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 901  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING THE HIGHER NASA CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-902  
 NASA FMEA #: 05-6KF-2180 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 902  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE JETS ON MANIFOLD 4. REDUNDANCY PROVIDED BY JETS ON MANIFOLD 2. JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS. FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-904  
 NASA FMEA #: 05-6KF-2179 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 904  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE JETS ON MANIFOLD 4. REDUNDANCY PROVIDED BY JETS ON MANIFOLD  
 2. JETS REQUIRED TO EXPEL PROPELLANTRS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN  
 WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-906  
 NASA FMEA #: 05-6KF-2183 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 906  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING THE HIGHER NASA CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-908  
 NASA FMEA #: 05-6KF-2183 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 908  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:  
 NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING THE HIGHER NASA CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-909  
 NASA FMEA #: 05-6KF-2260 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 909  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

LOSE JETS ON MANIFOLD 1. REDUNDANCY PROVIDED BY JETS ON MANIFOLD 3. JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS. FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN WITHDRAWN. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-913  
 NASA FMEA #: 05-6KF-2259 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 913  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ /N ]	[    ]	[    ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [    ] [    ] [    ] [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE JETS ON MANIFOLD 1. REDUNDANCY PROVIDED BY MANIFOLD 3 JETS.  
 JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN  
 WITHDRAWN. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE  
 (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-915  
 NASA FMEA #: 05-6KF-2260 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 915  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

LOSE JETS ON MANIFOLD 2. REDUNDANCY PROVIDED BY JETS ON MANIFOLD 4. JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS. FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN WITHDRAWN. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-919  
 NASA FMEA #: 05-6KF-2259 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 919  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ /N ]	[   ]	[   ]	[   ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [   ] [   ] [   ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

LOSE JETS ON MANIFOLD 2. REDUNDANCY PROVIDED BY JETS ON MANIFOLD  
 4. JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN  
 WITHDRAWN. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE  
 (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-941  
 NASA FMEA #: 05-6KF-2259 -1

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 941  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSE JETS ON MANIFOLD 4 AND 5. REDUNDANCY FOR MANIFOLD 4 JETS PROVIDED BY JETS ON MANIFOLD 2. JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-943  
 NASA FMEA #: 05-6KF-2260 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 943  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

LOSE JETS ON MANIFOLD 4. REDUNDANCY PROVIDED BY JETS ON MANIFOLD  
 2. JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN  
 WITHDRAWN. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE  
 (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-947  
 NASA FMEA #: 05-6KF-2214 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 947  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

LOSE JETS ON MANIFOLD 1. REDUNDANCY PROVIDED BY JETS ON MANIFOLD 3. JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-948  
 NASA FMEA #: 05-6KF-2214 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 948  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-949  
 NASA FMEA #: 05-6KF-2214 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 949  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

LOSE JETS ON MANIFOLD 2. REDUNDANCY PROVIDED BY JETS ON MANIFOLD 4. JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-950  
 NASA FMEA #: 05-6KF-2214 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 950  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-952  
 NASA FMEA #: 05-6KF-2214 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 952  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ /N ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [    ] [    ] [    ] [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-954  
 NASA FMEA #: 05-6KF-2214 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 954  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-955  
 NASA FMEA #: 05-6KF-2214 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 955  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-956  
 NASA FMEA #: 05-6KF-2214 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 956  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE JETS ON MANIFOLD 4. REDUNDANCY PROVIDED BY JETS ON MANIFOLD  
 2. JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN  
 WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-958  
 NASA FMEA #: 05-6KF-2220 -2

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 958  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-959  
 NASA FMEA #: 05-6KF-2009 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 959  
 ITEM: FUSE, 2A

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [    ] [    ] [    ] [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE JETS ON MANIFOLD 1. REDUNDANCY PROVIDED BY JETS ON MANIFOLD  
 3. JETS REQUIRED FOR TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN  
 WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-960  
 NASA FMEA #: 05-6KF-2008 -1

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 960  
 ITEM: FUSE, 1A

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSE JETS ON MANIFOLD 1. REDUNDANCY PROVIDED BY JETS ON MANIFOLD 3. JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-961  
 NASA FMEA #: 05-6KF-2007 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 961  
 ITEM: FUSE, 1A

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[    /N ]	[    ]	[    ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE JETS ON MANIFOLD 1. REDUNDANCY PROVIDED BY JETS ON MANIFOLD  
 3. JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN  
 WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-962  
 NASA FMEA #: 05-6KF-2009 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 962  
 ITEM: FUSE, 2A

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [    ] [    ] [    ] [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE JETS ON MANIFOLD 2. REDUNDANCY PROVIDED BY JETS ON MANIFOLD  
 4. JETS REQUIRED FOR TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN  
 WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-963  
 NASA FMEA #: 05-6KF-2008 -1

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 963  
 ITEM: FUSE, 1A

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSE JETS ON MANIFOLD 2. REDUNDANCY PROVIDED BY JETS ON MANIFOLD  
 4. JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN  
 WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-964  
 NASA FMEA #: 05-6KF-2007 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 964  
 ITEM: FUSE, 1A

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[    /N ]	[    ]	[    ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE JETS ON MANIFOLD 2. REDUNDANCY PROVIDED BY JETS ON MANIFOLD  
 4. JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN  
 WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-965  
 NASA FMEA #: 05-6KF-2009 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 965  
 ITEM: FUSE, 1A

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [    ] [    ] [    ] [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE JETS ON MANIFOLD 4. REDUNDANCY PROVIDED BY JETS ON MANIFOLD  
 2. JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN  
 WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-966  
 NASA FMEA #: 05-6KF-2008 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 966  
 ITEM: FUSE, 1A

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE JETS ON MANIFOLD 3. REDUNDANCY PROVIDED BY JETS ON MANIFOLD 1. JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-967  
 NASA FMEA #: 05-6KF-2007 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 967  
 ITEM: FUSE, 1A

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[    /N ]	[    ]	[    ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE JETS ON MANIFOLD 3. REDUNDANCY PROVIDED BY JETS ON MANIFOLD  
 1. JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN  
 WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-970  
 NASA FMEA #: 05-6KF-2008 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 970  
 ITEM: FUSE, 1A

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE JETS ON MANIFOLD 4. REDUNDANCY PROVIDED BY JETS ON MANIFOLD 2. JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-972  
 NASA FMEA #: 05-6KF-2130 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 972  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE JETS ON MANIFOLD 1. REDUNDANCY PROVIDED BY JETS ON MANIFOLD  
 3. JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN  
 WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-974  
 NASA FMEA #: 05-6KF-2130 -1

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 974  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSE JETS OF MANIFOLD 2. REDUNDANCY PROVIDED BY JETS ON MANIFOLD 4. JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-976  
 NASA FMEA #: 05-6KF-2130 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 976  
 ITEM: RELAY, LATCHING

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE JETS ON MANIFOLD 4. REDUNDANCY PROVIDED BY JETS ON MANIFOLD 2. JETS REQUIRED TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
ASSESSMENT ID: FRCS-1144  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: FRCS  
MDAC ID: 1144  
ITEM: CHAMBER PRESSURE (Pc) SENSOR, THRUSTERS F5L, F5R

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

VERNIER THRUSTERS CHAMBER PRESSURE SENSORS NOT ADDRESSED BY A FMEA. IOA RECOMMENDS THEIR INCLUSION INTO A FMEA. NOTE: PRIMARY SENSORS CONTAINED IN 03-2F-121314-2 FMEA. FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE THIS ITEM IS WITHIN THE VERNIER THRUSTER ASSEMBLY AND SO IS CONSIDERED TO BE COVERED BY THE THRUSTER'S FMEA. IOA MAINTAINS A CONCERN THAT THIS ITEM SHOULD BE COVERED SEPARATELY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
ASSESSMENT ID: FRCS-1145  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: FRCS  
MDAC ID: 1145  
ITEM: CHAMBER PRESSURE (Pc) SENSOR, THRUSTERS F5L, F5R

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

VERNIER THRUSTERS CHAMBER PRESSURE SENSORS NOT ADDRESSED BY A FMEA. IOA RECOMMENDS THEIR INCLUSION INTO A FMEA. NOTE: PRIMARY SENSORS CONTAINED IN 03-2F-121314-1 FMEA.  
FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE THIS ITEM IS WITHIN THE VERNIER THRUSTER ASSEMBLY AND SO IS CONSIDERED TO BE COVERED BY THE THRUSTER'S FMEA. IOA MAINTAINS A CONCERN THAT THIS ITEM SHOULD BE COVERED SEPARATELY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-1154  
 NASA FMEA #: NONE

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM: FRCS  
 MDAC ID: 1154  
 ITEM: OX OR FU INJECTOR TEMP SENSOR, THRUSTERS F5L, F5R

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 3 / 2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

VERNIER THRUSTERS INJECTOR TEMPERATURE SENSORS NOT ADDRESSED BY A FMEA. IOA RECOMMENDS THEIR INCLUSION INTO A FMEA. NOTE: PRIMARY SENSORS CONTAINED IN 03-2F-121315-2 FMEA. FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE THIS ITEM IS WITHIN THE VERNIER THRUSTER ASSEMBLY AND SO IS CONSIDERED TO BE COVERED BY THE THRUSTER'S FMEA. IOA MAINTAINS A CONCERN THAT THIS ITEM SHOULD BE COVERED SEPARATELY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
ASSESSMENT ID: FRCS-1155  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: FRCS  
MDAC ID: 1155  
ITEM: OX OR FU INJECTOR TEMP SENSOR, THRUSTERS F5L,  
F5R

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 3 / 2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

VERNIER THRUSTERS INJECTOR TEMPERATURE SENSORS NOT ADDRESSED BY A FMEA. IOA RECOMMENDS THEIR INCLUSION INTO A FMEA. NOTE: PRIMARY SENSORS CONTAINED IN 03-2F-121315-1 FMEA. FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE THIS ITEM IS WITHIN THE VERNIER THRUSTER ASSEMBLY AND SO IS CONSIDERED TO BE COVERED BY THE THRUSTER'S FMEA. IOA MAINTAINS A CONCERN THAT THIS ITEM SHOULD BE COVERED SEPARATELY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-1300  
 NASA FMEA #: 03-2F-103345-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 1300  
 ITEM: THERMOSTAT, VERNIER THRUSTERS, ALL AXES

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

THIS FAILURE MAY CAUSE LOSS OF MISSION OPERATIONS. NOTE: VERNIER THRUSTERS THERMAL SWITCH NOT SPECIFICALLY ADDRESSED ON THIS FMEA. FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE THIS ITEM IS WITHIN THE VERNIER THRUSTER ASSEMBLY, AND SO IS CONSIDERED TO BE COVERED BY THE THRUSTER'S FMEA. IOA MAINTAINS A CONCERN THAT THIS ITEM SHOULD BE COVERED SEPARATELY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11005X  
 NASA FMEA #: 05-6KF-2032 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11005  
 ITEM: MANIFOLD 5, OX & FU ISOL VLV SWITCH

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. LOSE CAPABILITY TO OPEN THE VALVE. THIS CAUSES LOSS OF VERNIERS THUS MISSION OPERATIONS. FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11007X  
 NASA FMEA #: 05-6KF-2032 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11007  
 ITEM: MANIFOLD 5, OX & FU ISOL VLV SWITCH

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ / ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [    ] [    ] [    ] [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. LOSE CAPABILITY TO CLOSE THE VALVE TO ISOLATE A THRUSTER LEAK.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11008X  
 NASA FMEA #: 05-6KF-2090 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11008  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ /N ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE STAUTS. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDRULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11017X  
 NASA FMEA #: 05-6KF-2156 -1

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11017  
 ITEM: EVENT INDICATOR

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ /N ]	[ ]	[ N ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE STAUTS. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11019X  
 NASA FMEA #: 05-6KF-2177 -2

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11019  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11020X  
 NASA FMEA #: 05-6KF-2178 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11020  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

FAILURE CAUSES THE INABILITY TO OPEN THE ISOLATION VALVE TO PERFORM MISSION OPERATIONS  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE A SECOND FAILURE IS REQUIRED TO CAUSE THE CREW TO CLOSE THE NORMALLY-OPEN VALVE IN THE FIRST PLACE.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11021X  
 NASA FMEA #: 05-6KF-2178 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11021  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11022X  
 NASA FMEA #: 05-6KF-2210A-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11022  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ /N ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDROLES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11024X  
 NASA FMEA #: 05-6KF-2210 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11024  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[    /N ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE CAUSES LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11025X  
 NASA FMEA #: 05-6KF-2210 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11025  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

THIS FAILURE CAUSES THE INABILITY TO OPEN THE VALVE, CAUSING LOSS OF VERNIERS FOR MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE A SECOND FAILURE IS REQUIRED TO CAUSE THE CREW TO CLOSE THE NORMALLY-OPEN VALVE IN THE FIRST PLACE.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11027X  
 NASA FMEA #: 05-6KF-2213 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11027  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11029X  
 NASA FMEA #: 05-6KF-2212 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11029  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS DRIVER FAILED HIGH CAUSES INABILITY TO OPEN THE ISOLATION VALVE. THIS CAUSES LOSS OF VERNIERS THUS MISSION OPERATIONS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDROLES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11030X  
 NASA FMEA #: 05-6KF-2211 -1

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11030  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

THIS FAILURE CAUSES THE INABILITY TO OPEN THE VALVE FOR VERNIERS,  
 THUS CAUSING LOSS OF MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE A SECOND  
 FAILURE IS REQUIRED TO CAUSE THE CREW TO CLOSE THE NORMALLY-OPEN  
 VALVE IN THE FIRST PLACE.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11031X  
 NASA FMEA #: 05-6KF-2211 -2

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11031  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11032X  
 NASA FMEA #: 05-6KF-2113A-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11032  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

THIS FAILURE CAUSES THE INABILITY TO OPEN THE VALVE, CAUSING LOSS OF VERNIERS THUS MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE A SECOND FAILURE IS REQUIRED TO CAUSE THE CREW TO CLOSE THE NORMALLY-OPEN VALVE IN THE FIRST PLACE.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11033X  
 NASA FMEA #: 05-6KF-2113A-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11033  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ / ]	[ ]	[ N ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. LOSE CAPABILITY TO CLOSE THE VALVE TO ISOLATE A THRUSTER LEAK.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11034X  
 NASA FMEA #: 05-6KF-2224 -1

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11034  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

THIS FAILURE CAUSES THE INABILITY TO OPEN THE VALVE, CAUSING LOSS OF VERNIERS THUS MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE A SECOND FAILURE IS REQUIRED TO CAUSE THE CREW TO CLOSE THE NORMALLY-OPEN VALVE IN THE FIRST PLACE.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11035X  
 NASA FMEA #: 05-6KF-2224 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11035  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11036X  
 NASA FMEA #: 05-6KF-2257 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11036  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11038X  
 NASA FMEA #: 05-6KF-2257A-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11038  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11070X  
 NASA FMEA #: 05-6KF-2258 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11070  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

THIS FAILURE CAUSES THE INABILITY TO OPEN THE ISOLATION VALVE,  
 CAUSING LOSS OF VERNIERS THUS MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE A SECOND  
 FAILURE IS REQUIRED TO CAUSE THE CREW TO CLOSE THE NORMALLY-OPEN  
 VALVE IN THE FIRST PLACE.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11077X  
 NASA FMEA #: 05-6KF-2280 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11077  
 ITEM: CIRCUIT BREAKER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S HIGHER CRIT WHICH IS DUE TO A CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11081X  
 NASA FMEA #: 05-6KF-2026 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11081  
 ITEM: HE OX & FU ISOL VLV A OR B SWITCH

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

WITH VALVE CLOSED, A SHORT ACROSS CLOSE CONTACTS PREVENTS FURTHER VALVE MOVEMENT. LOSS OF ALL REDUNDANCY CAUSES INABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (HE PRESS ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11082X  
 NASA FMEA #: 05-6KF-2026 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11082  
 ITEM: HE OX & FU ISOL VLV A OR B SWITCH

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

WITH VALVE CLOSED, A SHORT ACROSS CLOSE CONTACTS PREVENTS FURTHER VALVE MOVEMENT. LOSS OF ALL REDUNDANCY CAUSES INABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (HE PRESS ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11096X  
 NASA FMEA #: 05-6KF-2030 -2

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11096  
 ITEM: MANIFOLD 1, OX & FU ISOL VLV SWITCH 30

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF ALL REDUNDANCY CAUSES INABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (MANIFOLD ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11101X  
 NASA FMEA #: 05-6KF-2030 -2

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11101  
 ITEM: MANIFOLD 2, OX & FU ISOL VLV SWITCH 31

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

THIS FAILURE CAUSES LOSS INABILITY TO OPEN THE VALVE. LOSS OF ALL REDUNDANCY CAUSES INABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (MANIFOLD ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11102X  
 NASA FMEA #: 05-6KF-2030 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11102  
 ITEM: MANIFOLD 2, OX & FU ISOL VLV SWITCH 31

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

THIS FAILURE CAUSES LOSS INABILITY TO OPEN THE VALVE. LOSS OF ALL REDUNDANCY CAUSES INABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (MANIFOLD ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11106X  
 NASA FMEA #: 05-6KF-2030 -2

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11106  
 ITEM: MANIFOLD 3, OX & FU ISOL VLV SWITCH 32

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

THIS FAILURE CAUSES INABILITY TO OPEN THE VALVE. LOSS OF ALL REDUNDANCY CAUSES INABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (MANIFOLD ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11111X  
 NASA FMEA #: 05-6KF-2030 -2

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11111  
 ITEM: MANIFOLD 4, OX & FU ISOL VLV SWITCH 33

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

THIS FAILURE CAUSES INABILITY TO OPEN TH VALVE. LOSS OF ALL  
 REDUNDANCY CAUSES INABILITY TO EXPEL PROPELLANTS TO MEET CG  
 LIMITS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (MANIFOLD ISO VALVE STUCK CLOSED) HAS  
 BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11112X  
 NASA FMEA #: 05-6KF-2030 -2

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11112  
 ITEM: MANIFOLD 4, OX & FU ISOL VLV SWITCH 33

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

THIS FAILURE CAUSES INABILITY TO OPEN TH VALVE. LOSS OF ALL REDUNDANCY CAUSES INABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (MANIFOLD ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11115X  
 NASA FMEA #: 05-6KF-2035 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11115  
 ITEM: RJDF1B F1 MANIFOLD LOGIC SWITCH 7

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE CAPABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN  
 WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11119X  
 NASA FMEA #: 05-6KF-2035 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11119  
 ITEM: RJDF1B F1 MANIFOLD LOGIC SWITCH 7

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE CAPABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN  
 WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11120X  
 NASA FMEA #: 05-6KF-2036 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11120  
 ITEM: RJDF1B F1 MANIFOLD DRIVER SWITCH 8

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF ALL REDUNDANT JETS CAUSES INABILITY TO EXPEL PROPELLANTS  
 TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN  
 WITHDRAWN.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11125X  
 NASA FMEA #: 05-6KF-2035 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11125  
 ITEM: RJDF1A F2 MANIFOLD LOGIC SWITCH 7

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE CAPABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN  
 WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11129X  
 NASA FMEA #: 05-6KF-2035 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11129  
 ITEM: RJDF1A F2 MANIFOLD LOGIC SWITCH 7

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE CAPABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN  
 WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11130X  
 NASA FMEA #: 05-6KF-2036 -1

NASA DATA:  
 BASELINE [ ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11130  
 ITEM: RJDF1A F2 MANIFOLD DRIVER SWITCH 8

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSE CAPABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN  
 WITHDRAWN.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11135X  
 NASA FMEA #: 05-6KF-2035 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11135  
 ITEM: RJDF2A F3 MANIFOLD LOGIC SWITCH 5

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE CAPABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN  
 WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11139X  
 NASA FMEA #: 05-6KF-2035 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11139  
 ITEM: RJDF2A F3 MANIFOLD DRIVER SWITCH 5

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE CAPABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN  
 WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11140X  
 NASA FMEA #: 05-6KF-2036 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11140  
 ITEM: RJDF2A F3 MANIFOLD DRIVER SWITCH 6

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE CAPABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED  
 FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN  
 WITHDRAWN.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11150X  
 NASA FMEA #: 05-6KF-2036 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11150  
 ITEM: RJDF2A F4/F5 MANIFOLD DRIVER SWITCH 13

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF ALL REDUNDANT JETS CAUSES INABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11154X  
 NASA FMEA #: 05-6KF-2036 -1

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11154  
 ITEM: RJDF2A F4/F5 MANIFOLD DRIVER SWITCH 13

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF ALL REDUNDANT JETS CAUSES INABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11196X  
 NASA FMEA #: NONE

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM: FRCS  
 MDAC ID: 11196  
 ITEM: SIGNAL CONDITIONER OF3

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 3 / 2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

SIGNAL CONDITIONER NOT ADDRESSED BY A FMEA. IOA RECOMMENDS ITS INCLUSION INTO A FMEA.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE THIS IS NOT A DEDICATED SIGNAL CONDITIONER AND IS COVERED BY THE GN&C SUBSYSTEM.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
ASSESSMENT ID: FRCS-11202X  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: FRCS  
MDAC ID: 11202  
ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

DIODES NOT ADDRESSED BY A FMEA. IOA RECOMMENDS THEIR INCLUSION INTO A FMEA.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THESE DIODES ARE PART OF THE HELIUM PRESSURE ISOLATION VALVE AND ARE COVERED BY THE VALVE'S FMEA, AND BECAUSE THE ASSOCIATED HARDWARE CIL ISSUE (HE PRESS ISO VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
ASSESSMENT ID: FRCS-11205X  
NASA FMEA #: NONE

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: FRCS  
MDAC ID: 11205  
ITEM: MICROSWITCH

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

MICROSWITCHES NOT ADDRESSED BY A FMEA. IOA RECOMMENDS THEIR INCLUSION INTO A FMEA.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THESE MICRO (OR LIMIT) SWITCHES ARE PART OF A VALVE AND ARE CONSIDERED TO BE COVERED BY THE VALVE'S FMEA, AND BECAUSE THE ASSOCIATED HARDWARE CIL ISSUE (VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

HOWEVER, IOA MAINTAINS A CONCERN FOR COMPLETENESS AND RECOMMENDS THAT VALVE LIMIT OR MICROSWITCHES BE COVERED IN A SEPARATE FMEA.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11206X  
 NASA FMEA #: NONE

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM: FRCS  
 MDAC ID: 11206  
 ITEM: MICROSWITCH

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

MICROSWITCHES NOT ADDRESSED BY A FMEA. IOA RECOMMENDS THEIR INCLUSION INTO A FMEA.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THESE MICRO (OR LIMIT) SWITCHES ARE PART OF A VALVE AND ARE CONSIDERED TO BE COVERED BY THE VALVE'S FMEA, AND BECAUSE THE ASSOCIATED HARDWARE CIL ISSUE (VALVE STUCK CLOSED) HAS BEEN WITHDRAWN.

HOWEVER, IOA MAINTAINS A CONCERN FOR COMPLETENESS AND RECOMMENDS THAT VALVE LIMIT OR MICROSWITCHES BE COVERED IN A SEPARATE FMEA.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11211X  
 NASA FMEA #: 05-6KF-2252 -3

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11211  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO DIFFERENCES IN CRITICALITY. B SCREEN SHOULD BE "NA" BECAUSE ISOLATION OF A LEAK IS A STANDBY FUNCTION.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF THE MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY. IOA WILL NOT DISPUTE NASA'S MORE CONSERVATIVE (FAILED) B SCREEN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11212X  
 NASA FMEA #: 05-6KF-2252 -3

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11212  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO DIFFERENCES IN CRITICALITY. B SCREEN SHOULD BE "NA" BECAUSE ISOLATION OF A LEAK IS A STANDBY FUNCTION.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF THE MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11213X  
 NASA FMEA #: NONE

NASA DATA:  
 BASELINE [ ]  
 NEW [ ]

SUBSYSTEM: FRCS  
 MDAC ID: 11213  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF ALL REDUNDANT JETS CAUSES INABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11214X  
 NASA FMEA #: NONE

NASA DATA:  
 BASELINE [ ]  
 NEW [ ]

SUBSYSTEM: FRCS  
 MDAC ID: 11214  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF ALL REDUNDANT JETS CAUSES INABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11215X  
 NASA FMEA #: NONE

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM: FRCS  
 MDAC ID: 11215  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 3 / 1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF ALL REDUNDANT JETS CAUSES INABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11216X  
 NASA FMEA #: NONE

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM: FRCS  
 MDAC ID: 11216  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF ALL REDUNDANT JETS CAUSES INABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11217X  
 NASA FMEA #: NONE

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM: FRCS  
 MDAC ID: 11217  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF ALL REDUNDANT JETS CAUSES INABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, SINCE THE ASSOCIATED FRCS HARDWARE CIL ISSUE (THRUSTER FAILED CLOSED) HAS BEEN WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: FRCS-11221X  
 NASA FMEA #: 05-6KF-2258 -3

NASA DATA:  
 BASELINE [    ]  
 NEW [ N ]

SUBSYSTEM: FRCS  
 MDAC ID: 11221  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

THIS FAILURE CAUSES THE INABILITY TO OPEN THE VALVE, CAUSING LOSS OF VERNIERS THUIS MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE A SECOND FAILURE IS REQUIRED TO CAUSE THE CREW TO CLOSE THE NORMALLY-OPEN VALVE IN THE FIRST PLACE.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1323  
 NASA FMEA #: 05-6KA-2252-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1323  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1325  
 NASA FMEA #: 05-6KA-2252-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1325  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1333  
 NASA FMEA #: 05-6KA-2252-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1333  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1335  
 NASA FMEA #: 05-6KA-2252-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1335  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [   ] [   ] [   ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDRULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1478  
 NASA FMEA #: 05-6KA-2207-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1478  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1479  
 NASA FMEA #: 05-6KA-2207-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1479  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1480  
 NASA FMEA #: 05-6KA-2219-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1480  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1484  
 NASA FMEA #: 05-6KA-2207-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1484  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1485  
 NASA FMEA #: 05-6KA-2207-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1485  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1486  
 NASA FMEA #: 05-6KA-2219-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1486  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1487  
 NASA FMEA #: 05-6KA-2219-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1487  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDRULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1496  
 NASA FMEA #: 05-6KA-2208-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1496  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE STATUS. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1498  
 NASA FMEA #: 05-6KA-2208-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1498  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE STATUS. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1500  
 NASA FMEA #: 05-6KA-2208-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1500  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE STATUS. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1502  
 NASA FMEA #: 05-6KA-2208-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1502  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE STATUS. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDRULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1504  
 NASA FMEA #: 05-6KA-2208-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1504  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE STATUS. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1506  
 NASA FMEA #: 05-6KA-2208-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1506  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE STATUS. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1508  
 NASA FMEA #: 05-6KA-2208-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1508  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE STATUS. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS. FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1510  
 NASA FMEA #: 05-6KA-2208-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1510  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE STATUS. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1542  
 NASA FMEA #: 05-6KA-2136-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1542  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[    ]	[ N ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE CAUSES INABILITY TO CLOSE THE 1/2 VALVE. THIS PREVENTS CROSSFEED CAPABILITY THUS LOSS OF MISSION OPERATIONS. INABILITY TO CROSSFEED MAY CAUSE INCOMPLETE OMS ABORT DUMP.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1544  
 NASA FMEA #: 05-6KA-2136-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1544  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ ]	[ N ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE CAUSES INABILITY TO CLOSE THE 1/2 VALVE. THIS PREVENTS CROSSFEED CAPABILITY THUS LOSS OF MISSION OPERATIONS. INABILITY TO CROSSFEED MAY CAUSE INCOMPLETE OMS ABORT DUMP.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1545  
 NASA FMEA #: 05-6KA-2126-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1545  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 3 /2R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ /N ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE CAPABILITY TO CLOSE TANK ISOLATION 1/2 VALVE. THIS PREVENTS CROSSFEED OPERATIONS THUS LOSS OF MISSION. INABILITY TO CROSSFEED DURING AN RTLS/TAL ABORT MAY CAUSE INCOMPLETE OMS ABORT DUMP.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE THIS FAILURE PREVENTS CROSSFEEDING TO MANIFOLDS 1 & 2, BUT NOT TO MANIFOLDS 3, 4, & 5.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1546  
 NASA FMEA #: 05-6KA-2126-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1546  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1547  
 NASA FMEA #: 05-6KA-2126-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1547  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 3 /2R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ ]	[ N ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSE CAPABILITY TO CLOSE VALVE. THIS PREVENTS CROSSFEED OPERATIONS THUS LOSS OF MISSION. INABILITY TO CROSSFEED DURING AN RTLS/TAL ABORT MAY CAUSE INCOMPLETE OMS ABORT DUMP.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE THIS FAILURE PREVENTS CROSSFEEDING TO MANIFOLDS 1 & 2, BUT NOT TO MANIFOLDS 3, 4, & 5.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1548  
 NASA FMEA #: 05-6KA-2126-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1548  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1550  
 NASA FMEA #: 05-6KA-2137-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1550  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE CAUSES THE INABILITY TO CLOSE 3/4/5 VALVE. THIS PREVENTS CROSSFEED CAPABILITY THUS LOSS OF MISSION OPERATIONS. INABILITY TO CROSSFEED DURING RTLS/TAL MAY CAUSE INCOMPLETE OMS ABORT DUMP. FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1551  
 NASA FMEA #: 05-6KA-2127-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1551  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[    /    ]	[    ]	[    ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

DISAGREE WITH BOTH. INABILITY TO CLOSE VALVE PREVENTS ISOLATION OF A LEAK.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE IOA'S AND NASA'S CRITS AND SCREENS ARE THE SAME. IOA HAD MISSED THE FACT THAT NASA HAD ADDED A 1/1 ABORT TO THIS FMEA.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1552  
 NASA FMEA #: 05-6KA-2127-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1552  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[ N ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE WILL CLOSE THE VALVE AND CAUSE INABILITY TO RE-OPEN IT. REDUNDANCY PROVIDED BY SECOND LEG OF 3/4/5 AND CROSSFEED LEG. LOSS OF ALL REDUNDANCY PREVENTS PROPELLANTS TO BE EXPELLED TO MEET LANDING WEIGHT CONSTRAINTS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1554  
 NASA FMEA #: 05-6KA-2137-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1554  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE CAUSES THE INABILITY TO CLOSE 3/4/5 VALVE. THIS PREVENTS CROSSFEED CAPABILITY THUS LOSS OF MISSION OPERATIONS. INABILITY TO CROSSFEED DURING RTLS/TAL MAY CAUSE INCOMPLETE OMS ABORT DUMP. FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1555  
 NASA FMEA #: 05-6KA-2127-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1555  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

DISAGREE WITH BOTH. INABILITY TO CLOSE VALVE PREVENTS ISOLATION OF A LEAK.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE IOA'S AND NASA'S CRITS AND SCREENS ARE THE SAME. IOA HAD MISSED THE FACT THAT NASA HAD ADDED A 1/1 ABORT TO THIS FMEA.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1556  
 NASA FMEA #: 05-6KA-2127-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1556  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[ N ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE WILL CLOSE THE VALVE AND CAUSE INABILITY TO RE-OPEN IT. REDUNDANCY PROVIDED BY SECOND LEG OF 3/4/5 AND CROSSFEED LEG. LOSS OF ALL REDUNDANCY PREVENTS PROPELLANTS TO BE EXPELLED TO MEET LANDING WEIGHT CONSTRAINTS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1557  
 NASA FMEA #: 05-6KA-2133-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1557  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ /N ]	[    ]	[ N ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [    ] [    ] [    ] [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. FAILURE CAUSES INABILITY TO CROSSFEED WITH THE GPC. REDUNDANCY PROVIDED WITH SWITCH AND OTHER GPC COMMANDS. LOSS OF ALL REDUNDANCY CAUSES INABILITY TO CROSSFEED, THUS LOSS OF MISSION.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1558  
 NASA FMEA #: 05-6KA-2133-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1558  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. LOSE CAPABILITY TO CLOSE THE VALVE TO ISOLATE A THRUSTER LEAK. NOTE: NASA FMEA INCORRECTLY IDENTIFIES RELAY 56V76A116K44. IT SHOULD BE 56V76A116K46.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1559  
 NASA FMEA #: 05-6KA-2133-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1559  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ ]	[ N ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. FAILURE CAUSES INABILITY TO CROSSFEED WITH THE GPC. REDUNDANCY PROVIDED WITH SWITCH AND OTHER GPC COMMANDS. LOSS OF ALL REDUNDANCY CAUSES INABILITY TO CROSSFEED, THUS LOSS OF MISSION.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1560  
 NASA FMEA #: 05-6KA-2133-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1560  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. LOSE CAPABILITY TO CLOSE THE VALVE TO ISOLATE A THRUSTER LEAK.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1562  
 NASA FMEA #: 05-6KA-2132-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1562  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:  
 NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1564  
 NASA FMEA #: 05-6KA-2132-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1564  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ /N ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1565  
 NASA FMEA #: 05-6KA-2133-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1565  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ /N ]	[    ]	[ N ]	[    ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. FAILURE CAUSES INABILITY TO CROSSFEED WITH THE GPC. REDUNDANCY PROVIDED WITH SWITCH AND OTHER GPC COMMANDS. LOSS OF ALL REDUNDANCY CAUSES INABILITY TO CROSSFEED, THUS LOSS OF MISSION.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1566  
 NASA FMEA #: 05-6KA-2133-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1566  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. LOSE CAPABILITY TO CLOSE THE VALVE TO ISOLATE A THRUSTER LEAK.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1567  
 NASA FMEA #: 05-6KA-2133-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1567  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ ]	[ N ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. FAILURE CAUSES INABILITY TO CROSSFEED WITH THE GPC. REDUNDANCY PROVIDED WITH SWITCH AND OTHER GPC COMMANDS. LOSS OF ALL REDUNDANCY CAUSES INABILITY TO CROSSFEED, THUS LOSS OF MISSION.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1568  
 NASA FMEA #: 05-6KA-2133-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1568  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [   ] [   ] [   ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. LOSE CAPABILITY TO CLOSE THE VALVE TO ISOLATE A THRUSTER LEAK.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1570  
 NASA FMEA #: 05-6KA-2132-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1570  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1572  
 NASA FMEA #: 05-6KA-2132-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1572  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ /N ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1574  
 NASA FMEA #: 05-6KA-2128A-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1574  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. WITH RELAY FAILED HIGH, LOSE CAPABILITY TO CLOSE VALVE. THIS, COUPLED WITH THE LOSS OF ALL HARDWARE REDUNDANCY, MAY PREVENT ISOLATION OF A THRUSTER LEAK.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1576  
 NASA FMEA #: 05-6KA-2128-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1576  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /    ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:  
 NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE WILL CLOSE THE VALVE AND CAUSE INABILITY TO RE-OPEN IT CAUSING LOSS OF JETS. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY PREVENTS PROPELLANTS TO BE EXPELLED TO MEET LANDING WEIGHT CONSTRAINTS. LOSS OF MANIFOLD THRUSTERS DURING RTLS/TAL ABORT COULD RESULT IN INABILITY TO COMPLETE A PROPELLANT DUMP (1/1 ABORT)  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE IT WAS DEPENDENT ON A HARDWARE ISSUE (MANIFOLD ISOLATION VALVE FAILED CLOSE), WHICH WAS WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1578  
 NASA FMEA #: 05-6KA-2128A-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1578  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. WITH RELAY FAILED HIGH, LOSE CAPABILITY TO CLOSE VALVE. THIS, COUPLED WITH THE LOSS OF ALL HARDWARE REDUNDANCY, MAY PREVENT ISOLATION OF A THRUSTER LEAK.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1580  
 NASA FMEA #: 05-6KA-2128-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1580  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ N / ]	[ ]	[ N ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE WILL CLOSE THE VALVE AND CAUSE INABILITY TO RE-OPEN IT CAUSING LOSS OF JETS. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY PREVENTS PROPELLANTS TO BE EXPELLED TO MEET LANDING WEIGHT CONSTRAINTS. LOSS OF MANIFOLD THRUSTERS DURING RTLS/TAL ABORT COULD RESULT IN INABILITY TO COMPLETE A PROPELLANT DUMP (1/1 ABORT)  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE IT WAS DEPENDENT ON A HARDWARE ISSUE (MANIFOLD ISOLATION VALVE FAILED CLOSE), WHICH WAS WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1582  
 NASA FMEA #: 05-6KA-2128A-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1582  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. WITH RELAY FAILED HIGH, LOSE CAPABILITY TO CLOSE VALVE. THIS, COUPLED WITH THE LOSS OF ALL HARDWARE REDUNDANCY, MAY PREVENT ISOLATION OF A THRUSTER LEAK.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1584  
 NASA FMEA #: 05-6KA-2128-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1584  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /    ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE WILL CLOSE THE VALVE AND CAUSE INABILITY TO RE-OPEN IT CAUSING LOSS OF JETS. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY PREVENTS PROPELLANTS TO BE EXPELLED TO MEET LANDING WEIGHT CONSTRAINTS. LOSS OF MANIFOLD THRUSTERS DURING RTLS/TAL ABORT COULD RESULT IN INABILITY TO COMPLETE A PROPELLANT DUMP (1/1 ABORT)  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE IT WAS DEPENDENT ON A HARDWARE ISSUE (MANIFOLD ISOLATION VALVE FAILED CLOSE), WHICH WAS WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1586  
 NASA FMEA #: 05-6KA-2128-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1586  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE WILL CLOSE THE VALVE AND CAUSE INABILITY TO RE-OPEN IT CAUSING LOSS OF JETS. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY PREVENTS PROPELLANTS TO BE EXPELLED TO MEET LANDING WEIGHT CONSTRAINTS. LOSS OF MANIFOLD THRUSTERS DURING RTLS/TAL ABORT COULD RESULT IN INABILITY TO COMPLETE A PROPELLANT DUMP (1/1 ABORT)  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE IT WAS DEPENDENT ON A HARDWARE ISSUE (MANIFOLD ISOLATION VALVE FAILED CLOSE), WHICH WAS WITHDRAWN.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1588  
 NASA FMEA #: 05-6KA-2128A-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1588  
 ITEM: RELAY

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /    ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. WITH RELAY FAILED HIGH, LOSE CAPABILITY TO CLOSE VALVE. THIS, COUPLED WITH THE LOSS OF ALL HARDWARE REDUNDANCY, MAY PREVENT ISOLATION OF A THRUSTER LEAK.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1589  
 NASA FMEA #: 05-6KA-2081-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1589  
 ITEM: RESISTOR, 12K 1/4W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE NASA CONSIDERED THE GPC SOFTWARE'S USE OF THE MEASUREMENT PROVIDED THROUGH THIS RESISTOR. THIS LED TO NASA ASSIGNING A 1/1 ABORT CRITICALITY, WHICH PUTS THIS FMEA ON THE CIL LIST.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1591  
 NASA FMEA #: 05-6KA-2081-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1591  
 ITEM: RESISTOR, 5.1K 1/4W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[    ]
COMPARE	[    /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ] [    ] [    ] [    ] [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE NASA CONSIDERED THE GPC SOFTWARE'S USE OF THE MEASUREMENT PROVIDED THROUGH THIS RESISTOR. THIS LED TO NASA ASSIGNING A 1/1 ABORT CRITICALITY, WHICH PUTS THIS FMEA ON THE CIL LIST.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1593  
 NASA FMEA #: 05-6KA-2083-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1593  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1595  
 NASA FMEA #: 05-6KA-2083-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1595  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1599  
 NASA FMEA #: 05-6KA-2083-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1599  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1603  
 NASA FMEA #: 05-6KA-2081-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1603  
 ITEM: RESISTOR, 12K 1/4W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE NASA CONSIDERED THE GPC SOFTWARE'S USE OF THE MEASUREMENT PROVIDED THROUGH THIS RESISTOR. THIS LED TO NASA ASSIGNING A 1/1 ABORT CRITICALITY, WHICH PUTS THIS FMEA ON THE CIL LIST.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1604  
 NASA FMEA #: 05-6KA-2081-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1604  
 ITEM: RESISTOR, 12K 1/4W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[    ]
COMPARE	[    /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO DIFFERENCES, EXCEPT FOR NASA'S 1/1 ABORT CRITICALITY.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE NASA  
 CONSIDERED THE GPC SOFTWARE'S USE OF THE MEASUREMENT PROVIDED  
 THROUGH THIS RESISTOR. THIS LED TO NASA ASSIGNING A 1/1 ABORT  
 CRITICALITY, WHICH PUTS THIS FMEA ON THE CIL LIST.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1605  
 NASA FMEA #: 05-6KA-2081-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1605  
 ITEM: RESISTOR, 5.1K 1/4W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[    ]
COMPARE	[    /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE NASA CONSIDERED THE GPC SOFTWARE'S USE OF THE MEASUREMENT PROVIDED THROUGH THIS RESISTOR. THIS LED TO NASA ASSIGNING A 1/1 ABORT CRITICALITY, WHICH PUTS THIS FMEA ON THE CIL LIST.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1607  
 NASA FMEA #: 05-6KA-2086-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1607  
 ITEM: RESISTOR, 5.1K 1/4W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE NASA CONSIDERED THE GPC SOFTWARE'S USE OF THE MEASUREMENT PROVIDED THROUGH THIS RESISTOR. THIS LED TO NASA ASSIGNING A 1/1 ABORT CRITICALITY, WHICH PUTS THIS FMEA ON THE CIL LIST.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1609  
 NASA FMEA #: 05-6KA-2084-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1609  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1611  
 NASA FMEA #: 05-6KA-2086-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1611  
 ITEM: RESISTOR, 5.1K 1/4W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[    ]
COMPARE	[    /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE NASA CONSIDERED THE GPC SOFTWARE'S USE OF THE MEASUREMENT PROVIDED THROUGH THIS RESISTOR. THIS LED TO NASA ASSIGNING A 1/1 ABORT CRITICALITY, WHICH PUTS THIS FMEA ON THE CIL LIST.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1619  
 NASA FMEA #: 05-6KA-2086-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1619  
 ITEM: RESISTOR, 5.1K 1/4W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[    ]
COMPARE	[    /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE NASA CONSIDERED THE GPC SOFTWARE'S USE OF THE MEASUREMENT PROVIDED THROUGH THIS RESISTOR. THIS LED TO NASA ASSIGNING A 1/1 ABORT CRITICALITY, WHICH PUTS THIS FMEA ON THE CIL LIST.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1621  
 NASA FMEA #: 05-6KA-2084-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1621  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1623  
 NASA FMEA #: 05-6KA-2086-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1623  
 ITEM: RESISTOR, 5.1K 1/4W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[    ]
COMPARE	[    /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE NASA CONSIDERED THE GPC SOFTWARE'S USE OF THE MEASUREMENT PROVIDED THROUGH THIS RESISTOR. THIS LED TO NASA ASSIGNING A 1/1 ABORT CRITICALITY, WHICH PUTS THIS FMEA ON THE CIL LIST.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1624  
 NASA FMEA #: 05-6KA-2086-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1624  
 ITEM: RESISTOR, 5.1K 1/4W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[    ]
COMPARE	[    /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO DIFFERENCES, EXCEPT FOR NASA'S 1/1 ABORT CRITICALITY.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE NASA  
 CONSIDERED THE GPC SOFTWARE'S USE OF THE MEASUREMENT PROVIDED  
 THROUGH THIS RESISTOR. THIS LED TO NASA ASSIGNING A 1/1 ABORT  
 CRITICALITY, WHICH PUTS THIS FMEA ON THE CIL LIST.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1625  
 NASA FMEA #: 05-6KA-2084-1  
 SUBSYSTEM: ARCS  
 MDAC ID: 1625  
 ITEM: RESISTOR, 1.2K 2W  
 LEAD ANALYST: D. HARTMAN

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1627  
 NASA FMEA #: 05-6KA-2086-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1627  
 ITEM: RESISTOR, 5.1K 1/4W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[    ]
COMPARE	[    /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE NASA CONSIDERED THE GPC SOFTWARE'S USE OF THE MEASUREMENT PROVIDED THROUGH THIS RESISTOR. THIS LED TO NASA ASSIGNING A 1/1 ABORT CRITICALITY, WHICH PUTS THIS FMEA ON THE CIL LIST.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1631  
 NASA FMEA #: 05-6KA-2086-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1631  
 ITEM: RESISTOR, 5.1K 1/4W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[    ]
COMPARE	[    /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE NASA CONSIDERED THE GPC SOFTWARE'S USE OF THE MEASUREMENT PROVIDED THROUGH THIS RESISTOR. THIS LED TO NASA ASSIGNING A 1/1 ABORT CRITICALITY, WHICH PUTS THIS FMEA ON THE CIL LIST.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1633  
 NASA FMEA #: 05-6KA-2086-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1633  
 ITEM: RESISTOR, 5.1K 1/4W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE NASA CONSIDERED THE GPC SOFTWARE'S USE OF THE MEASUREMENT PROVIDED THROUGH THIS RESISTOR. THIS LED TO NASA ASSIGNING A 1/1 ABORT CRITICALITY, WHICH PUTS THIS FMEA ON THE CIL LIST.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1635  
 NASA FMEA #: 05-6KA-2086-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1635  
 ITEM: RESISTOR, 5.1K 1/4W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[    ]
COMPARE	[    /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE NASA CONSIDERED THE GPC SOFTWARE'S USE OF THE MEASUREMENT PROVIDED THROUGH THIS RESISTOR. THIS LED TO NASA ASSIGNING A 1/1 ABORT CRITICALITY, WHICH PUTS THIS FMEA ON THE CIL LIST.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1637  
 NASA FMEA #: 05-6KA-2084-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1637  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1643  
 NASA FMEA #: 05-6KA-2103-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1643  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1645  
 NASA FMEA #: 05-6KA-2103-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1645  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1649  
 NASA FMEA #: 05-6KA-2103-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1649  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1661  
 NASA FMEA #: 05-6KA-2103-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1661  
 ITEM: RESISTOR, 5.1K 1/4W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDRULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1663  
 NASA FMEA #: 05-6KA-2103-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1663  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1667  
 NASA FMEA #: 05-6KA-2103-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1667  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1683  
 NASA FMEA #: 05-6KA-2089-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1683  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1697  
 NASA FMEA #: 05-6KA-2089-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1697  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1711  
 NASA FMEA #: 05-6KA-2089-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1711  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1725  
 NASA FMEA #: 05-6KA-2089-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1725  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1858  
 NASA FMEA #: 05-6KA-2154-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1858  
 ITEM: L/R OX & FU TK ISOL VLV 3/4/5 A OR B SWITCH  
 TALKBACK

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /    ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1859  
 NASA FMEA #: 05-6KA-2155-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1859  
 ITEM: MANIFOLD 1, 2, 3, 4, 5, L/R OX & FU VLV SWITCH  
 TALKBACK

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /    ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1872  
 NASA FMEA #: 05-6KA-2179-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1872  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[   ]
COMPARE	[ /N ]	[   ]	[ N ]	[   ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS RPC INADVERTENTLY OPERATING ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1874  
 NASA FMEA #: 05-6KA-2179-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1874  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ /N ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS RPC INADVERTENTLY OPERATING ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1880  
 NASA FMEA #: 05-6KA-2179-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1880  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ /N ]	[ ]	[ N ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS RPC INADVERTENTLY OPERATING ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1884  
 NASA FMEA #: 05-6KA-2179-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1884  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[    /N ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS RPC INADVERTENTLY OPERATING ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1889  
 NASA FMEA #: 05-6KA-2179-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1889  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ /N ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [    ] [    ] [    ] [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS RPC INADVERTENTLY OPERATING ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1891  
 NASA FMEA #: 05-6KA-2179-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1891  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ /N ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS RPC INADVERTENTLY OPERATING ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1896  
 NASA FMEA #: 05-6KA-2179-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1896  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ /N ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS RPC INADVERTENTLY OPERATING ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDRULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1900  
 NASA FMEA #: 05-6KA-2179-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1900  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ /N ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [    ] [    ] [    ] [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS RPC INADVERTENTLY OPERATING ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDRULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1904  
 NASA FMEA #: 05-6KA-2184-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1904  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

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 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS RPC INADVERTENTLY OPERATING ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1906  
 NASA FMEA #: 05-6KA-2184-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1906  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

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 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS RPC INADVERTENTLY OPERATING ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDRULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1980  
 NASA FMEA #: 05-6KA-2214-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1980  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ /N ]	[ ]	[ N ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS DRIVER OPERATING ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1982  
 NASA FMEA #: 05-6KA-2214-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1982  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ /N ]	[ ]	[ N ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS DRIVER OPERATING ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1984  
 NASA FMEA #: 05-6KA-2214-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1984  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[    /N ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS DRIVER OPERATING ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1986  
 NASA FMEA #: 05-6KA-2214-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1986  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ /N ]	[ ]	[ N ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS DRIVER OPERATING ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1988  
 NASA FMEA #: 05-6KA-2214-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1988  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ /N ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [    ] [    ] [    ] [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS DRIVER OPERATING ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1990  
 NASA FMEA #: 05-6KA-2214-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1990  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ /N ]	[ ]	[ N ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS DRIVER OPERATING ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1992  
 NASA FMEA #: 05-6KA-2214-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1992  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[    /N ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS DRIVER OPERATING ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1994  
 NASA FMEA #: 05-6KA-2214-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1994  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ /N ]	[ ]	[ N ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS DRIVER OPERATING ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1996  
 NASA FMEA #: 05-6KA-2220-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1996  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDRULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-1998  
 NASA FMEA #: 05-6KA-2220-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 1998  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-2000  
 NASA FMEA #: 05-6KA-2185-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 2000  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS DRIVER INADVERTENTLY OPERATING ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-2002  
 NASA FMEA #: 05-6KA-2185-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 2002  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS DRIVER INADVERTENTLY OPERATING ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES. IOA RETAINS A CONCERN OF THE LOW PROBABILITY OF MULTIPLE FAILURES OCCURRING SIMULTANEOUSLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-2334  
 NASA FMEA #: NONE

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM: ARCS  
 MDAC ID: 2334  
 ITEM: THERMOSTAT, PRIMARY THRUSTERS, +X AXIS

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

PROPELLANT IN JET MAY FREEZE. IF JET IS REQUIRED, ORBITER ORIENT ITSELF TOWARD SOLAR HEATING. THIS MAY AFFECT MISSION OPERATIONS. IOA RECOMMENDS THE PRIMARY THRUSTER THERMOSTATS BE INCORPORATED INTO A FMEA.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE THESE THERMOSTATS ARE WITHIN THE PRIMARY THRUSTER ASSEMBLY, AND SO IS CONSIDERED TO BE COVERED BY THAT HARDWARE THRUSTER'S FMEA. IOA MAINTAINS A CONCERN THAT THIS ITEM SHOULD BE COVERED SEPARATELY.





APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-2340  
 NASA FMEA #: NONE

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM: ARCS  
 MDAC ID: 2340  
 ITEM: THERMOSTAT, VERNIER THRUSTERS, ALL AXES

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N / N ]	[    ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

PROPELLANT IN JET MAY FREEZE. NO REDUNDANCY PROVIDED. THIS MAY EFFECT MISSION OPERATIONS. IOA RECOMMENDS THIS FAILURE BE INCORPORATED INTO A FMEA.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE THESE THERMOSTATS ARE WITHIN THE VERNIER THRUSTER ASSEMBLY, AND SO IS CONSIDERED TO BE COVERED BY THAT HARDWARE THRUSTER'S FMEA. IOA MAINTAINS A CONCERN THAT THIS ITEM SHOULD BE COVERED SEPARATELY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12004X  
 NASA FMEA #: 05-6KA-2032-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12004  
 ITEM: MANIFOLD #5, L/R OX & FU ISOL VLV SWITCH

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ NA ]	[ P ]	[    ]
COMPARE	[ / ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [    ] [    ] [    ] [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. INABILITY TO CLOSE THE VALVE PREVENTS ISOLATION OF A THRUSTER LEAK.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12006X  
 NASA FMEA #: 05-6KA-2032-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12006  
 ITEM: MANIFOLD #5, L/R OX & FU ISOL VLV SWITCH

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ NA ]	[ P ]	[    ]
COMPARE	[ / ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [    ] [    ] [    ] [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. INABILITY TO CLOSE THE VALVE PREVENTS ISOLATION OF A THRUSTER LEAK.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12008X  
 NASA FMEA #: 05-6KA-2090-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12008  
 ITEM: RESISTOR, 1.2K 2W

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ /N ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [    ] [    ] [    ] [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12016X  
 NASA FMEA #: 05-6KA-2156-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12016  
 ITEM: EVENT INDICATOR

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ /N ]	[ ]	[ N ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS. FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12019X  
 NASA FMEA #: 05-6KA-2177-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12019  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12020X  
 NASA FMEA #: 05-6KA-2178-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12020  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:  
 LOSE CAPABILITY TO OPEN THE ISOLATION VALVE. THIS PREVENTS  
 VERNIER OPERATION THUS LOSS OF MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE. THE MANIFOLD 5 VALVE  
 IS NOMINALLY ALWAYS OPEN, SO ANOTHER FAILURE (LEAK) IS REQUIRED  
 TO CAUSE THE CREW TO CLOSE THE VALVE BEFORE AN "INABILITY TO OPEN  
 VALVE" FAILURE HAS AN EFFECT.  
 ALSO, IOA HAD IMPROPERLY TIED THIS FAILURE TO THE HARDWARE FMEA  
 FOR MANIFOLD 5 VALVE FAILED CLOSED, WHICH IS A CRIT 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12021X  
 NASA FMEA #: 05-6KA-2178-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12021  
 ITEM: CONTROLLER, REMOTE POWER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12022X  
 NASA FMEA #: 05-6KA-2210A-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12022  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[    /N ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE STATUS. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12024X  
 NASA FMEA #: 05-6KA-2210-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12024  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[    /N ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE STATUS. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12025X  
 NASA FMEA #: 05-6KA-2210-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12025  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

THIS FAILURE CAUSES INABILITY TO OPEN THE ISOLATION VALVE WHICH CAUSES LOSS OF MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE. THE MANIFOLD 5 VALVE IS NOMINALLY ALWAYS OPEN, SO ANOTHER FAILURE (LEAK) IS REQUIRED TO CAUSE THE CREW TO CLOSE THE VALVE BEFORE AN "INABILITY TO OPEN VALVE" FAILURE HAS AN EFFECT.  
 ALSO, IOA HAD IMPROPERLY TIED THIS FAILURE TO THE HARDWARE FMEA FOR MANIFOLD 5 VALVE FAILED CLOSED, WHICH IS A CRIT 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12027X  
 NASA FMEA #: 05-6KA-2213-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12027  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDRULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12029X  
 NASA FMEA #: 05-6KA-2212-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12029  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12030X  
 NASA FMEA #: 05-6KA-2211-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12030  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 2R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSE CAPABILITY TO OPEN THE ISOLATION VALVE. THIS PREVENTS  
 VERNIER OPERATION THUS LOSS OF MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE. THE MANIFOLD 5 VALVE  
 IS NOMINALLY ALWAYS OPEN, SO ANOTHER FAILURE (LEAK) IS REQUIRED  
 TO CAUSE THE CREW TO CLOSE THE VALVE BEFORE AN "INABILITY TO OPEN  
 VALVE" FAILURE HAS AN EFFECT.  
 ALSO, IOA HAD IMPROPERLY TIED THIS FAILURE TO THE HARDWARE FMEA  
 FOR MANIFOLD 5 VALVE FAILED CLOSED, WHICH IS A CRIT 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12031X  
 NASA FMEA #: 05-6KA-2211-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12031  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12032X  
 NASA FMEA #: 05-6KA-2213A-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12032  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSE CAPABILITY TO OPEN THE ISOLATION VALVE. THIS PREVENTS  
 VERNIER OPERATION THUS LOSS OF MISSION OPERATIONS.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE. THE MANIFOLD 5 VALVE  
 IS NOMINALLY ALWAYS OPEN, SO ANOTHER FAILURE (LEAK) IS REQUIRED  
 TO CAUSE THE CREW TO CLOSE THE VALVE BEFORE AN "INABILITY TO OPEN  
 VALVE" FAILURE HAS AN EFFECT.  
 ALSO, IOA HAD IMPROPERLY TIED THIS FAILURE TO THE HARDWARE FMEA  
 FOR MANIFOLD 5 VALVE FAILED CLOSED, WHICH IS A CRIT 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12033X  
 NASA FMEA #: 05-6KA-2213A-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12033  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ / ]	[ ]	[ N ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12034X  
 NASA FMEA #: 05-6KA-2224-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12034  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSE CAPABILITY TO OPEN THE ISOLATION VALVE. THIS PREVENTS  
 VERNIER OPERATION THUS LOSS OF MISSION OBJECTIVES.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE. THE MANIFOLD 5 VALVE  
 IS NOMINALLY ALWAYS OPEN, SO ANOTHER FAILURE (LEAK) IS REQUIRED  
 TO CAUSE THE CREW TO CLOSE THE VALVE BEFORE AN "INABILITY TO OPEN  
 VALVE" FAILURE HAS AN EFFECT.  
 ALSO, IOA HAD IMPROPERLY TIED THIS FAILURE TO THE HARDWARE FMEA  
 FOR MANIFOLD 5 VALVE FAILED CLOSED, WHICH IS A CRIT 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12035X  
 NASA FMEA #: 05-6KA-2224-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12035  
 ITEM: DRIVER, HYBRID

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12036X  
 NASA FMEA #: 05-6KA-2257-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12036  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12037X  
 NASA FMEA #: 05-6KA-2257-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12037  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

THIS FAILURE CAUSES THE INABILITY TO OPEN THE VALVE. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY CAUSES LOSS OF MISSION OPERATIONS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE. THE MANIFOLD 5 VALVE IS NOMINALLY ALWAYS OPEN, SO ANOTHER FAILURE (LEAK) IS REQUIRED TO CAUSE THE CREW TO CLOSE THE VALVE BEFORE AN "INABILITY TO OPEN VALVE" FAILURE HAS AN EFFECT.

ALSO, THE VALVE WILL NOT NEED TO BE OPENED AFTER A LEAK, ANYWAY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12038X  
 NASA FMEA #: 05-6KA-2257A-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12038  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDRULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12052X  
 NASA FMEA #: 05-6KA-2258-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12052  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSE CAPABILITY TO OPEN THE VALVE. THIS PREVENTS VERNIER  
 OPERATION THUS LOSS OF MISSION OBJECTIVES  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE. THE MANIFOLD 5 VALVE  
 IS NOMINALLY ALWAYS OPEN, SO ANOTHER FAILURE (LEAK) IS REQUIRED  
 TO CAUSE THE CREW TO CLOSE THE VALVE BEFORE AN "INABILITY TO OPEN  
 VALVE" FAILURE HAS AN EFFECT.  
 ALSO, IOA HAD IMPROPERLY TIED THIS FAILURE TO THE HARDWARE FMEA  
 FOR MANIFOLD 5 VALVE FAILED CLOSED, WHICH IS A CRIT 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12072X  
 NASA FMEA #: 05-6KA-2280-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12072  
 ITEM: CIRCUIT BREAKER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSE CAPABILITY TO OPEN THE VALVE. THIS PREVENTS VERNIER OPERATION THUS LOSS OF MISSION OBJECTIVES  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE. THE MANIFOLD 5 VALVE IS NOMINALLY ALWAYS OPEN, SO ANOTHER FAILURE (LEAK) IS REQUIRED TO CAUSE THE CREW TO CLOSE THE VALVE BEFORE AN "INABILITY TO OPEN VALVE" FAILURE HAS AN EFFECT.  
 ALSO, IOA HAD IMPROPERLY TIED THIS FAILURE TO THE HARDWARE FMEA FOR MANIFOLD 5 VALVE FAILED CLOSED, WHICH IS A CRIT 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12073X  
 NASA FMEA #: 05-6KA-2280-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12073  
 ITEM: CIRCUIT BREAKER

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12083X  
 NASA FMEA #: 05-6KA-2028-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12083  
 ITEM: L/R OX & FU TK ISOL VLV 1/2 SWITCH

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

SWITCH FAILED SHORT ACROSS OPEN CONTACTS CAUSES INABILITY TO CLOSE THE VALVE. THIS PREVENTS CROSSFEED CAPABILITY THUS LOSS OF MISSION. INABILITY TO CROSSFEED DURING AN RTLS/TAL ABORT MAY CAUSE INCOMPLETE OMS ABORT DUMP.

FINAL RESOLUTION: IOA RELUCTANTLY WITHDREW THIS ISSUE, BECAUSE IOA HAD MISINTERPRETED NASA'S TOGGLE SWITCH FAILURE MODE FOR THIS FMEA. IOA STILL RECOMMENDS CONSIDERING IOA'S FAILURE MODE.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12084X  
 NASA FMEA #: 05-6KA-2028-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12084  
 ITEM: L/R OX & FU TK ISOL VLV 1/2 SWITCH

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

SWITCH FAILED SHORT ACROSS OPEN CONTACTS CAUSES INABILITY TO CLOSE THE VALVE. THIS PREVENTS CROSSFEED CAPABILITY THUS LOSS OF MISSION. INABILITY TO CROSSFEED DURING AN RTLS/TAL ABORT MAY CAUSE INCOMPLETE OMS ABORT DUMP.

FINAL RESOLUTION: IOA RELUCTANTLY WITHDREW THIS ISSUE, BECAUSE IOA HAD MISINTERPRETED NASA'S TOGGLE SWITCH FAILURE MODE FOR THIS FMEA. IOA STILL RECOMMENDS CONSIDERING IOA'S FAILURE MODE.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12086X  
 NASA FMEA #: 05-6KA-2253-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12086  
 ITEM: DIODE - LIMIT SWITCH (OPEN CIRCUIT)

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12088X  
 NASA FMEA #: 05-6KA-2253-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12088  
 ITEM: DIODE - LIMIT SWITCH (CLOSED CIRCUIT)

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12098X  
 NASA FMEA #: 05-6KA-2253E-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12098  
 ITEM: DIODE - MANUAL OPEN/CLOSE INHIBIT

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12099X  
 NASA FMEA #: 05-6KA-2253E-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12099  
 ITEM: DIODE - MANUAL OPEN/CLOSE INHIBIT

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE CAUSES INABILITY TO CLOSE THE VALVE THUS PREVENTING CROSSFEED OPERATIONS. INABILITY TO CROSSFEED DURING RTLS/TAL ABORT MAY CAUSE INCOMPLETE OMS ABORT DUMP.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12100X  
 NASA FMEA #: 05-6KA-2253F-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12100  
 ITEM: DIODE - MANUAL CLOSE/OPEN INHIBIT

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12101X  
 NASA FMEA #: 05-6KA-2253F-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12101  
 ITEM: DIODE - MANUAL CLOSE/OPEN INHIBIT

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12103X  
 NASA FMEA #: 05-6KA-2029-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12103  
 ITEM: L/R OX & FU TK ISOL VLV 3/4/5 A OR B SWITCH

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

SWITCH FAILED SHORT ACROSS OPEN CONTACTS CAUSES INABILITY TO CLOSE THE VALVE. THIS PREVENTS CROSSFEED CAPABILITY THUS LOSS OF MISSION. INABILITY TO CROSSFEED DURING AN RTLS/TAL ABORT MAY CAUSE INCOMPLETE OMS ABORT DUMP.

FINAL RESOLUTION: IOA RELUCTANTLY WITHDREW THIS ISSUE, BECAUSE IOA HAD MISINTERPRETED NASA'S TOGGLE SWITCH FAILURE MODE FOR THIS FMEA. IOA STILL RECOMMENDS CONSIDERING IOA'S FAILURE MODE.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12104X  
 NASA FMEA #: 05-6KA-2029-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12104  
 ITEM: L/R OX & FU TK ISOL VLV 3/4/5 A OR B SWITCH

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

SWITCH FAILED SHORT ACROSS OPEN CONTACTS CAUSES INABILITY TO CLOSE THE VALVE. THIS PREVENTS CROSSFEED CAPABILITY THUS LOSS OF MISSION. INABILITY TO CROSSFEED DURING AN RTLS/TAL ABORT MAY CAUSE INCOMPLETE OMS ABORT DUMP.

FINAL RESOLUTION: IOA RELUCTANTLY WITHDREW THIS ISSUE, BECAUSE IOA HAD MISINTERPRETED NASA'S TOGGLE SWITCH FAILURE MODE FOR THIS FMEA. IOA STILL RECOMMENDS CONSIDERING IOA'S FAILURE MODE.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12105X  
 NASA FMEA #: 05-6KA-2029-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12105  
 ITEM: L/R OX & FU TK ISOL VLV 3/4/5 A OR B SWITCH

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

SWITCH FAILED SHORT ACROSS OPEN CONTACTS CAUSES INABILITY TO CLOSE THE VALVE. THIS PREVENTS CROSSFEED CAPABILITY THUS LOSS OF MISSION. INABILITY TO CROSSFEED DURING AN RTLS/TAL ABORT MAY CAUSE INCOMPLETE OMS ABORT DUMP.

FINAL RESOLUTION: IOA RELUCTANTLY WITHDREW THIS ISSUE, BECAUSE IOA HAD MISINTERPRETED NASA'S TOGGLE SWITCH FAILURE MODE FOR THIS FMEA. IOA STILL RECOMMENDS CONSIDERING IOA'S FAILURE MODE.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12109X  
 NASA FMEA #: 05-6KA-2254-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12109  
 ITEM: DIODE - LIMIT SWITCH (CLOSE CIRCUIT)

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (if applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.





APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12121X  
 NASA FMEA #: 05-6KA-2254F-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12121  
 ITEM: DIODE - MANUAL CLOSE/OPEN INHIBIT

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12122X  
 NASA FMEA #: 05-6KA-2254F-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12122  
 ITEM: DIODE - MANUAL CLOSE/OPEN INHIBIT

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE CAUSES THE VALVE TO CLOSE. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY CAUSES INABILITY TO EXPEL PROPELLANTS TO MEET LANDING WEIGHT CONSTRAINTS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE IOA'S AND NASA'S CRITS AND SCREENS ARE THE SAME. IOA STILL RECOMMENDS MODIFYING NASA'S EFFECTS FIELD WITH IOA'S FAILURE SCENARIO.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12126X  
 NASA FMEA #: 05-6KA-2039-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12126  
 ITEM: L/R OX & FU CROSSFEED VLV 1/2 SWITCH 32, 34

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE WILL CLOSE THE VALVE AND CAUSE INABILITY TO RE-OPEN IT. THIS PREVENTS CROSSFEED CAPABILITY THUS LOSS OF MISSION. INABILITY TO CROSSFEED MAY CAUSE INCOMPLETE OMS ABORT DUMP DURING RTLS/TAL - 1/1 ABORT.

FINAL RESOLUTION: IOA RELUCTANTLY WITHDREW THIS ISSUE, BECAUSE IOA HAD MISINTERPRETED NASA'S TOGGLE SWITCH FAILURE MODE FOR THIS FMEA. IOA STILL RECOMMENDS CONSIDERING IOA'S FAILURE MODE.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12127X  
 NASA FMEA #: 05-6KA-2039-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12127  
 ITEM: L/R OX & FU CROSSFEED VLV 1/2 SWITCH 32, 34

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE WILL CLOSE THE VALVE AND CAUSE INABILITY TO RE-OPEN IT. THIS PREVENTS CROSSFEED CAPABILITY THUS LOSS OF MISSION. INABILITY TO CROSSFEED MAY CAUSE INCOMPLETE OMS ABORT DUMP DURING RTLS/TAL - 1/1 ABORT.

FINAL RESOLUTION: IOA RELUCTANTLY WITHDREW THIS ISSUE, BECAUSE IOA HAD MISINTERPRETED NASA'S TOGGLE SWITCH FAILURE MODE FOR THIS FMEA. IOA STILL RECOMMENDS CONSIDERING IOA'S FAILURE MODE.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12130X  
 NASA FMEA #: 05-6KA-2261-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12130  
 ITEM: DIODE - LIMIT SWITCH (OPEN CIRCUIT)

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12132X  
 NASA FMEA #: 05-6KA-2261-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12132  
 ITEM: DIODE - LIMIT SWITCH (CLOSED CIRCUIT)

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12143X  
 NASA FMEA #: 05-6KA-2261E-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12143  
 ITEM: DIODE - MANUAL OPEN/CLOSE INHIBIT

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE CAUSES THE INABILITY TO CLOSE THE VALVE TO ISOLATE A THRUSTER LEAK.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE IOA'S AND NASA'S CRITS AND SCREENS ARE THE SAME. IOA STILL RECOMMENDS MODIFYING NASA'S EFFECTS FIELD WITH IOA'S FAILURE SCENARIO.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12144X  
 NASA FMEA #: 05-6KA-2261F-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12144  
 ITEM: DIODE - MANUAL CLOSE/OPEN INHIBIT

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDRULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12145X  
 NASA FMEA #: 05-6KA-2261F-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12145  
 ITEM: DIODE - MANUAL CLOSE/OPEN INHIBIT

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12148X  
 NASA FMEA #: 05-6KA-2039-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12148  
 ITEM: L/R OX & FU CROSSFEED VLV 3/4/5 SWITCH 33, 35

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE WILL CLOSE THE VALVE AND CAUSE INABILITY TO RE-OPEN IT. THIS PREVENTS CROSSFEED CAPABILITY THUS LOSS OF MISSION. INABILITY TO CROSSFEED MAY CAUSE INCOMPLETE OMS ABORT DUMP DURING RTLS/TAL - 1/1 ABORT.

FINAL RESOLUTION: IOA RELUCTANTLY WITHDREW THIS ISSUE, BECAUSE IOA HAD MISINTERPRETED NASA'S TOGGLE SWITCH FAILURE MODE FOR THIS FMEA. IOA STILL RECOMMENDS CONSIDERING IOA'S FAILURE MODE.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12153X  
 NASA FMEA #: 05-6KA-2261-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12153  
 ITEM: DIODE - LIMIT SWITCH (CLOSED CIRCUIT)

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

C-6

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12163X  
 NASA FMEA #: 05-6KA-2261E-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12163  
 ITEM: DIODE - MANUAL OPEN/CLOSE INHIBIT

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12164X  
 NASA FMEA #: 05-6KA-2261E-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12164  
 ITEM: DIODE - MANUAL OPEN/CLOSE INHIBIT

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE CAUSES THE INABILITY TO CLOSE THE VALVE TO ISOLATE A THRUSTER LEAK.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE IOA'S AND NASA'S CRITS AND SCREENS ARE THE SAME. IOA STILL RECOMMENDS MODIFYING NASA'S EFFECTS FIELD WITH IOA'S FAILURE SCENARIO..

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12165X  
 NASA FMEA #: 05-6KA-2261F-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12165  
 ITEM: DIODE - MANUAL CLOSE/OPEN INHIBIT

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12166X  
 NASA FMEA #: 05-6KA-2261F-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12166  
 ITEM: DIODE - MANUAL CLOSE/OPEN INHIBIT

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12192X  
 NASA FMEA #: 05-6KA-2255-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12192  
 ITEM: DIODE - LIMIT SWITCH (OPEN CIRCUIT)

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.





APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12205X  
 NASA FMEA #: 05-6KA-2255E-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12205  
 ITEM: DIODE - MANUAL OPEN/CLOSE INHIBIT

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE CAUSES INABILITY TO CLOSE THE VALVE TO ISOLATE A THRUSTER LEAK.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE IOA'S AND NASA'S CRITS AND SCREENS ARE THE SAME. IOA STILL RECOMMENDS MODIFYING NASA'S EFFECTS FIELD WITH IOA'S FAILURE SCENARIO.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12206X  
 NASA FMEA #: 05-6KA-2255F-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12206  
 ITEM: DIODE - MANUAL CLOSE/OPEN INHIBIT

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NTS 22206 REDUNDANCY GROUNDRULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12207X  
 NASA FMEA #: 05-6KA-2255F-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12207  
 ITEM: DIODE - MANUAL CLOSE/OPEN INHIBIT

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE INABILITY TO OPEN THE VALVE IF COMMAND WAS FROM THE GPC. LOSS OF ALL REDUNDANCY TO OPEN THE VALVE PREVENT PROPELLANTS TO BE EXPELLED TO MEET LANDING CONSTRAINTS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE IOA'S AND NASA'S CRITS AND SCREENS ARE THE SAME. IOA STILL RECOMMENDS MODIFYING NASA'S EFFECTS FIELD WITH IOA'S FAILURE SCENARIO.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12210X  
 NASA FMEA #: 05-6KA-2255-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12210  
 ITEM: DIODE - LIMIT SWITCH (CLOSE CIRCUIT)

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12221X  
 NASA FMEA #: 05-6KA-2255E-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12221  
 ITEM: DIODE - MANUAL OPEN/CLOSE INHIBIT

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE CAUSES INABILITY TO CLOSE THE VALVE TO ISOLATE A THRUSTER LEAK. FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE IOA'S AND NASA'S CRITS AND SCREENS ARE THE SAME. IOA STILL RECOMMENDS MODIFYING NASA'S EFFECTS FIELD WITH IOA'S FAILURE SCENARIO..



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12223X  
 NASA FMEA #: 05-6KA-2255F-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12223  
 ITEM: DIODE - MANUAL CLOSE/OPEN INHIBIT

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE INABILITY TO OPEN THE VALVE IF COMMAND WAS FROM THE GPC. LOSS OF ALL REDUNDANCY TO OPEN THE VALVE PREVENT PROPELLANTS TO BE EXPELLED TO MEET LANDING CONS

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE IOA'S AND NASA'S CRITS AND SCREENS ARE THE SAME. IOA STILL RECOMMENDS MODIFYING NASA'S EFFECTS FIELD WITH IOA'S FAILURE SCENARIO..

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12224X  
 NASA FMEA #: 05-6KA-2255-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12224  
 ITEM: DIODE - LIMIT SWITCH (OPEN CIRCUIT)

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12226X  
 NASA FMEA #: 05-6KA-2255-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12226  
 ITEM: DIODE - LIMIT SWITCH (CLOSE CIRCUIT)

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12237X  
 NASA FMEA #: 05-6KA-2255E-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12237  
 ITEM: DIODE - MANUAL OPEN/CLOSE INHIBIT

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE CAUSES INABILITY TO CLOSE THE VALVE TO ISOLATE A THRUSTER LEAK.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE IOA'S AND NASA'S CRITS AND SCREENS ARE THE SAME. IOA STILL RECOMMENDS MODIFYING NASA'S EFFECTS FIELD WITH IOA'S FAILURE SCENARIO..

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12238X  
 NASA FMEA #: 05-6KA-2255F-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12238  
 ITEM: DIODE - MANUAL CLOSE/OPEN INHIBIT

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12239X  
 NASA FMEA #: 05-6KA-2255F-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12239  
 ITEM: DIODE - MANUAL CLOSE/OPEN INHIBIT

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE INABILITY TO OPEN THE VALVE IF COMMAND WAS FROM THE GPC. LOSS OF ALL REDUNDANCY TO OPEN THE VALVE PREVENT PROPELLANTS TO BE EXPELLED TO MEET LANDING CONS

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE IOA'S AND NASA'S CRITS AND SCREENS ARE THE SAME. IOA STILL RECOMMENDS MODIFYING NASA'S EFFECTS FIELD WITH IOA'S FAILURE SCENARIO..

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12240X  
 NASA FMEA #: 05-6KA-2255-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12240  
 ITEM: DIODE - LIMIT SWITCH (OPEN CIRCUIT)

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12242X  
 NASA FMEA #: 05-6KA-2255-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12242  
 ITEM: DIODE - LIMIT SWITCH (CLOSE CIRCUIT)

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUND RULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12252X  
 NASA FMEA #: 05-6KA-2255E-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12252  
 ITEM: DIODE - MANUAL OPEN/CLOSE INHIBIT

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONTAINS MULTIPLE FAILURES. THIS FAILURE ALONE HAS NO EFFECT.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, ACCEPTING NASA'S MORE CONSERVATIVE INTERPRETATION OF NSTS 22206 REDUNDANCY GROUNDRULES.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12253X  
 NASA FMEA #: 05-6KA-2255E-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12253  
 ITEM: DIODE - MANUAL OPEN/CLOSE INHIBIT

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE CAUSES INABILITY TO CLOSE THE VALVE TO ISOLATE A THRUSTER LEAK. FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE IOA'S AND NASA'S CRITS AND SCREENS ARE THE SAME. IOA STILL RECOMMENDS MODIFYING NASA'S EFFECTS FIELD WITH IOA'S FAILURE SCENARIO..



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12255X  
 NASA FMEA #: 05-6KA-2255F-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12255  
 ITEM: DIODE - MANUAL CLOSE/OPEN INHIBIT

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ / ]	[ ]	[ ]	[ ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE INABILITY TO OPEN THE VALVE IF COMMAND WAS FROM THE GPC. LOSS OF ALL REDUNDANCY TO OPEN THE VALVE PREVENT PROPELLANTS TO BE EXPELLED TO MEET LANDING CONS

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE IOA'S AND NASA'S CRITS AND SCREENS ARE THE SAME. IOA STILL RECOMMENDS MODIFYING NASA'S EFFECTS FIELD WITH IOA'S FAILURE SCENARIO..



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12260X  
 NASA FMEA #: 05-6KA-2035-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12260  
 ITEM: RJDA1B L1/L5/R1 MANIFOLD LOGIC SWITCH 3

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO DIFFERENCES FOR MANIFOLDS 1-4. NASA FMEA SHOULD INCLUDE BOTH MANIFOLD 5 EFFECTS ALSO (2/2)..  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE IOA'S AND NASA'S CRITS AND SCREENS ARE THE SAME. IOA STILL RECOMMENDS MODIFYING NASA'S EFFECTS FIELD.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12280X  
 NASA FMEA #: 05-6KA-2035-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12280  
 ITEM: RJDA2B L3/R3/R5 MANIFOLD LOGIC SWITCH 3

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO DIFFERENCES FOR MANIFOLDS 1-4. NASA FMEA SHOULD INCLUDE BOTH  
 MANIFOLD 5 EFFECTS ALSO (2/2)..  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE IOA'S AND  
 NASA'S CRITS AND SCREENS ARE THE SAME. IOA STILL RECOMMENDS  
 MODIFYING NASA'S EFFECTS FIELD.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12329X  
 NASA FMEA #: NONE

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM: ARCS  
 MDAC ID: 12329  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

THIS FAILED OPEN DIODE CAUSES INABILITY TO OPEN THE VALVE.  
 REDUNDANCY PROVIDED BY OTHER VALVE. LOSS OF THIS CAUSES  
 INABILITY TO EXPEL PROPELLANTS TO MEET LANDING WEIGHT  
 CONSTRAINTS.

FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE THESE DIODES  
 ARE WITHIN THE HELIUM PRESSURE ISO VALVE ASSEMBLY, AND SO IS  
 CONSIDERED TO BE COVERED BY THAT HARDWARE VALVE'S FMEA. IOA  
 MAINTAINS A CONCERN THAT THIS ITEM SHOULD BE COVERED SEPARATELY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12332X  
 NASA FMEA #: NONE

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM: ARCS  
 MDAC ID: 12332  
 ITEM: MICROSWITCH

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N / N ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

THE MICROSWITCH FAILURE ACROSS THE CLOSE CONTACTS WILL NOT ALLOW THE VALVE TO BE CLOSED. THIS PREVENTS CROSSFEED CAPABILITY THUS LOSS OF MISSION OPERATIONS. INABILITY TO CROSSFEED DURING RTLS/TAL MAY CAUSE INCOMPLETE OMS ABORT DUMP.  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE, BECAUSE THESE (LIMIT) MICROSWITCHES ARE WITHIN THE TANK ISO VALVE 1/2 ASSEMBLY, AND SO IS CONSIDERED TO BE COVERED BY THAT VALVE'S FMEA. IOA MAINTAINS A CONCERN THAT THIS ITEM SHOULD BE COVERED SEPARATELY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
 ASSESSMENT ID: ARCS-12344X  
 NASA FMEA #: 05-6KA-2258-3

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: ARCS  
 MDAC ID: 12344  
 ITEM: DIODE

LEAD ANALYST: D. HARTMAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSE CAPABILITY TO OPEN THE VALVE. THIS PREVENTS VERNIER  
 OPERATION THUS LOSS OF MISSION OBJECTIVES  
 FINAL RESOLUTION: IOA WITHDREW THIS ISSUE. THE MANIFOLD 5 VALVE  
 IS NOMINALLY ALWAYS OPEN, SO ANOTHER FAILURE (LEAK) IS REQUIRED  
 TO CAUSE THE CREW TO CLOSE THE VALVE BEFORE AN "INABILITY TO OPEN  
 VALVE" FAILURE HAS AN EFFECT.  
 ALSO, IOA HAD IMPROPERLY TIED THIS FAILURE TO THE HARDWARE FMEA  
 FOR MANIFOLD 5 VALVE FAILED CLOSED, WHICH IS A CRIT 2/2.



SECTION C.19  
COMMUNICATIONS AND TRACKING  
SUBSYSTEM

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88  
 ASSESSMENT ID: COMTRK-1045  
 NASA FMEA #: 05-2G-21500-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM & TRACK  
 MDAC ID:             1045  
 ITEM:                NETWORK SIGNAL PROCESSOR, DL SECTION

LEAD ANALYST:        A.W. ADDIS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ NA ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF ACTIVE NSP DOWNLINK COULD CAUSE MINIMUM DURATION FLIGHT BECAUSE ONLY ONE NSP PATH WOULD REMAIN FOR INSIGHT INTO VEHICLE SYSTEMS VIA TELEMETRY. IOA ACCEPTS NASA FMEA CRITICALITY BASED ON ACCOMPLISHING FM DOWNLINK OF TELEMETRY DATA THROUGH USE OF A CABLE KIT WHICH ALLOWS USE OF THE FM SIGNAL PROCESSOR AND FM TRANSMITTER FOR DOWNLINKING DATA AFTER FAILURE OF SECOND NSP.





APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88  
 ASSESSMENT ID: COMTRK-1052  
 NASA FMEA #: 05-2G-21801-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM & TRACK  
 MDAC ID: 1052  
 ITEM: NSP ENCRYPTION MODE SWITCH

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ NA ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

SAME FAILURE MODES COULD PREVENT PROPER SELECTION OF "NSP ENCRYPTION SELECT" FUNCTIONS "T/R" OR "REV" ENCRYPTION/DECRYPTION OF NSP DATA. THERE IS NOT HARDWARE OR COMMAND REDUNDANCY FOR THE SWITCH'S FUNCTION. RECOMMEND FMEA UPGRADE TO 2/2 (CIL STATUS). AFTER NASA FMEA/CIL REEVALUATION, NASA REASSIGNED CRITICALITY FROM 2/1R TO 2/2. IOA AND NASA NOW AGREE.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88  
 ASSESSMENT ID: COMTRK-1053  
 NASA FMEA #: 05-2G-21802-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM & TRACK  
 MDAC ID: 1053  
 ITEM: NSP ENCRYPTION SELECT SWITCH

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ NA ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

SAME FAILURE MODES (e.g., FAIL MID-TRAVEL) COULD PREVENT SELECTION OF "NSP ENCRYPTION SELECT" FUNCTIONS FOR SELECTION OF "T/R" OR "REV" ENCRYPTION/DECRYPTION OF NSP DATA. THERE IS NO HARDWARE OR COMMAND REDUNDANCY FOR THE SWITCH'S FUNCTION. IOA CRITICALITY AGREES WITH NASA FMEA/CIL 05-2G-21802-2 (CRIT-2/2) FOR COMPLETE SWITCH FAILURE. SWITCH HAS DUAL SET OF CONTACTS THAT MUST BE INVOLVED IN THE FAILURE.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88  
 ASSESSMENT ID: COMTRK-1054  
 NASA FMEA #: 05-2G-21802-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM & TRACK  
 MDAC ID: 1054  
 ITEM: NSP ENCRYPTION SELECT SWITCH

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ NA ]	[ P ]	[ X ] *
IOA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

SAME FAILURE MODES COULD PREVENT PROPER SELECTION OF "NSP ENCRYPTION SELECT" FUNCTIONS "T/R" OR "REV" ENCRYPTION/DECRYPTION OF NSP DATA. THERE IS NOT HARDWARE OR COMMAND REDUNDANCY FOR THE SWITCH'S FUNCTION. RECOMMEND FMEA UPGRADE TO 2/2 (CIL STATUS). AFTER NASA FMEA/CIL REEVALUATION, NASA REASSIGNED CRITICALITY FROM 2/1R TO 2/2. IOA AND NASA NOW AGREE.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88  
 ASSESSMENT ID: COMTRK-1056  
 NASA FMEA #: 05-2G-21803-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM & TRACK  
 MDAC ID:             1056  
 ITEM:                ENCRYPTION ZEROIZE/NORMAL SWITCH

LEAD ANALYST:        A.W. ADDIS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[   ]	[   ]	[   ]	[   ] *
IOA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[   ]	[   ]	[   ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]  
 INADEQUATE [   ]

REMARKS:

BRIDGING SHORT IN SWITCH COULD CAUSE INADVERTENT ZEROIZING OF THE KEY, CAUSING LOSS OF ENCRYPTION/DECRYPTION CAPABILITY AND LOSS OF MISSION. IOA ACCEPTS NASA REVISED CRITICALITY 3/2R BASED ON NON VIABLE FAILURE FOR BOTH SETS OF CONTACTS TO FAIL SINCE SWITCH IS NOT USED DURING FLIGHT.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88  
 ASSESSMENT ID: COMTRK-1068  
 NASA FMEA #: 05-6PG-22000-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM & TRACK  
 MDAC ID: 1068  
 ITEM: UPLINK BLOCK SWITCH

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

IOA 1068 ASSIGNS 2/1R FOR ORBIT OPS - LOSS OF MISSION PLUS POSSIBLE LOSS OF CREW/VEHICLE FOR FAILURE OF ALL PATHS FOR STATE VECTOR UPDATE. (NASA FMEA WRITEUP ACKNOWLEDGES THE 1R FUNCTIONAL CRITICALITY BUT FMEA ASSIGNS FUNCTIONAL CRITICALITY 2). IOA ACCEPTS THE NASA CRITICALITY BASED ON ORBITER WIRING CHANGES WHICH PREVENTS LOSS OF STATE VECTOR UPDATE UPON SWITCH FAILURE.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4001  
 NASA FMEA #: 05-2R-5100-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 4001  
 ITEM: KU BD EA-1 (INTERFACE AND CONTROL UNIT)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.





APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4003  
 NASA FMEA #: 05-2R-5400-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 4003  
 ITEM: KU BD SPA (SIGNAL PROCESSOR ASSY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 3 / 1R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4003A  
 NASA FMEA #: 05-2R-5400-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 4003  
 ITEM: KU BD SPA (SIGNAL PROCESSOR ASSY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4005  
 NASA FMEA #: 05-2R-5300-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 4005  
 ITEM: KU BD DEA (DEPLOYED ELECTRONIC ASSY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ N / ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88	NASA DATA:
ASSESSMENT ID: COMTRK-4005B	BASELINE [    ]
NASA FMEA #: 05-2R-5300-3	NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:              4005  
ITEM:                  KU BD DEA (DEPLOYED ELECTRONIC ASSY)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 3 / 1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]        [    ]        [    ]        [    ]        [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
INADEQUATE [    ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4006  
 NASA FMEA #: 05-2R-5300-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 4006  
 ITEM: KU BD DEA (DEPLOYED ELECTRONIC ASSY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ N / ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88	NASA DATA:
ASSESSMENT ID: COMTRK-4007	BASELINE [    ]
NASA FMEA #: 05-2R-5300-1	NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:              4007  
ITEM:                 KU BD DMA (DEPLOYED MECHANICAL ASSY)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
INADEQUATE [    ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE:	3/03/88	NASA DATA:	
ASSESSMENT ID:	COMTRK-4009	BASELINE	[   ]
NASA FMEA #:	05-2R-5300-1	NEW	[ X ]

SUBSYSTEM:           COMM AND TRACK  
MDAC ID:             4009  
ITEM:                KU BD DMA (DEPLOYED MECHANICAL ASSY)

LEAD ANALYST:       W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[   ]
COMPARE	[ N /   ]	[   ]	[   ]	[   ]	[ N ]

RECOMMENDATIONS:   (If different from NASA)

[   /   ]	[   ]	[   ]	[   ]	[   ]	(ADD/DELETE)
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\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE	[ X ]
INADEQUATE	[   ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88	NASA DATA:
ASSESSMENT ID: COMTRK-4010	BASELINE [    ]
NASA FMEA #: 05-2R-5300-4	NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:              4010  
ITEM:                  KU BD DMA (DEPLOYED MECHANICAL ASSY)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]	[    ]	[    ]	[    ]	[    ] (ADD/DELETE)
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\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE	[ X ]
INADEQUATE	[    ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4011  
 NASA FMEA #: 05-2R-5100-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 4011  
 ITEM: KU BD COMM UP/FORWARD LINK MODE 1

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ N / ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
ASSESSMENT ID: COMTRK-4012  
NASA FMEA #: 05-2R-5100-1

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 4012  
ITEM: KU BD COMM UP/FORWARD LINK MODE 1

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ N / ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [ ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4013  
 NASA FMEA #: 05-2R-5100-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 4013  
 ITEM: KU BD COMM UP/FORWARD LINK MODE 1

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ N / ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:  
 ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4014  
 NASA FMEA #: 05-2R-5100-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 4014  
 ITEM: KU BD COMM UP/FORWARD LINK MODE 2

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ N / ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4015  
 NASA FMEA #: 05-2R-5100-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             4015  
 ITEM:                 KU BD COMM UP/FORWARD LINK MODE 2

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.





APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4018  
 NASA FMEA #: 05-2R-5100-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 4018  
 ITEM: KU BD COMM DOWN/RETURN LINK MODE 1 CHANNEL1

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ N / ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4019  
 NASA FMEA #: 05-2R-5100-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             4019  
 ITEM:                KU BD COMM DOWN/RETURN LINK MODE 1 CHANNEL 2

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /N ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]        [    ]        [    ]        [    ]        [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4020  
 NASA FMEA #: 05-2R-5100-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             4020  
 ITEM:                KU BD COMM DOWN/RETURN LINK MODE 1 CHANNEL 3

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /N ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
 INADEQUATE [    ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4021  
 NASA FMEA #: 05-2R-5100-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             4021  
 ITEM:                KU BD COMM DOWN/RETURN LINK MODE 2

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4022  
 NASA FMEA #: 05-2R-5100-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 4022  
 ITEM: KU BD COMM DOWN/RETURN LINK MODE 2 CHANNEL 1

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ N / ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4023  
 NASA FMEA #: 05-2R-5100-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 4023  
 ITEM: KU BD COMM DOWN/RETURN LINK MODE 2 CHANNEL 2

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ N /N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4024  
 NASA FMEA #: 05-2R-5100-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 4024  
 ITEM: KU BD COMM DOWN/RETURN LINK MODE 2 CHANNEL 3

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /N ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (if applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4025  
 NASA FMEA #: 05-2R-5112-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 4025  
 ITEM: KU A PWR SW (REF NAVAIDS RR)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 3 / 1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALLY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4026  
 NASA FMEA #: 05-2R-5112-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             4026  
 ITEM:                 KU A PWR SW (REF NAVAIDS RR)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]        [    ]        [    ]        [    ]        [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE        [ X ]  
 INADEQUATE     [    ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4027  
 NASA FMEA #: 05-2R-5113-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             4027  
 ITEM:                KU A MODE SW (REF NAVAIDS RR)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 3 / 1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88	NASA DATA:
ASSESSMENT ID: COMTRK-4028	BASELINE [    ]
NASA FMEA #: 05-2R-5113-2	NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:              4028  
ITEM:                 KU A MODE SW (REF NAVAIDS RR)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /    ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
INADEQUATE [    ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4035  
 NASA FMEA #: 05-2R-5107-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 4035  
 ITEM: KU BD A ANT STEERING SW

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[    ]
COMPARE	[ N / N ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

FAILURE TO SWITCH WOULD PREVENT SELECTION OF OPTIMUM ANTENNA STEERING MODE. NOT CRITICAL FUNCTION. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4035A  
 NASA FMEA #: 05-2R-5107-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 4035  
 ITEM: KU BD A ANT STEERING SW

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[    ]
COMPARE	[ N / N ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

FAILURE TO SWITCH WOULD PREVENT SELECTION OF OPTIMUM ANTENNA  
 STEERING MODE. NOT CRITICAL FUNCTION. NASA FMEA 05-2R-5107-2  
 WAS COMBINED WITH 5107-1 AND DELETED DURING THE NASA  
 REEVALUATION.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4036  
 NASA FMEA #: 05-2R-5107-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 4036  
 ITEM: KU BD A ANT STEERING SW

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 3 / 1R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

OPEN/SHORT FAILURE COULD RESULT IN LOSS OF KUCOMM. ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4041  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             4041  
 ITEM:                KU BD ANT A PYRO ARM/SAFE SW

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[   /   ]	[   ]	[   ]	[   ]	[   ] *
IOA	[ 1 /1 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[   ]	[   ]	[   ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA KUCOMM FMEA. SHOULD BE COVERED IN NASA FMEA.  
 IOA AGREES WITH THE NEWLY GENERATED NASA FMEA/CIL 05-6EI-2001-1  
 (2/24/88, CRITICALITY 1/1), WHICH ADDRESSES THIS IOA CRITICALITY  
 ASSESSMENT.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4042  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             4042  
 ITEM:                KU BD ANT A PYRO ARM/SAFE SW

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[   /   ]	[   ]	[   ]	[   ]	[   ] *
IOA	[ 1 / 1 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N / N ]	[   ]	[   ]	[   ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA KUCOMM FMEA. SHOULD BE COVERED IN NASA FMEA.  
 IOA ACCEPTS THE NASA GENERATED FMEA 05-6EI-2001-2 (2/24/88,  
 CRITICALITY 3/1R), WHICH ADDRESSES THIS IOA CRITICALITY  
 ASSESSMENT.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4043  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             4043  
 ITEM:                KU BD ANT A PYRO JETT/SAFE SW

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 1 / 1 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N / N ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA KUCOMM FMEA. SHOULD BE COVERED IN NASA FMEA.  
 IOA AGREES WITH THE NEWLY GENERATED NASA FMEA/CIL 05-6EI-2002-1  
 (2/24/88, CRITICALITY 1/1), WHICH ADDRESSES THIS IOA CRITICALITY  
 ASSESSMENT.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-4044  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             4044  
 ITEM:                KU BD ANT A PYRO JETT/SAFE SW

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 1 / 1 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N / N ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA KUCOMM FMEA. SHOULD BE COVERED IN NASA FMEA.  
 IOA AGREES WITH THE NEWLY GENERATED NASA FMEA/CIL 05-6EI-2002-2  
 (2/24/88, CRITICALITY 1/1), WHICH ADDRESSES THIS IOA CRITICALITY  
 ASSESSMENT.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88  
ASSESSMENT ID: COMTRK-4514  
NASA FMEA #:

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM:            COMM AND TRACK/EPD&C  
MDAC ID:             4514  
ITEM:                 CIRCUIT BREAKER, 3A

LEAD ANALYST:        A.W. ADDIS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[   /   ]	[   ]	[   ]	[   ]	[   ] *
IOA	[ 2 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NO CORRESPONDING FMEA IN FMEA/CIL PACKET.  
IOA AGREES WITH THE NEWLY GENERATED NASA FMEA/CIL 05-6EI-2000-1  
(2/24/88, CRITICALITY 1/1RB), WHICH ADDRESSES THIS IOA  
CRITICALITY ASSESSMENT.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88  
 ASSESSMENT ID: COMTRK-5010  
 NASA FMEA #: 05-2B-22104-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM & TRACK  
 MDAC ID:             5010  
 ITEM:                 UHF SIMPLEX POWER SWITCH

LEAD ANALYST:        A.W. ADDIS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 3 /1R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[ N /    ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]        [    ]        [    ]        [    ]        [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

CONTACT-TO-CONTACT BRIDGING SHORT HOLDING A FAILED PA IN THE UHF  
 RF TRANSMIT CIRCUIT COULD PREVENT UHF USE FOR ATC/LANDING OPS.  
 FAILS SCREEN B BECAUSE FAILURE WOULD NOT BE DETECTABLE. NASA  
 ASSIGNED CRITICALITY OF 3/3 FOR EVA AND 2/1R FOR OTHER MISSION  
 PHASES. NASA FMEA 05-2B-22104-1 WAS ASSIGNED THE HIGHEST  
 CRITICALITY OF 2/1R. IOA ACCEPTS THE MORE SEVERE NASA  
 CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO  
 ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88	NASA DATA:
ASSESSMENT ID: COMTRK-5502	BASELINE [    ]
NASA FMEA #: 05-6PB-22107-2	NEW [ X ]

SUBSYSTEM:            COMM & TRACK  
MDAC ID:              5502  
ITEM:                  CIRCUIT BREAKER, UHF, MNC

LEAD ANALYST:        A.W. ADDIS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS A	B	C	CIL ITEM
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 3 /2R ]	[ P ]	[ F ]	[ P ]	[ X ]
COMPARE	[    /    ]	[    ]	[ N ]	[    ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]	[    ]	[    ]	[    ]	[    ] (ADD/DELETE)
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\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE	[    ]
INADEQUATE	[    ]

REMARKS:

BOTH CIRCUIT BREAKERS (CB13, CB18) ARE NORMALLY CLOSED. ONE (CB18) COULD FAIL OPEN AND CONDITION WOULD NOT BE DETECTED IN FLIGHT BECAUSE OTHER (CB13) WOULD BE PROVIDING POWER TO BOTH XCVR AND TO PA, SO FAILS SCREEN B. IOA 5502 COVERS EVA OPS; IOA 5503 COVERS FLIGHT OPS VOICE COMM WITH GROUND. IOA ACCEPTS NASA FMEA SCREEN B PASS CRITERIA ON THE BASIS THAT CIRCUIT BREAKERS COULD BE ROUTINELY CYCLED ON AND OFF TO CHECK OPERATION DURING FLIGHT. ALTHOUGH THIS IS NOT A NORMAL PROCEDURE, IT COULD ACCOMPLISH THE IN-FLIGHT READILY DETECTABLE FAILURE REQUIREMENT.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-7026A  
 NASA FMEA #: 05-2R-5100-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             7026  
 ITEM:                 RENDEZVOUS RADAR

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

ANALYSIS ONLY COVERED KU-BAND RADAR FUNCTION. WHEN BOTH RADAR AND COMM FUNCTIONS ARE COMBINED, CRITICALITY IS IN AGREEMENT. KUCOMM FUNCTIONS COVERED UNDER SEPARATE FMEA, 4000 SERIES. STOWED ANTENNA CAUSES LOSS OF KUB-BAND RR FUNCTION. IOA AGREES WITH NASA FMEA/CIL CRITICALITY 2/2 FOR RADAR FUNCTION. OVERLOOKED DURING INITIAL REVIEW SINCE MAIN FMEA PERTAINED TO KU COMM AND RADAR CRITICALITY SHOWED UP AS A SECONDARY PART OF THE FMEA AS A 2/2 CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-7027A  
 NASA FMEA #: 05-2R-5100-2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 7027  
 ITEM: RENDEZVOUS RADAR

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

ANALYSIS ONLY COVERED KU-BAND RADAR FUNCTION. WHEN BOTH RADAR AND COMM FUNCTIONS ARE COMBINED, CRITICALITY IS IN AGREEMENT. KUCOMM FUNCTIONS COVERED UNDER SEPARATE FMEA, 4000 SERIES. STOWED ANTENNA CAUSES LOSS OF KU-BAND RR FUNCTION. IOA AGREES WITH NASA FMEA/CIL CRITICALITY 2/2 FOR RADAR FUNCTION. OVERLOOKED DURING INITIAL REVIEW SINCE MAIN FMEA PERTAINED TO KU COMM AND RADAR CRITICALITY SHOWED UP AS A SECONDARY PART OF THE FMEA AS A 2/2 CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-7028A  
 NASA FMEA #: 05-2R-5100-2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             7028  
 ITEM:                RR EA-1 (INTERFACE AND CONTROL UNIT) [REF KU  
 COMM]

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

ANALYSIS ONLY COVERED KU-BAND RADAR FUNCTION. WHEN BOTH RADAR AND COMM FUNCTIONS ARE COMBINED, CRITICALITY IS IN AGREEMENT. KUCOMM FUNCTIONS COVERED UNDER SEPARATE FMEA, 4000 SERIES. STOWED ANTENNA CAUSES LOSS OF KU-BAND RR FUNCTION. IOA AGREES WITH NASA FMEA/CIL CRITICALITY 2/2 FOR RADAR FUNCTION. OVERLOOKED DURING INITIAL REVIEW SINCE MAIN FMEA PERTAINED TO KU COMM AND RADAR CRITICALITY SHOWED UP AS A SECONDARY PART OF THE FMEA AS A 2/2 CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-7034  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             7034  
 ITEM:                RR DMA (DEPLOYED MECHANICAL ASSY) [REF KU COMM]

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N / N ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA KU-BAND RADAR FMEA. FAILURE TO START/STOP  
 COULD RESULT IN LOSS OF RADAR FUNCTION.  
 IOA AGREES WITH NASA FMEA/CIL 05-2R-5300-1 (CRIT-2/2) FOR RADAR  
 FUNCTION. OVERLOOKED DURING INITIAL ASSESSMENT DUE TO SEVERAL  
 CRITICALITIES AND FUNCTION BEING INCLUDED ON ONE FMEA.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-7038  
 NASA FMEA #: NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             7038  
 ITEM:                KU-BAND POWER SWITCH (REF KU-BAND COMM)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[   /   ]	[   ]	[   ]	[   ]	[   ] *
IOA	[ 2 / 2 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N / N ]	[   ]	[   ]	[   ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA KU-BAND RADAR FMEA. FAILURE TO REMAIN CLOSED  
 COULD RESULT IN LOSS OF KU-BAND SYSTEM. LOSS OF RADAR WOULD  
 RESULT IN LOSS OF MISSION.  
 IOA AGREES WITH NASA FMEA/CIL 05-2R-5112-1 (CRIT-2/2) FOR RADAR  
 FUNCTION. FAILURE MODE "OPEN" PRESENTS SAME EFFECT AS FAILS TO  
 REMAIN CLOSED.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-7044  
 NASA FMEA #: 05-2R-5104-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             7044  
 ITEM:                 SLEW AZIMUTH CONTROL SWITCH (REF KU-BAND COMM)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]        [    ]        [    ]        [    ]        [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

ANALYSIS ONLY COVERED KU-BAND RADAR FUNCTION. WHEN BOTH RADAR AND COMM FUNCTIONS ARE COMBINED, CRITICALITY IS IN AGREEMENT. KUCOMM FUNCTIONS COVERED UNDER SEPARATE FMEA, 4000 SERIES. STOWED ANTENNA CAUSES LOSS OF KUB-BAND RR FUNCTION. IOA ACCEPTS NASA FMEA CRITICALITY 3/2R FOR RADAR FUNCTION. NORMALLY RADAR EMPLOYS AUTOMATIC ANTENNA TRACKING/SLEWING SO THAT USE OF MANUAL SLEWING REQUIRES A PRIOR FAILURE.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
 ASSESSMENT ID: COMTRK-7046  
 NASA FMEA #: 05-2R-5104-1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             7046  
 ITEM:                SLEW ELEV CONTROL SWITCH (REF KU-BAND COMM)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

ANALYSIS ONLY COVERED KU-BAND RADAR FUNCTION. WHEN BOTH RADAR AND COMM FUNCTIONS ARE COMBINED, CRITICALITY IS IN AGREEMENT. KUCOMM FUNCTIONS COVERED UNDER SEPARATE FMEA, 4000 SERIES. STOWED ANTENNA CAUSES LOSS OF KUB-BAND RR FUNCTION. IOA ACCEPTS NASA FMEA CRITICALITY 3/2R FOR RADAR FUNCTION. NORMALLY RADAR EMPLOYS AUTOMAATIC ANTENNA TRACKING/SLEWING SO THAT USE OF MANUAL SLEWING REQUIRES A PRIOR FAILURE.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/04/88  
 ASSESSMENT ID: COMTRK-8001  
 NASA FMEA #: 1.2.2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8001  
 ITEM:                VIDEO SWITCHING UNIT

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]        [   ]        [   ]        [   ]        [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
 INADEQUATE [   ]

REMARKS:

LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. IOA ACCEPTS THE NASA CRITICALITY BASED ON THE LATITUDE GIVEN FOR USE OF VARIOUS GROUND RULE INTERPRETATIONS IN DETERMINING THE SYSTEM LEVEL OF REDUNDANCY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/04/88  
 ASSESSMENT ID: COMTRK-8001A  
 NASA FMEA #: 1.2.18

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:              8001  
 ITEM:                  VIDEO SWITCHING UNIT

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ p ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]        [    ]        [    ]        [    ]        [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. IOA ACCEPTS THE NASA CRITICALITY BASED ON THE LATITUDE GIVEN FOR USE OF VARIOUS GROUND RULE INTERPRETATIONS IN DETERMINING THE SYSTEM LEVEL OF REDUNDANCY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/04/88  
ASSESSMENT ID: COMTRK-8001B  
NASA FMEA #: 1.2.21

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8001  
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ p ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [ ]

REMARKS:

LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. IOA ACCEPTS THE NASA CRITICALITY BASED ON THE LATITUDE GIVEN FOR USE OF VARIOUS GROUND RULE INTERPRETATIONS IN DETERMINING THE SYSTEM LEVEL OF REDUNDANCY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/04/88  
 ASSESSMENT ID: COMTRK-8001C  
 NASA FMEA #: 1.2.22

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8001  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. IOA ACCEPTS THE NASA CRITICALITY BASED ON THE LATITUDE GIVEN FOR USE OF VARIOUS GROUND RULE INTERPRETATIONS IN DETERMINING THE SYSTEM LEVEL OF REDUNDANCY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/04/88  
 ASSESSMENT ID: COMTRK-8001D  
 NASA FMEA #: 1.2.23

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8001  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. IOA ACCEPTS THE NASA CRITICALITY BASED ON THE LATITUDE GIVEN FOR USE OF VARIOUS GROUND RULE INTERPRETATIONS IN DETERMINING THE SYSTEM LEVEL OF REDUNDANCY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/04/88  
 ASSESSMENT ID: COMTRK-8001E  
 NASA FMEA #: 1.2.1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8001  
 ITEM:                 VIDEO SWITCHING UNIT

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED.  
 WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8001F  
NASA FMEA #: 1.2.3

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8001  
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED.

WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8001G  
 NASA FMEA #: 1.2.4

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8001  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 / 1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED.  
 WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8001H  
 NASA FMEA #: 1.2.5

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8001  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 / 1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE  
 FUNCTION WAS ANALYSED.  
 WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS  
 JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL  
 ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT  
 LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE  
 SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8001I  
 NASA FMEA #: 1.2.6

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8001  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 / 1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED.  
 WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8001J  
 NASA FMEA #: 1.2.7

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8001  
 ITEM:                VIDEO SWITCHING UNIT

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE  
 FUNCTION WAS ANALYSED.  
 WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS  
 JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL  
 ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT  
 LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE  
 SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8001K  
NASA FMEA #: 1.2.8

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8001  
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED.  
WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8001L  
NASA FMEA #: 1.2.9

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8001  
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED.  
WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8001M  
 NASA FMEA #: 1.2.10

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8001  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED.  
 WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8001N  
 NASA FMEA #: 1.2.11

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8001  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED.  
 WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-80010  
 NASA FMEA #: 1.2.12

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8001  
 ITEM:                 VIDEO SWITCHING UNIT

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]        [    ]        [    ]        [    ]        [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED.  
 WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8001P  
 NASA FMEA #: 1.2.13

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8001  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 / 1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED.  
 WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8001Q  
 NASA FMEA #: 1.2.14

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8001  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 / 1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED.  
 WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8001R  
 NASA FMEA #: 1.2.15

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8001  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY	REDUNDANCY SCREENS			CIL ITEM
	FLIGHT HDW/FUNC	A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED.  
 WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8001S  
 NASA FMEA #: 1.2.16

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8001  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED.  
 WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8001T  
NASA FMEA #: 1.2.17

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8001  
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 / 1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED.  
WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8001U  
 NASA FMEA #: 1.2.19

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8001  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED.  
 WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8001V  
NASA FMEA #: 1.2.20

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8001  
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED.  
WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8002  
NASA FMEA #: 1.2.2

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8002  
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [    ]

REMARKS:

LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW IOA ACCEPTS THE NASA CRITICALITY BASED ON THE LATITUDE GIVEN FOR USE OF VARIOUS GROUND RULE INTERPRETATIONS IN DETERMINING THE SYSTEM LEVEL OF REDUNDANCY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8002A  
 NASA FMEA #: 1.2.18

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8002  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW IOA ACCEPTS THE NASA CRITICALITY BASED ON THE LATITUDE GIVEN FOR USE OF VARIOUS GROUND RULE INTERPRETATIONS IN DETERMINING THE SYSTEM LEVEL OF REDUNDANCY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8002B  
NASA FMEA #: 1.2.21

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8002  
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [    ] [    ] [    ] [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [    ]

REMARKS:

LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW IOA ACCEPTS THE NASA CRITICALITY BASED ON THE LATITUDE GIVEN FOR USE OF VARIOUS GROUND RULE INTERPRETATIONS IN DETERMINING THE SYSTEM LEVEL OF REDUNDANCY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8002C  
NASA FMEA #: 1.2.22

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8002  
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [    ]

REMARKS:

LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW IOA ACCEPTS THE NASA CRITICALITY BASED ON THE LATITUDE GIVEN FOR USE OF VARIOUS GROUND RULE INTERPRETATIONS IN DETERMINING THE SYSTEM LEVEL OF REDUNDANCY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8002D  
 NASA FMEA #: 1.2.23

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8002  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW IOA ACCEPTS THE NASA CRITICALITY BASED ON THE LATITUDE GIVEN FOR USE OF VARIOUS GROUND RULE INTERPRETATIONS IN DETERMINING THE SYSTEM LEVEL OF REDUNDANCY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8002E  
 NASA FMEA #: 1.2.1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8002  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

FAILS TO SWITCH RESULTS IN LOSS OF OUTPUT. LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8002F  
 NASA FMEA #: 1.2.3

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8002  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

FAILS TO SWITCH RESULTS IN LOSS OF OUTPUT. LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8002G  
 NASA FMEA #: 1.2.4

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8002  
 ITEM:                VIDEO SWITCHING UNIT

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

FAILS TO SWITCH RESULTS IN LOSS OF OUTPUT. LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8002H  
 NASA FMEA #: 1.2.5

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8002  
 ITEM:                 VIDEO SWITCHING UNIT

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]        [    ]        [    ]        [    ]        [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

FAILS TO SWITCH RESULTS IN LOSS OF OUTPUT. LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8002I  
NASA FMEA #: 1.2.6

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:              8002  
ITEM:                  VIDEO SWITCHING UNIT

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

FAILS TO SWITCH RESULTS IN LOSS OF OUTPUT. LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8002J  
 NASA FMEA #: 1.2.7

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8002  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

FAILS TO SWITCH RESULTS IN LOSS OF OUTPUT. LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8002L  
 NASA FMEA #: 1.2.9

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8002  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

FAILS TO SWITCH RESULTS IN LOSS OF OUTPUT. LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8002M  
 NASA FMEA #: 1.2.10

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8002  
 ITEM:                VIDEO SWITCHING UNIT

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

FAILS TO SWITCH RESULTS IN LOSS OF OUTPUT. LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8002N  
 NASA FMEA #: 1.2.11

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8002  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

FAILS TO SWITCH RESULTS IN LOSS OF OUTPUT. LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-80020  
NASA FMEA #: 1.2.12

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8002  
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

FAILS TO SWITCH RESULTS IN LOSS OF OUTPUT. LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.





APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8002R  
NASA FMEA #: 1.2.15

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8002  
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

FAILS TO SWITCH RESULTS IN LOSS OF OUTPUT. LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8002S  
 NASA FMEA #: 1.2.16

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8002  
 ITEM:                VIDEO SWITCHING UNIT

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

FAILS TO SWITCH RESULTS IN LOSS OF OUTPUT. LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8002T  
 NASA FMEA #: 1.2.17

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8002  
 ITEM:                 VIDEO SWITCHING UNIT

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

FAILS TO SWITCH RESULTS IN LOSS OF OUTPUT. LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8002U  
 NASA FMEA #: 1.2.19

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8002  
 ITEM:                 VIDEO SWITCHING UNIT

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]        [    ]        [    ]        [    ]        [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

FAILS TO SWITCH RESULTS IN LOSS OF OUTPUT. LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8002V  
 NASA FMEA #: 1.2.20

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8002  
 ITEM:                 VIDEO SWITCHING UNIT

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

FAILS TO SWITCH RESULTS IN LOSS OF OUTPUT. LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8003  
 NASA FMEA #: 1.2.2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8003  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ p ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. IOA ACCEPTS THE NASA CRITICALITY BASED ON THE LATITUDE GIVEN FOR USE OF VARIOUS GROUND RULE INTERPRETATION IN DETERMINING THE SYSTEM LEVEL OF REDUNDANCY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8003A  
 NASA FMEA #: 1.2.18

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8003  
 ITEM:                 VIDEO SWITCHING UNIT

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]        [    ]        [    ]        [    ]        [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. IOA ACCEPTS THE NASA CRITICALITY BASED ON THE LATITUDE GIVEN FOR USE OF VARIOUS GROUND RULE INTERPRETATION IN DETERMINING THE SYSTEM LEVEL OF REDUNDANCY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8003B  
 NASA FMEA #: 1.2.21

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8003  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. IOA ACCEPTS THE NASA CRITICALITY BASED ON THE LATITUDE GIVEN FOR USE OF VARIOUS GROUND RULE INTERPRETATION IN DETERMINING THE SYSTEM LEVEL OF REDUNDANCY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8003C  
 NASA FMEA #: 1.2.22

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8003  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. IOA ACCEPTS THE NASA CRITICALITY BASED ON THE LATITUDE GIVEN FOR USE OF VARIOUS GROUND RULE INTERPRETATION IN DETERMINING THE SYSTEM LEVEL OF REDUNDANCY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8003D  
 NASA FMEA #: 1.2.23

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8003  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. IOA ACCEPTS THE NASA CRITICALITY BASED ON THE LATITUDE GIVEN FOR USE OF VARIOUS GROUND RULE INTERPRETATION IN DETERMINING THE SYSTEM LEVEL OF REDUNDANCY.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8003F  
 NASA FMEA #: 1.2.3

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8003  
 ITEM:                VIDEO SWITCHING UNIT

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]        [    ]        [    ]        [    ]        [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

INTERNAL ELECTRICAL OPEN/SHORT CIRCUIT COULD RESULT IN LOSS OF OUTPUT.  
 LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8003G  
NASA FMEA #: 1.2.4

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8003  
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ N /N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

INTERNAL ELECTRICAL OPEN/SHORT CIRCUIT COULD RESULT IN LOSS OF OUTPUT.  
LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8003H  
 NASA FMEA #: 1.2.5

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8003  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ N /N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

INTERNAL ELECTRICAL OPEN/SHORT CIRCUIT COULD RESULT IN LOSS OF OUTPUT.

LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8003I  
 NASA FMEA #: 1.2.6

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8003  
 ITEM:                 VIDEO SWITCHING UNIT

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ N /N ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

INTERNAL ELECTRICAL OPEN/SHORT CIRCUIT COULD RESULT IN LOSS OF OUTPUT.  
 LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8003J  
 NASA FMEA #: 1.2.7

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8003  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ N /N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

INTERNAL ELECTRICAL OPEN/SHORT CIRCUIT COULD RESULT IN LOSS OF OUTPUT.  
 LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8003K  
 NASA FMEA #: 1.2.8

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8003  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

INTERNAL ELECTRICAL OPEN/SHORT CIRCUIT COULD RESULT IN LOSS OF OUTPUT.  
 LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8003L  
 NASA FMEA #: 1.2.9

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8003  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

INTERNAL ELECTRICAL OPEN/SHORT CIRCUIT COULD RESULT IN LOSS OF OUTPUT.  
 LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8003M  
NASA FMEA #: 1.2.10

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8003  
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ N /N ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

INTERNAL ELECTRICAL OPEN/SHORT CIRCUIT COULD RESULT IN LOSS OF OUTPUT.  
LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8003N  
 NASA FMEA #: 1.2.11

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8003  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

INTERNAL ELECTRICAL OPEN/SHORT CIRCUIT COULD RESULT IN LOSS OF OUTPUT.  
 LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-80030  
NASA FMEA #: 1.2.12

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8003  
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ N /N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

INTERNAL ELECTRICAL OPEN/SHORT CIRCUIT COULD RESULT IN LOSS OF OUTPUT.  
LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8003P  
NASA FMEA #: 1.2.13

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8003  
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

INTERNAL ELECTRICAL OPEN/SHORT CIRCUIT COULD RESULT IN LOSS OF OUTPUT.  
LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8003Q  
NASA FMEA #: 1.2.14

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8003  
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ N /N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

INTERNAL ELECTRICAL OPEN/SHORT CIRCUIT COULD RESULT IN LOSS OF OUTPUT.  
LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8003R  
NASA FMEA #: 1.2.15

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8003  
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

INTERNAL ELECTRICAL OPEN/SHORT CIRCUIT COULD RESULT IN LOSS OF OUTPUT.  
LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8003S  
NASA FMEA #: 1.2.16

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8003  
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ N /N ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

INTERNAL ELECTRICAL OPEN/SHORT CIRCUIT COULD RESULT IN LOSS OF OUTPUT.  
LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8003T  
 NASA FMEA #: 1.2.17

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8003  
 ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ p ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

INTERNAL ELECTRICAL OPEN/SHORT CIRCUIT COULD RESULT IN LOSS OF OUTPUT.  
 LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8003U  
NASA FMEA #: 1.2.19

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8003  
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

INTERNAL ELECTRICAL OPEN/SHORT CIRCUIT COULD RESULT IN LOSS OF OUTPUT.  
LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8003V  
NASA FMEA #: 1.2.20

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8003  
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ p ]	[ p ]	[ X ]
COMPARE	[ N /N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

INTERNAL ELECTRICAL OPEN/SHORT CIRCUIT COULD RESULT IN LOSS OF OUTPUT.

LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8008  
NASA FMEA #: 2.1.1

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8008  
ITEM: TV CAMERA A (FWD P/L BAY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [    ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE.  
IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8008A  
 NASA FMEA #: 2.1.2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8008  
 ITEM:                TV CAMERA A (FWD P/L BAY)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
 EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8008B  
 NASA FMEA #: 2.1.3.1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8008  
 ITEM:                TV CAMERA A (FWD P/L BAY)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]        [    ]        [    ]        [    ]        [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
 EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE.  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8008C  
 NASA FMEA #: 2.1.5

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8008  
 ITEM: TV CAMERA A (FWD P/L BAY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8008E  
NASA FMEA #: 2.2.2

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8008  
ITEM: TV CAMERA A (FWD P/L BAY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [    ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE.  
IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8008F  
 NASA FMEA #: 2.2.3.1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8008  
 ITEM:                TV CAMERA A (FWD P/L BAY)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [   ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
 EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8008G  
 NASA FMEA #: 2.2.5

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8008  
 ITEM: TV CAMERA A (FWD P/L BAY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8008H  
 NASA FMEA #: 2.3.1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8008  
 ITEM: TV CAMERA A (FWD P/L BAY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8008I  
 NASA FMEA #: 2.3.2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8008  
 ITEM: TV CAMERA A (FWD P/L BAY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (if applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8008J  
 NASA FMEA #: 2.3.3.1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8008  
 ITEM:                TV CAMERA A (FWD P/L BAY)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8008K  
 NASA FMEA #: 2.3.5

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8008  
 ITEM: TV CAMERA A (FWD P/L BAY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8009  
 NASA FMEA #: 2.1.1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8009  
 ITEM: TV CAMERA C (AFT P/L BAY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8009A  
NASA FMEA #: 2.1.2

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8009  
ITEM: TV CAMERA C (AFT P/L BAY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY	REDUNDANCY SCREENS			CIL ITEM
	FLIGHT HDW/FUNC	A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [ ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
EVA AND COAS FOR CREW VISUAL INSPECITON AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE.  
IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8009B  
 NASA FMEA #: 2.1.3.1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8009  
 ITEM:                TV CAMERA C (AFT P/L BAY)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8009C  
NASA FMEA #: 2.1.5

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8009  
ITEM: TV CAMERA C (AFT P/L BAY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [ ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
EVA AND COAS FOR CREW VISUAL INSPECITON AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE.  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8009D  
 NASA FMEA #: 2.2.1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8009  
 ITEM: TV CAMERA C (AFT P/L BAY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8009E  
NASA FMEA #: 2.2.2

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8009  
ITEM: TV CAMERA C (AFT P/L BAY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [ ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8009F  
 NASA FMEA #: 2.2.3.1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8009  
 ITEM:                TV CAMERA C (AFT P/L BAY)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]        [    ]        [    ]        [    ]        [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
 EVA AND COAS FOR CREW VISUAL INSPECITON AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8009G  
 NASA FMEA #: 2.2.5

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8009  
 ITEM:                TV CAMERA C (AFT P/L BAY)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8009H  
 NASA FMEA #: 2.3.1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8009  
 ITEM:                TV CAMERA C (AFT P/L BAY)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECITON AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8009J  
 NASA FMEA #: 2.3.3.1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8009  
 ITEM:                TV CAMERA C (AFT P/L BAY)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8009K  
 NASA FMEA #: 2.3.5

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8009  
 ITEM: TV CAMERA C (AFT P/L BAY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8010A  
 NASA FMEA #: 2.1.2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8010  
 ITEM:                TV CAMERA D (RMS STBD POSITION FWD)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]            [    ]            [    ]            [    ]            [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8010G  
 NASA FMEA #: 2.2.5

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8010  
 ITEM: TV CAMERA D (RMS STBD POSITION FWD)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECITON AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8010H  
 NASA FMEA #: 2.3.1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8010  
 ITEM:                TV CAMERA D (RMS STBD POSITION FWD)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [   ]

REMARKS:

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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8010I  
NASA FMEA #: 2.3.2

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8010  
ITEM: TV CAMERA D (RMS STBD POSITION FWD)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [ ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECITON AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8011A  
NASA FMEA #: 2.1.2

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM:  
MDAC ID: 8011  
ITEM: TV CAMERA D (RMS STBD POSITION FWD)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [ ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8011C  
NASA FMEA #: 2.1.5

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM:  
MDAC ID: 8011  
ITEM: TV CAMERA D (RMS STBD POSITION FWD)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [    ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8011D  
 NASA FMEA #: 2.2.1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM:  
 MDAC ID: 8011  
 ITEM: TV CAMERA D (RMS STBD POSITION FWD)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8011E  
NASA FMEA #: 2.2.2

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM:  
MDAC ID: 8011  
ITEM: TV CAMERA D (RMS STBD POSITION FWD)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [ ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8011F  
 NASA FMEA #: 2.2.3.1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:  
 MDAC ID: 8011  
 ITEM: TV CAMERA D (RMS STBD POSITION FWD)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8011G  
NASA FMEA #: 2.2.5

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM:  
MDAC ID: 8011  
ITEM: TV CAMERA D (RMS STBD POSITION FWD)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [ ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8011H  
NASA FMEA #: 2.3.1

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM:  
MDAC ID: 8011  
ITEM: TV CAMERA D (RMS STBD POSITION FWD)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [ ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
EVA AND COAS FOR CREW VISUAL INSEPTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE.  
IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8011I  
 NASA FMEA #: 2.3.2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM:  
 MDAC ID: 8011  
 ITEM: TV CAMERA D (RMS STBD POSITION FWD)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSEPCION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8011J  
 NASA FMEA #: 2.3.3.1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:  
 MDAC ID: 8011  
 ITEM: TV CAMERA D (RMS STBD POSITION FWD)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
 EVA AND COAS FOR CREW VISUAL INSEPCTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8011K  
 NASA FMEA #: 2.3.5

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:  
 MDAC ID: 8011  
 ITEM: TV CAMERA D (RMS STBD POSITION FWD)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF TVC COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING OF P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING,  
 EVA AND COAS FOR CREW VISUAL INSEPTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8014  
NASA FMEA #: 2.1.7

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8014  
ITEM: PAN AND TILT UNIT (TVC A POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [ ]

REMARKS:

PHYSICAL BINDING COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8014A  
 NASA FMEA #: 2.2.7

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8014  
 ITEM: PAN AND TILT UNIT (TVC A POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

PHYSICAL BINDING COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8014C  
 NASA FMEA #: 2.4.1.1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8014  
 ITEM: PAN AND TILT UNIT (TVC A POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

PHYSICAL BINDING COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8014E  
 NASA FMEA #: 2.4.2.1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8014  
 ITEM: PAN AND TILT UNIT (TVC A POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

PHYSICAL BINDING COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8014G  
NASA FMEA #: 2.4.3

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8014  
ITEM: PAN AND TILT UNIT (TVC A POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [ ]

REMARKS:

PHYSICAL BINDING COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8015A  
 NASA FMEA #: 2.2.7

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8015  
 ITEM: PAN AND TILT UNIT (TVC A POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION.  
 LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS  
 STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE  
 LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY  
 EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL  
 INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST  
 CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL  
 CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE  
 CRITICALITY.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88	NASA DATA:
ASSESSMENT ID: COMTRK-8015C	BASELINE [    ]
NASA FMEA #: 2.4.1.1	NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:              8015  
ITEM:                 PAN AND TILT UNIT (TVC A POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY	REDUNDANCY SCREENS			CIL ITEM
	FLIGHT				
	HDW/FUNC	A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
INADEQUATE [    ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8015E  
 NASA FMEA #: 2.4.2.1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8015  
 ITEM: PAN AND TILT UNIT (TVC A POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION.  
 LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS  
 STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE  
 LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY  
 EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL  
 INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST  
 CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL  
 CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE  
 CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8015F  
NASA FMEA #: 2.4.2.2

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8015  
ITEM: PAN AND TILT UNIT (TVC A POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [ ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.





APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8016  
NASA FMEA #: 2.1.7

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8016  
ITEM: PAN AND TILT UNIT (TVC A POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [ ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXIST VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.

IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8016B  
 NASA FMEA #: 2.3.7

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8016  
 ITEM: PAN AND TILT UNIT (TVC A POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXIST VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8016D  
 NASA FMEA #: 2.4.1.2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8016  
 ITEM:                PAN AND TILT UNIT (TVC A POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXIST VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8016F  
 NASA FMEA #: 2.4.2.2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8016  
 ITEM:                PAN AND TILT UNIT (TVC A POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
 INADEQUATE [    ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXIST VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8016G  
 NASA FMEA #: 2.4.3

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8016  
 ITEM:                PAN AND TILT UNIT (TVC A POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (if applicable)

ADEQUATE    [ X ]  
 INADEQUATE [    ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXIST VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.

IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.







APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8017C  
 NASA FMEA #: 2.4.1.1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8017  
 ITEM: PAN AND TILT UNIT (TVC B POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

PHYSICAL BINDING COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXIST VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.

IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8017D  
 NASA FMEA #: 2.4.1.2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8017  
 ITEM: PAN AND TILT UNIT (TVC B POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

PHYSICAL BINDING COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXIST VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.

IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8017E  
 NASA FMEA #: 2.4.2.1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8017  
 ITEM:                PAN AND TILT UNIT (TVC B POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]      [    ]      [    ]      [    ]      [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
 INADEQUATE [    ]

REMARKS:

PHYSICAL BINDING COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXIST VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8017F  
 NASA FMEA #: 2.4.2.2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8017  
 ITEM: PAN AND TILT UNIT (TVC B POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

PHYSICAL BINDING COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXIST VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8017G  
 NASA FMEA #: 2.4.3

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8017  
 ITEM: PAN AND TILT UNIT (TVC B POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

PHYSICAL BINDING COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXIST VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.







APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8018C  
 NASA FMEA #: 2.4.1.1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8018  
 ITEM:                PAN AND TILT UNIT (TVC B POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION.  
 LOSS OF CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS  
 STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE  
 LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXIST  
 VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION  
 AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE  
 CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL  
 CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE  
 CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8018D  
 NASA FMEA #: 2.4.1.2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8018  
 ITEM:                PAN AND TILT UNIT (TVC B POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION.  
 LOSS OF CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS  
 STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE  
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 VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION  
 AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE  
 CONDITION.

IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL  
 CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE  
 CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8018E  
NASA FMEA #: 2.4.2.1

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8018  
ITEM: PAN AND TILT UNIT (TVC B POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [ ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXIST VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.

IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8018F  
 NASA FMEA #: 2.4.2.2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8018  
 ITEM: PAN AND TILT UNIT (TVC B POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION.  
 LOSS OF CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS  
 STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE  
 LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXIST  
 VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION  
 AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE  
 CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL  
 CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE  
 CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8018G  
 NASA FMEA #: 2.4.3

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8018  
 ITEM:                PAN AND TILT UNIT (TVC B POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION.  
 LOSS OF CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS  
 STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE  
 LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXIST  
 VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION  
 AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE  
 CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL  
 CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE  
 CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8018H  
 NASA FMEA #: 2.4.4.2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8018  
 ITEM:                PAN AND TILT UNIT (TVC B POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION.  
 LOSS OF CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS  
 STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE  
 LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXIST  
 VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION  
 AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE  
 CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL  
 CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE  
 CRITICALITY.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8019A  
 NASA FMEA #: 2.2.7

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8019  
 ITEM:                PAN AND TILT UNIT (TVC B POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8019C  
 NASA FMEA #: 2.4.1.1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8019  
 ITEM: PAN AND TILT UNIT (TVC B POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8019E  
 NASA FMEA #: 2.4.2.1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8019  
 ITEM:                PAN AND TILT UNIT (TVC B POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8019G  
NASA FMEA #: 2.4.3

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8019  
ITEM: PAN AND TILT UNIT (TVC B POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [    ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.

IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8020A  
 NASA FMEA #: 2.2.7

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8020  
 ITEM:                PAN AND TILT UNIT (TVC C POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

PHYSICAL BINDING COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8020B  
NASA FMEA #: 2.3.7

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8020  
ITEM: PAN AND TILT UNIT (TVC C POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [ ]

REMARKS:

PHYSICAL BINDING COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8020C  
 NASA FMEA #: 2.4.1.1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8020  
 ITEM: PAN AND TILT UNIT (TVC C POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

PHYSICAL BINDING COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8020E  
 NASA FMEA #: 2.4.2.1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8020  
 ITEM: PAN AND TILT UNIT (TVC C POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

PHYSICAL BINDING COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8020G  
 NASA FMEA #: 2.4.3

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8020  
 ITEM: PAN AND TILT UNIT (TVC C POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

PHYSICAL BINDING COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8021A  
NASA FMEA #: 2.2.7

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8021  
ITEM: PAN AND TILT UNIT (TVC C POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [ ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION.  
LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT RMS  
STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE  
LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY  
EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL  
INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST  
CASE CONDITION.  
IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL  
CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE  
CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8021B  
 NASA FMEA #: 2.3.7

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8021  
 ITEM:                PAN AND TILT UNIT (TVC C POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [   ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION.  
 LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT RMS  
 STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE  
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 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL  
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 CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8021C  
 NASA FMEA #: 2.4.1.1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8021  
 ITEM:                PAN AND TILT UNIT (TVC C POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION.  
 LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT RMS  
 STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE  
 LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY  
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 INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST  
 CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL  
 CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE  
 CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8021D  
NASA FMEA #: 2.4.1.2

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:              8021  
ITEM:                  PAN AND TILT UNIT (TVC C POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ / ]      [    ]      [    ]      [    ]      [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [    ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION.  
LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT RMS  
STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE  
LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY  
EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL  
INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST  
CASE CONDITION.  
IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL  
CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE  
CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8021E  
 NASA FMEA #: 2.4.2.1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8021  
 ITEM:                PAN AND TILT UNIT (TVC C POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION.  
 LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT RMS  
 STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE  
 LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY  
 EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL  
 INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST  
 CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL  
 CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE  
 CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8021F  
 NASA FMEA #: 2.4.2.2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8021  
 ITEM: PAN AND TILT UNIT (TVC C POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8021G  
 NASA FMEA #: 2.4.3

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8021  
 ITEM:                PAN AND TILT UNIT (TVC C POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[ / ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION.  
 LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT RMS  
 STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE  
 LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY  
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 CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL  
 CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE  
 CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8021H  
NASA FMEA #: 2.4.4.2

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:             8021  
ITEM:                PAN AND TILT UNIT (TVC C POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [    ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8021I  
 NASA FMEA #: 2.4.4.1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8021  
 ITEM: PAN AND TILT UNIT (TVC C POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

ONLY WORST CASE CONDITION ANALYSED.  
 NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL  
 ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT  
 LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE  
 SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8022  
 NASA FMEA #: 2.1.7

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8022  
 ITEM: PAN AND TILT UNIT (TVC C POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8022A  
 NASA FMEA #: 2.2.7

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8022  
 ITEM: PAN AND TILT UNIT (TVC C POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8022B  
NASA FMEA #: 2.3.7

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:              8022  
ITEM:                 PAN AND TILT UNIT (TVC C POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]      [    ]      [    ]      [    ]      [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
INADEQUATE [    ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.

IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8022C  
NASA FMEA #: 2.4.1.1

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8022  
ITEM: PAN AND TILT UNIT (TVC C POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [ ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.

IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8022D  
NASA FMEA #: 2.4.1.2

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8022  
ITEM: PAN AND TILT UNIT (TVC C POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [    ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.

IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8022E  
 NASA FMEA #: 2.4.2.1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8022  
 ITEM: PAN AND TILT UNIT (TVC C POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88	NASA DATA:
ASSESSMENT ID: COMTRK-8022F	BASELINE [    ]
NASA FMEA #: 2.4.2.2	NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:              8022  
ITEM:                  PAN AND TILT UNIT (TVC C POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS	A	B	C	CIL ITEM
NASA	[ 2 /2 ]		[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]		[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]		[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [    ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.

IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8022G  
 NASA FMEA #: 2.4.3

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8022  
 ITEM:                PAN AND TILT UNIT (TVC C POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8023A  
 NASA FMEA #: 2.2.7

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8023  
 ITEM: PAN AND TILT UNIT (TVC D POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

PHYSICAL BINDING COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8023B  
NASA FMEA #: 2.3.7

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:             8023  
ITEM:                 PAN AND TILT UNIT (TVC D POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [    ]

REMARKS:

PHYSICAL BINDING COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.

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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8023C  
 NASA FMEA #: 2.4.1.1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8023  
 ITEM:                PAN AND TILT UNIT (TVC D POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

PHYSICAL BINDING COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88	NASA DATA:
ASSESSMENT ID: COMTRK-8023D	BASELINE [    ]
NASA FMEA #: 2.4.1.2	NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:              8023  
ITEM:                  PAN AND TILT UNIT (TVC D POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC		REDUNDANCY SCREENS			CIL ITEM
		A	B	C		
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *	
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]	
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]	

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [    ]

REMARKS:

PHYSICAL BINDING COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8023E  
 NASA FMEA #: 2.4.2.1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8023  
 ITEM: PAN AND TILT UNIT (TVC D POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

PHYSICAL BINDING COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8023F  
 NASA FMEA #: 2.4.2.2

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8023  
 ITEM: PAN AND TILT UNIT (TVC D POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

PHYSICAL BINDING COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8023G  
 NASA FMEA #: 2.4.3

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8023  
 ITEM: PAN AND TILT UNIT (TVC D POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

PHYSICAL BINDING COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8024A  
 NASA FMEA #: 2.2.7

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8024  
 ITEM:                 PAN AND TILT UNIT (TVC D POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION.  
 LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS  
 STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE  
 LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY  
 EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL  
 INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST  
 CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL  
 CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE  
 CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8024B  
 NASA FMEA #: 2.3.7

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8024  
 ITEM:                PAN AND TILT UNIT (TVC D POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION.  
 LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS  
 STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE  
 LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY  
 EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL  
 INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST  
 CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL  
 CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE  
 CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8024C  
NASA FMEA #: 2.4.1.1

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8024  
ITEM: PAN AND TILT UNIT (TVC D POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [ ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION.  
LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS  
STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE  
LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY  
EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL  
INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST  
CASE CONDITION.  
IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL  
CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE  
CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8024D  
 NASA FMEA #: 2.4.1.2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8024  
 ITEM:                PAN AND TILT UNIT (TVC D POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8024E  
 NASA FMEA #: 2.4.2.1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8024  
 ITEM: PAN AND TILT UNIT (TVC D POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION.  
 LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS  
 STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE  
 LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY  
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 INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST  
 CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL  
 CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE  
 CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8024F  
 NASA FMEA #: 2.4.2.2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8024  
 ITEM:                PAN AND TILT UNIT (TVC D POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8024G  
 NASA FMEA #: 2.4.3

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8024  
 ITEM: PAN AND TILT UNIT (TVC D POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION.  
 LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS  
 STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE  
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 EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL  
 INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST  
 CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL  
 CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE  
 CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8024H  
 NASA FMEA #: 2.4.4.2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8024  
 ITEM:                PAN AND TILT UNIT (TVC D POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[   ]	[   ]	[   ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[   /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]        [   ]        [   ]        [   ]        [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
 INADEQUATE [   ]

REMARKS:

FAILURE TO START/STOP COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8025  
 NASA FMEA #: 2.1.7

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8025  
 ITEM: PAN AND TILT UNIT (TVC D POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8025A  
 NASA FMEA #: 2.2.7

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8025  
 ITEM:                PAN AND TILT UNIT (TVC D POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ p ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
 INADEQUATE [    ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.

IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8025B  
NASA FMEA #: 2.3.7

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8025  
ITEM: PAN AND TILT UNIT (TVC D POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [ ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8025C  
 NASA FMEA #: 2.4.1.1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8025  
 ITEM:                PAN AND TILT UNIT (TVC D POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ / ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.

IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8025D  
 NASA FMEA #: 2.4.1.2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8025  
 ITEM: PAN AND TILT UNIT (TVC D POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8025E  
 NASA FMEA #: 2.4.2.1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8025  
 ITEM: PAN AND TILT UNIT (TVC D POSITION)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ p ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.

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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8025F  
 NASA FMEA #: 2.4.2.2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8025  
 ITEM:                PAN AND TILT UNIT (TVC D POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ p ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
 INADEQUATE [    ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
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APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8025G  
 NASA FMEA #: 2.4.3

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8025  
 ITEM:                 PAN AND TILT UNIT (TVC D POSITION)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ p ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[ / ]      [    ]      [    ]      [    ]      [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
 INADEQUATE [    ]

REMARKS:

ERRATIC/INTERMITTANT OPERATION COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.

IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8033  
 NASA FMEA #: 2.1.6.1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8033  
 ITEM: MONOCHROME LENS ASSEMBLY (TVC A FWD P/L BAY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF OUTPUT COULD CAUSE LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. ONLY WORST CASE CONDITION WAS ANALYSED. IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8033A  
 NASA FMEA #: 2.1.6.4

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8033  
 ITEM: MONOCHROME LENS ASSEMBLY (TVC A FWD P/L BAY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF OUTPUT COULD CAUSE LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. ONLY WORST CASE CONDITION WAS ANALYSED. IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8033B  
 NASA FMEA #: 2.1.6.3

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8033  
 ITEM: MONOCHROME LENS ASSEMBLY (TVC A FWD P/L BAY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

ONLY WORST CASE CONDITION WAS ANALYSED.  
 NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL  
 ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT  
 LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE  
 SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8034  
 NASA FMEA #: 2.1.6.2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8034  
 ITEM:                MONOCHROME LENS ASSEMBLY (TVC A FWD P/L BAY)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
 INADEQUATE [    ]

REMARKS:

PHYSICAL BINDING/JAMMING COULD CAUSE LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8035  
NASA FMEA #: 2.1.6.1

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8035  
ITEM: MONOCHROME LENS ASSEMBLY (TVC B KEEL/EVA AFT P/L BAY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [ ]

REMARKS:

LOSS OF OUTPUT COULD CAUSE LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION WAS ANALYSED.

IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8035A  
 NASA FMEA #: 2.1.6.4

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8035  
 ITEM:                MONOCHROME LENS ASSEMBLY (TVC B KEEL/EVA AFT P/L BAY)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF OUTPUT COULD CAUSE LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION WAS ANALYSED.

IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8035B  
 NASA FMEA #: 2.1.6.3

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8035  
 ITEM:                MONOCHROME LENS ASSEMBLY (TVC B KEEL/EVA AFT P/L  
 BAY)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

ONLY WORST CASE CONDITION WAS ANALYSED.  
 NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL  
 ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT  
 LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE  
 SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8036  
NASA FMEA #: 2.1.6.2

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8036  
ITEM: MONOCHROME LENS ASSEMBLY (TVC B KEEL/EVA AFT P/L BAY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [    ]

REMARKS:

PHYSICAL BINDING/JAMMING COULD CAUSE LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAST FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.

IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8037  
 NASA FMEA #: 2.1.6.1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8037  
 ITEM:                MONOCHROME LENS ASSEMBLY (TVC C AFT P/L BAY)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF OUTPUT COULD CAUSE LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8037A  
 NASA FMEA #: 2.1.6.4

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8037  
 ITEM: MONOCHROME LENS ASSEMBLY (TVC C AFT P/L BAY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF OUTPUT COULD CAUSE LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8037B  
NASA FMEA #: 2.1.6.3

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8037  
ITEM: MONOCHROME LENS ASSEMBLY (TVC C AFT P/L BAY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

ONLY WORST CASE CONDITION ANALYSED.  
NASA IN AGREEMENT WITH IOA CRITICALITY DESIGNATIONS FOR LRU LEVEL  
ANALYSIS. NASA MADE AN INDEPTH ANALYSIS TO THE LRU COMPONENT  
LEVEL SO THAT THE IOA LRU LEVEL ANALYSIS RESULTED IN A MORE  
SEVERE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8038  
NASA FMEA #: 2.1.6.2

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8038  
ITEM: MONOCHROME LENS ASSEMBLY (TVC C AFT P/L BAY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [    ]

REMARKS:

PHYSICAL BINDING/JAMMING COULD CAUSE LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.

IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8039  
 NASA FMEA #: 2.1.6.1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8039  
 ITEM: MONOCHROME LENS ASSEMBLY (TVC D FWD P/L BAY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

LOSS OF OUTPUT COULD CAUSE LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. ONLY WORST CASE CONDITION WAS ANALYSED.

IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8039A  
 NASA FMEA #: 2.1.6.4

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8039  
 ITEM: MONOCHROME LENS ASSEMBLY (TVC D FWD P/L BAY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF OUTPUT COULD CAUSE LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. ONLY WORST CASE CONDITION WAS ANALYSED.

IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8040  
NASA FMEA #: 2.1.6.2

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8040  
ITEM: MONOCHROME LENS ASSEMBLY (TVC D FWD P/L BAY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [    ] [    ] [    ] [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [    ]

REMARKS:

PHYSICAL BINDING/JAMMING COULD CAUSE LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8056  
 NASA FMEA #: 2.2.6.2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8056  
 ITEM:                COLOR LENS ASSEMBLY (TVC C)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

PHYSICAL BINDING/JAMMING COULD CAUSE LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA

CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.

IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8056A  
 NASA FMEA #: 2.2.8.1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8056  
 ITEM: COLOR LENS ASSEMBLY (TVC C)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ / N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

PHYSICAL BINDING/JAMMING COULD CAUSE LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8060  
 NASA FMEA #: 2.2.6.2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8060  
 ITEM:                COLOR LENS ASSEMBLY (TVC D)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]      [    ]      [    ]      [    ]      [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
 INADEQUATE [    ]

REMARKS:

PHYSICAL BINDING/JAMMING COULD CAUSE LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION. ONLY WORST CASE CONDITION WAS ANALYSED. IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8060A  
 NASA FMEA #: 2.2.8.1

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8060  
 ITEM: COLOR LENS ASSEMBLY (TVC D)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

PHYSICAL BINDING/JAMMING COULD CAUSE LOSS OF CCTV AND MISSION.  
 LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS  
 STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE  
 LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA  
 CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION AND  
 RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE  
 CONDITION. ONLY WORST CASE CONDITION WAS ANALYSED.  
 IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL  
 CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE  
 CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8069  
 NASA FMEA #: 05-6PK-20402-1

NASA DATA:  
 BASELINE [ X ]  
 NEW [ ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8069  
 ITEM: TV PWR CNTL UNIT SWITCH

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA ACCEPTS NASA REVISED 3/1R CRITICALITY BASED ON GCIL REDUNDANCY. GCIL CAN SELECT CCTV MNA OR MNB POWER THROUGH DEDICATED DRIVERS THUS PROVIDING TWO LEVELS OF REDUNDANCY FOR THIS ITEM.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8070  
 NASA FMEA #: 05-6PK-20402-1

NASA DATA:  
 BASELINE [ X ]  
 NEW [ ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8070  
 ITEM: TV PWR CNTL UNIT SWITCH

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA ACCEPTS NASA REVISED 3/1R CRITICALITY BASED ON GCIL REDUNDANCY. GCIL CAN SELECT CCTV MNA OR MNB POWER THROUGH DEDICATED DRIVERS THUS PROVIDING TWO LEVELS OF REDUNDANCY FOR THIS ITEM.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8074  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8074  
 ITEM:                TV SYNC SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[ / ]    [ ]    [ ]    [ ]    [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO FMEA PRESENTLY AVAILABLE, BUT NASA PLANS TO HAVE A FMEA 3/1R (NON-CIL) GENERATED FOR THIS ITEM. IOA ACCEPTS NASA PLANNED FMEA CRITICALITY 3/1R BASED ON CONSIDERATION THAT RMS JETTISON REPRESENTS A SECOND LEVEL OF REDUNDANCY FOR RMS MOVEMENT MONITORING AND THAT TWO LATCH SENSE DETECTORS PROVIDE TWO LEVELS OF REDUNDANCY FOR P/L BAY DOOR LATCH MONITORING.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8077  
 NASA FMEA #: 05-6PK-20501-1

NASA DATA:  
 BASELINE [ X ]  
 NEW [ ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8077  
 ITEM: TV CAMERA POWER SWITCH (TVC A)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA ACCEPTS NASA REVISED 3/1R CRITICALITY BASED ON CONSIDERATION THAT RMS JETTISON REPRESENTS A SECOND LEVEL OF REDUNDANCY FOR RMS MOVEMENT MONITORING AND THAT TWO LATCH SENSE DETECTORS PROVIDE TWO LEVELS OF REDUNDANCY FOR P/L BAY DOOR LATCH MONITORING.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8078  
 NASA FMEA #: 05-6PK-20501-1

NASA DATA:  
 BASELINE [ X ]  
 NEW [ ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8078  
 ITEM: TV CAMERA POWER SWITCH (TVC A)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA ACCEPTS NASA REVISED 3/1R CRITICALITY BASED ON CONSIDERATION THAT RMS JETTISON REPRESENTS A SECOND LEVEL OF REDUNDANCY FOR RMS MOVEMENT MONITORING AND THAT TWO LATCH SENSE DETECTORS PROVIDE TWO LEVELS OF REDUNDANCY FOR P/L BAY DOOR LATCH MONITORING.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8079  
 NASA FMEA #: 05-6PK-20501-1

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8079  
 ITEM: TV CAMERA POWER SWITCH (TVC B)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

IOA ACCEPTS NASA REVISED 3/1R CRITICALITY BASED ON CONSIDERATION THAT RMS JETTISON REPRESENTS A SECOND LEVEL OF REDUNDANCY FOR RMS MOVEMENT MONITORING AND THAT TWO LATCH SENSE DETECTORS PROVIDE TWO LEVELS OF REDUNDANCY FOR P/L BAY DOOR LATCH MONITORING.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88	NASA DATA:
ASSESSMENT ID: COMTRK-8080	BASELINE [ X ]
NASA FMEA #: 05-6PK-20501-1	NEW [ ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8080  
 ITEM: TV CAMERA POWER SWITCH (TVC B)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA ACCEPTS NASA REVISED 3/1R CRITICALITY BASED ON CONSIDERATION THAT RMS JETTISON REPRESENTS A SECOND LEVEL OF REDUNDANCY FOR RMS MOVEMENT MONITORING AND THAT TWO LATCH SENSE DETECTORS PROVIDE TWO LEVELS OF REDUNDANCY FOR P/L BAY DOOR LATCH MONITORING.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8081  
 NASA FMEA #: 05-6PK-20501-1

NASA DATA:  
 BASELINE [ X ]  
 NEW [ ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8081  
 ITEM: TV CAMERA POWER SWITCH (TVC C)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA ACCEPTS NASA REVISED 3/1R CRITICALITY BASED ON CONSIDERATION THAT RMS JETTISON REPRESENTS A SECOND LEVEL OF REDUNDANCY FOR RMS MOVEMENT MONITORING AND THAT TWO LATCH SENSE DETECTORS PROVIDE TWO LEVELS OF REDUNDANCY FOR P/L BAY DOOR LATCH MONITORING.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8082  
 NASA FMEA #: 05-6PK-20501-1

NASA DATA:  
 BASELINE [ X ]  
 NEW [ ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8082  
 ITEM: TV CAMERA POWER SWITCH (TVC C)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA ACCEPTS NASA REVISED 3/1R CRITICALITY BASED ON CONSIDERATION THAT RMS JETTISON REPRESENTS A SECOND LEVEL OF REDUNDANCY FOR RMS MOVEMENT MONITORING AND THAT TWO LATCH SENSE DETECTORS PROVIDE TWO LEVELS OF REDUNDANCY FOR P/L BAY DOOR LATCH MONITORING.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8083  
 NASA FMEA #: 05-6PK-20501-1

NASA DATA:  
 BASELINE [ X ]  
 NEW [ ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8083  
 ITEM: TV CAMERA POWER SWITCH (TVC D)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA ACCEPTS NASA REVISED 3/1R CRITICALITY BASED ON CONSIDERATION THAT RMS JETTISON REPRESENTS A SECOND LEVEL OF REDUNDANCY FOR RMS MOVEMENT MONITORING AND THAT TWO LATCH SENSE DETECTORS PROVIDE TWO LEVELS OF REDUNDANCY FOR P/L BAY DOOR LATCH MONITORING.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8095  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8095  
 ITEM:                TV CAMERA CMD FOCUS SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[   /   ]	[   ]	[   ]	[   ]	[   ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COMPARABLE NASA CCTV FMEA. FAILURE TO PROVIDE THIS FUNCTION WOULD RESULT IN LOSS OF TVC. UP CMD PROVIDES UNLIKE REDUNDANCY. SECOND FAILURE COULD RESULT IN LOSS OF CCTV FUNCTION AND LOSS OF VEHICLE AND CREW.  
 IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20250-2. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8096  
NASA FMEA #:

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:              8096  
ITEM:                  TV CAMERA CMD FOCUS SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[   /   ]	[   ]	[   ]	[   ]	[   ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NO COMPARABLE NASA CCTV FMEA. FAILURE TO PROVIDE THIS FUNCTION WOULD RESULT IN LOSS OF TVC. UP CMD PROVIDES UNLIKE REDUNDANCY. SECOND FAILURE COULD RESULT IN LOSS OF CCTV FUNCTION AND LOSS OF VEHICLE AND CREW.

IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20250-2. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8097  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8097  
 ITEM:                TV CAMERA CMD ZOOM SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COMPARABLE NASA CCTV FMEA. FAILURE TO PROVIDE THIS FUNCTION WOULD RESULT IN LOSS OF TVC. UP CMD PROVIDES UNLIKE REDUNDANCY. SECOND FAILURE COULD RESULT IN LOSS OF CCTV FUNCTION AND LOSS OF VEHICLE AND CREW.  
 IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20251-2. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8098  
NASA FMEA #:

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:              8098  
ITEM:                  TV CAMERA CMD ZOOM SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NO COMPARABLE NASA CCTV FMEA. FAILURE TO PROVIDE THIS FUNCTION WOULD RESULT IN LOSS OF TVC. UP CMD PROVIDES UNLIKE REDUNDANCY. SECOND FAILURE COULD RESULT IN LOSS OF CCTV FUNCTION AND LOSS OF VEHICLE AND CREW.  
IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20251-2. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8099  
 NASA FMEA #:

NASA DATA:  
 BASELINE [ ]  
 NEW [ ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8099  
 ITEM: TV CAMERA CMD IRIS SWITCH

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NO COMPARABLE NASA CCTV FMEA. FAILURE TO PROVIDE THIS FUNCTION WOULD RESULT IN LOSS OF TVC. UP CMD PROVIDES UNLIKE REDUNDANCY. SECOND FAILURE COULD RESULT IN LOSS OF CCTV FUNCTION AND LOSS OF VEHICLE AND CREW.  
 IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20252-2. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8100  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8100  
 ITEM:                 TV CAMERA CMD IRIS SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[   /   ]	[   ]	[   ]	[   ]	[   ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COMPARABLE NASA CCTV FMEA. FAILURE TO PROVIDE THIS FUNCTION WOULD RESULT IN LOSS OF TVC. UP CMD PROVIDES UNLIKE REDUNDANCY. SECOND FAILURE COULD RESULT IN LOSS OF CCTV FUNCTION AND LOSS OF VEHICLE AND CREW.  
 IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20252-2. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8101  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8101  
 ITEM:                TV CAMERA CMD TILT SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[ / ]    [ ]    [ ]    [ ]    [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COMPARABLE NASA CCTV FMEA. FAILURE TO PROVIDE THIS FUNCTION WOULD RESULT IN LOSS OF TVC. UP CMD PROVIDES UNLIKE REDUNDANCY. SECOND FAILURE COULD RESULT IN LOSS OF CCTV FUNCTION AND LOSS OF VEHICLE AND CREW.  
 IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20214-2. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8102  
NASA FMEA #:

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:             8102  
ITEM:                 TV CAMERA CMD TILT SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[   /   ]	[   ]	[   ]	[   ]	[   ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N   ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]        [   ]        [   ]        [   ]        [   ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NO COMPARABLE NASA CCTV FMEA. FAILURE TO PROVIDE THIS FUNCTION WOULD RESULT IN LOSS OF TVC. UP CMD PROVIDES UNLIKE REDUNDANCY. SECOND FAILURE COULD RESULT IN LOSS OF CCTV FUNCTION AND LOSS OF VEHICLE AND CREW.

IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20214-2. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8103  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8103  
 ITEM:                 TV CAMERA CMD PAN SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COMPARABLE NASA CCTV FMEA. FAILURE TO PROVIDE THIS FUNCTION  
 WOULD RESULT IN LOSS OF TVC. UP CMD PROVIDES UNLIKE REDUNDANCY.  
 SECOND FAILURE COULD RESULT IN LOSS OF CCTV FUNCTION AND LOSS OF  
 VEHICLE AND CREW.  
 IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-  
 6PK-20215-2. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR  
 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8104  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8104  
 ITEM:                 TV CAMERA CMD PAN SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COMPARABLE NASA CCTV FMEA. FAILURE TO PROVIDE THIS FUNCTION WOULD RESULT IN LOSS OF TVC. UP CMD PROVIDES UNLIKE REDUNDANCY. SECOND FAILURE COULD RESULT IN LOSS OF CCTV FUNCTION AND LOSS OF VEHICLE AND CREW.  
 IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20215-2. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8123  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8123  
 ITEM:                TV VIDEO INPUT PBI [TVC A FWD BAY SELECT] SW

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[ P ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COMPARABLE NASA CCTV FMEA. FAILURE TO PROVIDE THIS FUNCTION WOULD RESULT IN LOSS OF TVC. UP CMD PROVIDES UNLIKE REDUNDANCY. SECOND FAILURE COULD RESULT IN LOSS OF CCTV FUNCTION AND LOSS OF VEHICLE AND CREW.  
 IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20227-2. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8124  
NASA FMEA #:

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:             8124  
ITEM:                TV VIDEO INPUT PBI [TVC A SELECT] SW

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NO COMPARABLE NASA CCTV FMEA. FAILURE TO PROVIDE THIS FUNCTION WOULD RESULT IN LOSS OF TVC. UP CMD PROVIDES UNLIKE REDUNDANCY. SECOND FAILURE COULD RESULT IN LOSS OF CCTV FUNCTION AND LOSS OF VEHICLE AND CREW.  
IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20227-2. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8125  
 NASA FMEA #:

NASA DATA:  
 BASELINE [ ]  
 NEW [ ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8125  
 ITEM: TV VIDEO INPUT PBI [TVC B KEEL/EVA SELECT] SW

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NO COMPARABLE NASA CCTV FMEA. FAILURE TO PROVIDE THIS FUNCTION WOULD RESULT IN LOSS OF TVC. UP CMD PROVIDES UNLIKE REDUNDANCY. SECOND FAILURE COULD RESULT IN LOSS OF CCTV FUNCTION AND LOSS OF VEHICLE AND CREW.  
 IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20228-2. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8126  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8126  
 ITEM:                 TV VIDEO INPUT PBI [TVC B SELECT] SW

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[   /   ]	[   ]	[   ]	[   ]	[   ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COMPARABLE NASA CCTV FMEA. FAILURE TO PROVIDE THIS FUNCTION  
 WOULD RESULT IN LOSS OF TVC. UP CMD PROVIDES UNLIKE REDUNDANCY.  
 SECOND FAILURE COULD RESULT IN LOSS OF CCTV FUNCTION AND LOSS OF  
 VEHICLE AND CREW.  
 IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-  
 6PK-20228-2. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR  
 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8127  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8127  
 ITEM:                TV VIDEO INPUT PBI [TVC C AFT BAY SELECT] SW

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COMPARABLE NASA CCTV FMEA. FAILURE TO PROVIDE THIS FUNCTION WOULD RESULT IN LOSS OF TVC. UP CMD PROVIDES UNLIKE REDUNDANCY. SECOND FAILURE COULD RESULT IN LOSS OF CCTV FUNCTION AND LOSS OF VEHICLE AND CREW.  
 IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20260-2. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8128  
NASA FMEA #:

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8128  
ITEM: TV VIDEO INPUT PBI [TVC C SELECT] SW

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NO COMPARABLE NASA CCTV FMEA. FAILURE TO PROVIDE THIS FUNCTION WOULD RESULT IN LOSS OF TVC. UP CMD PROVIDES UNLIKE REDUNDANCY. SECOND FAILURE COULD RESULT IN LOSS OF CCTV FUNCTION AND LOSS OF VEHICLE AND CREW.

IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20260-2. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8129  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8129  
 ITEM:                TV VIDEO INPUT PBI [TVC D RMS STBD SELECT] SW

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COMPARABLE NASA CCTV FMEA. FAILURE TO PROVIDE THIS FUNCTION WOULD RESULT IN LOSS OF TVC. UP CMD PROVIDES UNLIKE REDUNDANCY. SECOND FAILURE COULD RESULT IN LOSS OF CCTV FUNCTION AND LOSS OF VEHICLE AND CREW.  
 IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20229-2. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8130  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8130  
 ITEM:                TV VIDEO INPUT PBI [TVC D SELECT] SW

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[   /   ]	[   ]	[   ]	[   ]	[   ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COMPARABLE NASA CCTV FMEA. FAILURE TO PROVIDE THIS FUNCTION WOULD RESULT IN LOSS OF TVC. UP CMD PROVIDES UNLIKE REDUNDANCY. SECOND FAILURE COULD RESULT IN LOSS OF CCTV FUNCTION AND LOSS OF VEHICLE AND CREW.  
 IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20229-2. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8243  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8243  
 ITEM:                TVC A MONOCHROME LENS ASSY FOCUS CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO UNLIKELY FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF PAYLOAD BAY LOCATED CCTV COMPONENTS ARE NOT EXERCISED DURING FLIGHT, THEREFORE THEY CANNOT EXPERIENCE A "FAILURE TO SWITCH".

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8244  
NASA FMEA #:

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:             8244  
ITEM:                 TVC A MONOCHROME LENS ASSY FOCUS CONTROL SWITCH  
  
LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[   /   ]	[   ]	[   ]	[   ]	[   ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO IMPROBABLE FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF CCTV COMPONENTS ARE MOMENTARY SWITCHES THAT CAN BE OVERRIDDEN BY GROUND UPLINK AND CREW COMMANDS. "OPEN OR SHORT TO CASE" WILL NOT PREVENT TV CAMERA AND LENS OPERATION, AND SHORTED CONTACTS ARE UNLIKELY. SINCE THE CARGO BAY CCTV COMPONENTS CONTROLS ARE NOT PLANNED FOR USE DURING FLIGHT, NASA DID NOT GENERATE FMEA'S FOR THEM.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8245  
NASA FMEA #:

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8245  
ITEM: TVC B MONOCHROME LENS ASSY FOCUS CONTROL SWITCH

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:  
NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO UNLIKELY FAILURE MODE. CONTROL MOUNTED ON CHASSIS OF PAYLOAD BAY LOCATED CCTV COMPONENTS ARE NOT EXERCISED DURING FLIGHT, THEREFORE THEY CANNOT EXPERIENCE A "FAILURE TO SWITCH".







APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8249  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8249  
 ITEM:                TVC D MONOCHROME LENS ASSY FOCUS CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[   /   ]	[   ]	[   ]	[   ]	[   ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO UNLIKELY FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF PAYLOAD BAY LOCATED CCTV COMPONENTS ARE NOT EXERCISED DURING FLIGHT, THEREFORE THEY CANNOT EXPERIENCE A "FAILURE TO SWITCH".

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8250  
NASA FMEA #:

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:             8250  
ITEM:                TVC D MONOCHROME LENS ASSY FOCUS CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ]    [ ]    [ ]    [ ]    [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO IMPROBABLE FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF CCTV COMPONENTS ARE MOMENTARY SWITCHES THAT CAN BE OVERRIDDEN BY GROUND UPLINK AND CREW COMMANDS. "OPEN OR SHORT TO CASE" WILL NOT PREVENT TV CAMERA AND LENS OPERATION, AND SHORTED CONTACTS ARE UNLIKELY. SINCE THE CARGO BAY CCTV COMPONENTS CONTROLS ARE NOT PLANNED FOR USE DURING FLIGHT, NASA DID NOT GENERATE FMEA'S FOR THEM.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8259  
NASA FMEA #:

NASA DATA:  
BASELINE [ ]  
NEW [ ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8259  
ITEM: TVC A MONOCHROME LENS ASSY ZOOM CONTROL SWITCH

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO UNLIKELY FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF PAYLOAD BAY LOCATED CCTV COMPONENTS ARE NOT EXERCISED DURING FLIGHT, THEREFORE THEY CANNOT EXPERIENCE A "FAILURE TO SWITCH".

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8260  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8260  
 ITEM:                TVC A MONOCHROME LENS ASSY ZOOM CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO IMPROBABLE FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF CCTV COMPONENTS ARE MOMENTARY SWITCHES THAT CAN BE OVERRIDDEN BY GROUND UPLINK AND CREW COMMANDS. "OPEN OR SHORT TO CASE" WILL NOT PREVENT TV CAMERA AND LENS OPERATION, AND SHORTED CONTACTS ARE UNLIKELY. SINCE THE CARGO BAY CCTV COMPONENTS CONTROLS ARE NOT PLANNED FOR USE DURING FLIGHT, NASA DID NOT GENERATE FMEA'S FOR THEM.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8261  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8261  
 ITEM:                TVC B MONOCHROME LENS ASSY ZOOM CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO UNLIKELY FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF PAYLOAD BAY LOCATED CCTV COMPONENTS ARE NOT EXERCISED DURING FLIGHT, THEREFORE THAY CANNOT EXPERIENCE A "FAILURE TO SWITCH".

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8262  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8262  
 ITEM:                TVC B MONOCHROME LENS ASSY ZOOM CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[   /   ]	[   ]	[   ]	[   ]	[   ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO IMPROBABLE FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF CCTV COMPONENTS ARE MOMENTARY SWITCHES THAT CAN BE OVERRIDDEN BY GROUND UPLINK AND CREW COMMANDS. "OPEN OR SHORT TO CASE" WILL NOT PREVENT TV CAMERA AND LENS OPERATION, AND SHORTED CONTACTS ARE UNLIKELY. SINCE THE CARGO BAY CCTV COMPONENTS CONTROLS ARE NOT PLANNED FOR USE DURING FLIGHT, NASA DID NOT GENERATE FMEA'S FOR THEM.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8263  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8263  
 ITEM:                TVC C MONOCHROME LENS ASSY ZOOM CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[ P ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO UNLIKELY FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF PAYLOAD BAY LOCATED CCTV COMPONENTS ARE NOT EXERCISED DURING FLIGHT, THEREFORE THEY CANNOT EXPERIENCE A "FAILURE TO SWITCH".

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8264  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8264  
 ITEM:                TVC C MONOCHROME LENS ASSY ZOOM CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO IMPROBABLE FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF CCTV COMPONENTS ARE MOMENTARY SWITCHES THAT CAN BE OVERRIDDEN BY GROUND UPLINK AND CREW COMMANDS. "OPEN OR SHORT TO CASE" WILL NOT PREVENT TV CAMERA AND LENS OPERATION, AND SHORTED CONTACTS ARE UNLIKELY. SINCE THE CARGO BAY CCTV COMPONENTS CONTROLS ARE NOT PLANNED FOR USE DURING FLIGHT, NASA DID NOT GENERATE FMEA'S FOR THEM.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8265  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8265  
 ITEM:                TVC D MONOCHROME LENS ASSY ZOOM CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[ / ]    [ ]    [ ]    [ ]    [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:  
 NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO UNLIKELY FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF PAYLOAD BAY LOCATED CCTV COMPONENTS ARE NOT EXERCISED DURING FLIGHT, THEREFORE THEY CANNOT EXPERIENCE A "FAILURE TO SWITCH".

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8266  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8266  
 ITEM:                TVC D MONOCHROME LENS ASSY ZOOM CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO IMPROBABLE FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF CCTV COMPONENTS ARE MOMENTARY SWITCHES THAT CAN BE OVERRIDDEN BY GROUND UPLINK AND CREW COMMANDS. "OPEN OR SHORT TO CASE" WILL NOT PREVENT TV CAMERA AND LENS OPERATION, AND SHORTED CONTACTS ARE UNLIKELY. SINCE THE CARGO BAY CCTV COMPONENTS CONTROLS ARE NOT PLANNED FOR USE DURING FLIGHT, NASA DID NOT GENERATE FMEA'S FOR THEM.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8275  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8275  
 ITEM:                TVC A MONOCHROME LENS ASSY IRIS CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILAURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO UNLIKELY FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF PAYLOAD BAY LOCATED CCTV COMPONENTS ARE NOT EXERCISED DURING FLIGHT, THEREFORE THEY CANNOT EXPERIENCE A "FAILURE TO SWITCH".

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8276  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8276  
 ITEM:                TVC A MONOCHROME LENS ASSY IRIS CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILAURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO IMPROBABLE FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF CCTV COMPONENTS ARE MOMENTARY SWITCHES THAT CAN BE OVERRIDDEN BY GROUND UPLINK AND CREW COMMANDS. "OPEN OR SHORT TO CASE" WILL NOT PREVENT TV CAMERA AND LENS OPERATION, AND SHORTED CONTACTS ARE UNLIKELY. SINCE THE CARGO BAY CCTV COMPONENTS CONTROLS ARE NOT PLANNED FOR USE DURING FLIGHT, NASA DID NOT GENERATE FMEA'S FOR THEM.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8277  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8277  
 ITEM:                TVC B MONOCHROME LENS ASSY IRIS CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:  
 NO COUNTERPART NASA CCTV FMEA. FAILAURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO UNLIKELY FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF PAYLOAD BAY LOCATED CCTV COMPONENTS ARE NOT EXERCISED DURING FLIGHT, THEREFORE THEY CANNOT EXPERIENCE A "FAILURE TO SWITCH".

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8278  
NASA FMEA #:

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:              8278  
ITEM:                  TVC B MONOCHROME LENS ASSY IRIS CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]      [    ]      [    ]      [    ]      [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:  
NO COUNTERPART NASA CCTV FMEA. FAILAURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO IMPROBABLE FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF CCTV COMPONENTS ARE MOMENTARY SWITCHES THAT CAN BE OVERRIDDEN BY GROUND UPLINK AND CREW COMMANDS. "OPEN OR SHORT TO CASE" WILL NOT PREVENT TV CAMERA AND LENS OPERATION, AND SHORTED CONTACTS ARE UNLIKELY. SINCE THE CARGO BAY CCTV COMPONENTS CONTROLS ARE NOT PLANNED FOR USE DURING FLIGHT, NASA DID NOT GENERATE FMEA'S FOR THEM.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8279  
NASA FMEA #:

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 8279  
ITEM: TVC C MONOCHROME LENS ASSY IRIS CONTROL SWITCH

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:  
NO COUNTERPART NASA CCTV FMEA. FAILAURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO UNLIKELY FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF PAYLOAD BAY LOCATED CCTV COMPONENTS ARE EXERCISED DURING FLIGHT, THEREFORE THEY CANNOT EXPERIENCE A "FAILURE TO SWITCH".

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8280  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8280  
 ITEM:                TVC C MONOCHROME LENS ASSY IRIS CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILAURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO IMPROBABLE FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF CCTV COMPONENTS ARE MOMENTARY SWITCHES THAT CAN BE OVERRIDDEN BY GROUND UPLINK AND CREW COMMANDS. "OPEN OR SHORT TO CASE" WILL NOT PREVENT TV CAMERA AND LENS OPERATION, AND SHORTED CONTACTS ARE UNLIKELY. SINCE THE CARGO BAY CCTV COMPONENTS CONTROLS ARE NOT PLANNED FOR USE DURING FLIGHT, NASA DID NOT GENERATE FMEA'S FOR THEM.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8281  
 NASA FMEA #:

NASA DATA:  
 BASELINE [ ]  
 NEW [ ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8281  
 ITEM: TVC D MONOCHROME LENS ASSY IRIS CONTROL SWITCH

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILAURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO UNLIKELY FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF PAYLOAD BAY LOCATED CCTV COMPONENTS ARE NOT EXERCISED DURING FLIGHT, THEREFORE THEY CANNOT EXPERIENCE A "FAILURE TO SWITCH".









APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8306  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8306  
 ITEM:                TVC A COLOR LENS ASSY ZOOM CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO IMPROBABLE FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF CCTV COMPONENTS ARE MOMENTARY SWITCHES THAT CAN BE OVERRIDDEN BY GROUND UPLINK AND CREW COMMANDS. "OPEN OR SHORT TO CASE" WILL NOT PREVENT TV CAMERA AND LENS OPERATION, AND SHORTED CONTACTS ARE UNLIKELY. SINCE THE CARGO BAY CCTV COMPONENTS CONTROLS ARE NOT PLANNED FOR USE DURING FLIGHT, NASA DID NOT GENERATE FMEA'S FOR THEM.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8307  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8307  
 ITEM:                TVC A COLOR LENS ASSY IRIS CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[ / ]    [ ]    [ ]    [ ]    [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO UNLIKELY FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF PAYLOAD BAY LOCATED CCTV COMPONENTS ARE NOT EXERCISED DURING FLIGHT, THEREFORE THEY CANNOT EXPERIENCE A "FAILURE TO SWITCH".



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8309  
NASA FMEA #:

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:             8309  
ITEM:                TVC B COLOR LENS ASSY FOCUS CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO UNLIKELY FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF PAYLOAD BAY LOCATED CCTV COMPONENTS ARE NOT EXERCISED DURING FLIGHT, THEREFORE THEY CANNOT EXPERIENCE A "FAILURE TO SWITCH".

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8310  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8310  
 ITEM:                TVC B COLOR LENS ASSY FOCUS CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO IMPROBABLE FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF CCTV COMPONENTS ARE MOMENTARY SWITCHES THAT CAN BE OVERRIDDEN BY GROUND UPLINK AND CREW COMMANDS. "OPEN OR SHORT TO CASE" WILL NOT PREVENT TV CAMERA AND LENS OPERATION, AND SHORTED CONTACTS ARE UNLIKELY. SINCE THE CARGO BAY CCTV COMPONENTS CONTROLS ARE NOT PLANNED FOR USE DURING FLIGHT, NASA DID NOT GENERATE FMEA'S FOR THEM.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8311  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8311  
 ITEM:                TVC B COLOR LENS ASSY ZOOM CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO UNLIKELY FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF PAYLOAD BAY LOCATED CCTV COMPONENTS ARE NOT EXERCISED DURING FLIGHT, THEREFORE THEY CANNOT EXPERIENCE A "FAILURE TO SWITCH".

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8312  
 NASA FMEA #: NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8312  
 ITEM: TVC B COLOR LENS ASSY ZOOM CONTROL SWITCH

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO IMPROBABLE FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF CCTV COMPONENTS ARE MOMENTARY SWITCHES THAT CAN BE OVERRIDDEN BY GROUND UPLINK AND CREW COMMANDS. "OPEN OR SHORT TO CASE" WILL NOT PREVENT TV CAMERA AND LENS OPERATION, AND SHORTED CONTACTS ARE UNLIKELY. SINCE THE CARGO BAY CCTV COMPONENTS CONTROLS ARE NOT PLANNED FOR USE DURING FLIGHT, NASA DID NOT GENERATE FMEA'S FOR THEM.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8313  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8313  
 ITEM:                TVC B COLOR LENS ASSY IRIS CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO UNLIKELY FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF PAYLOAD BAY LOCATED CCTV COMPONENTS ARE NOT EXERCISED DURING FLIGHT, THEREFORE THEY CANNOT EXPERIENCE A "FAILURE TO SWITCH".

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8314  
NASA FMEA #:

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:              8314  
ITEM:                  TVC B COLOR LENS ASSY IRIS CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[   /   ]	[   ]	[   ]	[   ]	[   ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO IMPROBABLE FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF CCTV COMPONENTS ARE MOMENTARY SWITCHES THAT CAN BE OVERRIDDEN BY GROUND UPLINK AND CREW COMMANDS. "OPEN OR SHORT TO CASE" WILL NOT PREVENT TV CAMERA AND LENS OPERATION, AND SHORTED CONTACTS ARE UNLIKELY. SINCE THE CARGO BAY CCTV COMPONENTS CONTROLS ARE NOT PLANNED FOR USE DURING FLIGHT, NASA DID NOT GENERATE FMEA'S FOR THEM.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8315  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8315  
 ITEM:                TVC C COLOR LENS ASSY FOCUS CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[   /   ]	[   ]	[   ]	[   ]	[   ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO UNLIKELY FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF PAYLOAD BAY LOCATED CCTV COMPONENTS ARE NOT EXERCISED DURING FLIGHT, THEREFORE THEY CANNOT EXPERIENCE A "FAILURE TO SWITCH".

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8316  
 NASA FMEA #: NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8316  
 ITEM: TVC C COLOR LENS ASSY FOCUS CONTROL SWITCH

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO IMPROBABLE FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF CCTV COMPONENTS ARE MOMENTARY SWITCHES THAT CAN BE OVERRIDDEN BY GROUND UPLINK AND CREW COMMANDS. "OPEN OR SHORT TO CASE" WILL NOT PREVENT TV CAMERA AND LENS OPERATION, AND SHORTED CONTACTS ARE UNLIKELY. SINCE THE CARGO BAY CCTV COMPONENTS CONTROLS ARE NOT PLANNED FOR USE DURING FLIGHT, NASA DID NOT GENERATE FMEA'S FOR THEM.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8317  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8317  
 ITEM:                TVC C COLOR LENS ASSY ZOOM CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[ / ]    [ ]    [ ]    [ ]    [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO UNLIKELY FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF PAYLOAD BAY LOCATED CCTV COMPONENTS ARE NOT EXERCISED DURING FLIGHT, THEREFORE THEY CANNOT EXPERIENCE A "FAILURE TO SWITCH".

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8318  
 NASA FMEA #: NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8318  
 ITEM: TVC C COLOR LENS ASSY ZOOM CONTROL SWITCH

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO IMPROBABLE FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF CCTV COMPONENTS ARE MOMENTARY SWITCHES THAT CAN BE OVERRIDDEN BY GROUND UPLINK AND CREW COMMANDS. "OPEN OR SHORT TO CASE" WILL NOT PREVENT TV CAMERA AND LENS OPERATION, AND SHORTED CONTACTS ARE UNLIKELY. SINCE THE CARGO BAY CCTV COMPONENTS CONTROLS ARE NOT PLANNED FOR USE DURING FLIGHT, NASA DID NOT GENERATE FMEA'S FOR THEM.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8319  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8319  
 ITEM:                TVC C COLOR LENS ASSY IRIS CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[ / ]    [ ]    [ ]    [ ]    [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO UNLIKELY FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF PAYLOAD BAY LOCATED CCTV COMPONENTS ARE NOT EXERCISED DURING FLIGHT, THEREFORE THEY CANNOT EXPERIENCE A "FAILURE TO SWITCH".

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8320  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8320  
 ITEM:                TVC C COLOR LENS ASSY IRIS CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO IMPROBABLE FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF CCTV COMPONENTS ARE MOMENTARY SWITCHES THAT CAN BE OVERRIDDEN BY GROUND UPLINK AND CREW COMMANDS. "OPEN OR SHORT TO CASE" WILL NOT PREVENT TV CAMERA AND LENS OPERATION, AND SHORTED CONTACTS ARE UNLIKELY. SINCE THE CARGO BAY CCTV COMPONENTS CONTROLS ARE NOT PLANNED FOR USE DURING FLIGHT, NASA DID NOT GENERATE FMEA'S FOR THEM.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8321  
NASA FMEA #:

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:             8321  
ITEM:                TVC D COLOR LENS ASSY FOCUS CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO UNLIKELY FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF PAYLOAD BAY LOCATED CCTV COMPONENTS ARE NOT EXERCISED DURING FLIGHT, THEREFORE THEY CANNOT EXPERIENCE A "FAILURE TO SWITCH".

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8322  
 NASA FMEA #: NASA DATA:  
 BASELINE [ ]  
 NEW [ ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8322  
 ITEM: TVC D COLOR LENS ASSY FOCUS CONTROL SWITCH

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO IMPROBABLE FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF CCTV COMPONENTS ARE MOMENTARY SWITCHES THAT CAN BE OVERIDDEN BY GROUND UPLINK AND CREW COMMANDS. "OPEN OR SHORT TO CASE" WILL NOT PREVENT TV CAMERA AND LENS OPERATION, AND SHORTED CONTACTS ARE UNLIKELY. SINCE THE CARGO BAY CCTV COMPONENTS CONTROLS ARE NOT PLANNED FOR USE DURING FLIGHT, NASA DID NOT GENERATE FMEA'S FOR THEM.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8323  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8323  
 ITEM: TVC D COLOR LENS ASSY ZOOM CONTROL SWITCH

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:  
 NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO UNLIKELY FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF PAYLOAD BAY LOCATED CCTV COMPONENTS ARE NOT EXERCISED DURING FLIGHT, THEREFORE THEY CANNOT EXPERIENCE A "FAILURE TO SWITCH".

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8324  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8324  
 ITEM:                TVC D COLOR LENS ASSY ZOOM CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[   /   ]	[   ]	[   ]	[   ]	[   ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N   ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[   /   ]            [   ]            [   ]            [   ]            [   ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO IMPROBABLE FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF CCTV COMPONENTS ARE MOMENTARY SWITCHES THAT CAN BE OVERRIDDEN BY GROUND UPLINK AND CREW COMMANDS. "OPEN OR SHORT TO CASE" WILL NOT PREVENT TV CAMERA AND LENS OPERATION, AND SHORTED CONTACTS ARE UNLIKELY. SINCE THE CARGO BAY CCTV COMPONENTS CONTROLS ARE NOT PLANNED FOR USE DURING FLIGHT, NASA DID NOT GENERATE FMEA'S FOR THEM.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8325  
 NASA FMEA #:

NASA DATA:  
 BASELINE [ ]  
 NEW [ ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8325  
 ITEM: TVC D COLOR LENS ASSY IRIS CONTROL SWITCH

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO UNLIKELY FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF PAYLOAD BAY LOCATED CCTV COMPONENTS ARE NOT EXERCISED DURING FLIGHT, THEREFORE THEY CANNOT EXPERIENCE A "FAILURE TO SWITCH".

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8326  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8326  
 ITEM:                TVC D COLOR LENS ASSY IRIS CONTROL SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY		REDUNDANCY SCREENS			CIL ITEM
	FLIGHT		A	B	C	
	HDW/FUNC					
NASA	[    /    ]		[    ]	[    ]	[    ]	*
IOA	[ 2 /1R ]		[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]		[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]     [    ]     [    ]     [    ]     [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF CCTV AND SUBSEQUENT LOSS OF VEHICLE AND CREW. WITHDRAWN DUE TO IMPROBABLE FAILURE MODE. CONTROLS MOUNTED ON CHASSIS OF CCTV COMPONENTS ARE MOMENTARY SWITCHES THAT CAN BE OVERRIDDEN BY GROUND UPLINK AND CREW COMMANDS. "OPEN OR SHORT TO CASE" WILL NOT PREVENT TV CAMERA AND LENS OPERATION, AND SHORTED CONTACTS ARE UNLIKELY. SINCE THE CARGO BAY CCTV COMPONENTS CONTROLS ARE NOT PLANNED FOR USE DURING FLIGHT, NASA DID NOT GENERATE FMEA'S FOR THEM.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8328  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8328  
 ITEM:                RMS WRIST TVC COLOR LENS ASSY FOCUS CONTROL  
 SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO COUNTERPART NASA CCTV FMEA. LOSS OF ALL CAPABILITY TO PERFORM THIS FUNCTION COULD RESULT IN LOSS OF MISSION. THIS MDAC FMEA ID-8328 WAS PREVIOUSLY INCLUDED IN THE CIL LIST BY AN ERRONEOUS "X" PLACED IN THE "IOA/CIL ITEM" SLOT ON THE ASSESSMENT WORKSHEET.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8363  
 NASA FMEA #:

NASA DATA:  
 BASELINE [    ]  
 NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             8363  
 ITEM:                CONSOLE MONITOR PWR SW

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY	REDUNDANCY SCREENS			CIL ITEM
	FLIGHT HDW/FUNC	A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]      [    ]      [    ]      [    ]      [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
 INADEQUATE [    ]

REMARKS:

NO FMEA PRESENTLY AVAILABLE, BUT NASA PLANS TO HAVE A FMEA 3/1R (NON-CIL) GENERATED FOR THIS ITEM. IOA ACCEPTS NASA PLANNED FMEA CRITICALITY 3/1R BASED ON CONSIDERATION THAT RMS JETTISON REPRESENTS A SECOND LEVEL OF REDUNDANCY FOR RMS MOVEMENT MONITORING AND THAT TWO LATCH SENSE DETECTORS PROVIDE TWO LEVELS OF REDUNDANCY FOR P/L BAY DOOR LATCH MONITORING.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8364  
 NASA FMEA #:

NASA DATA:  
 BASELINE [ ]  
 NEW [ ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8364  
 ITEM: CONSOLE MONITOR PWR SW

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NO FMEA PRESENTLY AVAILABLE, BUT NASA PLANS TO HAVE A FMEA 3/1R (NON-CIL) GENERATED FOR THIS ITEM. IOA ACCEPTS NASA PLANNED FMEA CRITICALITY 3/1R BASED ON CONSIDERATION THAT RMS JETTISON REPRESENTS A SECOND LEVEL OF REDUNDANCY FOR RMS MOVEMENT MONITORING AND THAT TWO LATCH SENSE DETECTORS PROVIDE TWO LEVELS OF REDUNDANCY FOR P/L BAY DOOR LATCH MONITORING.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8368  
 NASA FMEA #:

NASA DATA:  
 BASELINE [ ]  
 NEW [ ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 8368  
 ITEM: CONSOLE MONITOR SYNC SW

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

NO FMEA PRESENTLY AVAILABLE, BUT NASA PLANS TO HAVE A FMEA 3/1R (NON-CIL) GENERATED FOR THIS ITEM. IOA ACCEPTS NASA PLANNED FMEA CRITICALITY 3/1R BASED ON CONSIDERATION THAT RMS JETTISON REPRESENTS A SECOND LEVEL OF REDUNDANCY FOR RMS MOVEMENT MONITORING AND THAT TWO LATCH SENSE DETECTORS PROVIDE TWO LEVELS OF REDUNDANCY FOR P/L BAY DOOR LATCH MONITORING.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8374  
NASA FMEA #:

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:             8374  
ITEM:                 CONSOLE MONITOR SOURCE SW

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NO FMEA PRESENTLY AVAILABLE, BUT NASA PLANS TO HAVE A FMEA 3/1R (NON-CIL) GENERATED FOR THIS ITEM. IOA ACCEPTS NASA PLANNED FMEA CRITICALITY 3/1R BASED ON CONSIDERATION THAT RMS JETTISON REPRESENTS A SECOND LEVEL OF REDUNDANCY FOR RMS MOVEMENT MONITORING AND THAT TWO LATCH SENSE DETECTORS PROVIDE TWO LEVELS OF REDUNDANCY FOR P/L BAY DOOR LATCH MONITORING.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8376  
NASA FMEA #:

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:              8376  
ITEM:                 CONSOLE MONITOR BRIGHTNESS AND CONTRAST CONTROL  
SW

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NO FMEA PRESENTLY AVAILABLE, BUT NASA PLANS TO HAVE A FMEA 3/1R (NON-CIL) GENERATED FOR THIS ITEM. IOA ACCEPTS NASA PLANNED FMEA CRITICALITY 3/1R BASED ON CONSIDERATION THAT RMS JETTISON REPRESENTS A SECOND LEVEL OF REDUNDANCY FOR RMS MOVEMENT MONITORING AND THAT TWO LATCH SENSE DETECTORS PROVIDE TWO LEVELS OF REDUNDANCY FOR P/L BAY DOOR LATCH MONITORING.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8505  
 NASA FMEA #: 05-6PK-20201-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C  
 MDAC ID: 8505  
 ITEM: CB 39 FWD BAY TVC & P/T (3A)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

OPEN FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT IN LOSS OF VEHICLE AND CREW.

IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20115-1. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8507  
 NASA FMEA #: 05-6PK-20202-1

NASA DATA:  
 BASELINE [ X ]  
 NEW [ ]

SUBSYSTEM: COMM AND TRACK/EPD&C  
 MDAC ID: 8507  
 ITEM: CB 40 FWD BAY TVC HTR (3A)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

ONE FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT IN LOSS OF VEHICLE AND CREW.

IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20116-1. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8509  
 NASA FMEA #: 05-6PK-20202-1

NASA DATA:  
 BASELINE [ X ]  
 NEW [ ]

SUBSYSTEM: COMM AND TRACK/EPD&C  
 MDAC ID: 8509  
 ITEM: CB 41 FWD BAY P/T HTR (3A)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

OPEN FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT IN LOSS OF VEHICLE AND CREW.  
 IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20117-1. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8511  
 NASA FMEA #: 05-6PK-20201-1

NASA DATA:  
 BASELINE [ X ]  
 NEW [ ]

SUBSYSTEM: COMM AND TRACK/EPD&C  
 MDAC ID: 8511  
 ITEM: CB 34 AFT BAY TVC & P/T (3A)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

OPEN FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT IN LOSS OF VEHICLE AND CREW.

IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20112-1. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8513  
 NASA FMEA #: 05-6PK-20202-1

NASA DATA:  
 BASELINE [ X ]  
 NEW [ ]

SUBSYSTEM: COMM AND TRACK/EPD&C  
 MDAC ID: 8513  
 ITEM: CB 35 AFT BAY TVC HTR (3A)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY	REDUNDANCY SCREENS			CIL ITEM
	FLIGHT HDW/FUNC	A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

OPEN FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT IN LOSS OF VEHICLE AND CREW.

IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20113-1. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8515  
 NASA FMEA #: 05-6PK-20202-1

NASA DATA:  
 BASELINE [ X ]  
 NEW [ ]

SUBSYSTEM: COMM AND TRACK/EPD&C  
 MDAC ID: 8515  
 ITEM: CB 36 AFT BAY P/T HTR (3A)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

OPEN FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT IN LOSS OF VEHICLE AND CREW.  
 IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20114-1. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8517  
 NASA FMEA #: 05-6PK-20201-1

NASA DATA:  
 BASELINE [ X ]  
 NEW [ ]

SUBSYSTEM: COMM AND TRACK/EPD&C  
 MDAC ID: 8517  
 ITEM: CB 45 KEEL/EVA TVC & P/T (3A)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

OPEN FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT IN LOSS OF VEHICLE AND CREW.  
 IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20118-1. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88	NASA DATA:
ASSESSMENT ID: COMTRK-8519	BASELINE [ X ]
NASA FMEA #: 05-6PK-20201-1	NEW [ ]

SUBSYSTEM: COMM AND TRACK/EPD&C  
MDAC ID: 8519  
ITEM: CB 46 KEEL/EVA TVC HTR (3A)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

OPEN FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT IN LOSS OF VEHICLE AND CREW.

IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20119-1. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8521  
NASA FMEA #: 05-6PK-20202-1

NASA DATA:  
BASELINE [ X ]  
NEW [ ]

SUBSYSTEM: COMM AND TRACK/EPD&C  
MDAC ID: 8521  
ITEM: CB 47 KEEL/EVA P/T HTR (3A)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 / 3 ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

OPEN FAILURE COULD RESULT IN LOSS OF MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD RESULT IN LOSS OF VEHICLE AND CREW.

IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20120-1. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8525  
NASA FMEA #:

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM:            COMM AND TRACK/EPD&C  
MDAC ID:              8525  
ITEM:                 CB 51 STBD RMS TVC & P/T (3A)

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NO COMPARABLE NASA CCTV FMEA. STBD NOT USED ON PRESENT MISSION.  
NO FMEA REQUIRED FOR STBD RMS.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
ASSESSMENT ID: COMTRK-8527  
NASA FMEA #:

NASA DATA:  
BASELINE [    ]  
NEW [    ]

SUBSYSTEM: COMM AND TRACK/EPD&C  
MDAC ID: 8527  
ITEM: CB 52 STBD RMS TVC HTR (3A)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[    /    ]	[    ]	[    ]	[    ]	[    ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]  
INADEQUATE [    ]

REMARKS:

NO COMPARABLE NASA CCTV FMEA. STBD RMS NOT USED ON PRESENT MISSIONS.  
IOA ACCEPTS NASA CRITICALITY BASED ON NASA REVISED FMEA/CIL 05-6PK-20201-1. BOTH NASA AND IOA ASSIGNED CIL DESIGNATIONS 2/1R OR 2/2.



APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8531  
 NASA FMEA #: 05-6PK-20101-1

NASA DATA:  
 BASELINE [ X ]  
 NEW [ ]

SUBSYSTEM: COMM AND TRACK/EPD&C  
 MDAC ID: 8531  
 ITEM: CB 55 PORT RMS TVC & P/T (3A)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

OTHER TVCS AND CREW VIEWING COULD BE CONSIDERED AS UNLIKE  
 REDUNDANCY AND LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTIONS  
 COULD RESULT IN LOSS OF VEHICLE AND CREW.  
 IOA ACCEPTS THE NASA CRITICALITY BASED ON THE LATITUDE GIVEN FOR  
 USE OF VARIOUS GROUND RULE INTERPRETATION IN DETERMING THE SYSTEM  
 LEVEL OF REDUNDANCY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88	NASA DATA:
ASSESSMENT ID: COMTRK-8533	BASELINE [ X ]
NASA FMEA #: 05-6PK-20102-1	NEW [   ]
SUBSYSTEM:           COMM AND TRACK/EPD&C	
MDAC ID:             8533	
ITEM:                 CB 56 PORT RMS TVC HTR (3A)	
LEAD ANALYST:        W.C. LONG	

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[   ]	[   ]	[   ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[   / N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS:   (If different from NASA)

[   /   ]	[   ]	[   ]	[   ]	[   ]
				(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE	[ X ]
INADEQUATE	[   ]

REMARKS:

OTHER TVCs AND CREW VIEWING COULD BE CONSIDERED AS UNLIKE REDUNDANCY AND LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTIONS COULD RESULT IN LOSS OF VEHICLE AND CREW. IOA ACCEPTS THE NASA CRITICALITY BASED ON THE LATITUDE GIVEN FOR USE OF VARIOUS GROUND RULE INTERPRETATION IN DETERMING THE SYSTEM LEVEL OF REDUNDANCY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  
 ASSESSMENT ID: COMTRK-8535  
 NASA FMEA #: 06-6PK-20102-1

NASA DATA:  
 BASELINE [ X ]  
 NEW [ ]

SUBSYSTEM: COMM AND TRACK/EPD&C  
 MDAC ID: 8535  
 ITEM: CB 57 PORT RMS P/T HTR (3A)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ /N ]	[ N ]	[ N ]	[ N ]	[ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

OTHER TVCS AND CREW VIEWING COULD BE CONSIDERED AS UNLIKE REDUNDANCY AND LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTIONS COULD RESULT IN LOSS OF VEHICLE AND CREW. IOA ACCEPTS THE NASA CRITICALITY BASED ON THE LATITUDE GIVEN FOR USE OF VARIOUS GROUND RULE INTERPRETATION IN DETERMING THE SYSTEM LEVEL OF REDUNDANCY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/11/88  
ASSESSMENT ID: COMTRK-10502  
NASA FMEA #:

NASA DATA:  
BASELINE [ ]  
NEW [ ]

SUBSYSTEM: COMM AND TRACK/EPD&C  
MDAC ID: 10502  
ITEM: EMU/TV-BATTERY PACK

LEAD ANALYST: W.H. TRAHAN

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ / ]	[ ]	[ ]	[ ]	[ ] *
IOA	[ 1 /1 ]	[ ]	[ ]	[ ]	[ X ]
COMPARE	[ N /N ]	[ ]	[ ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

NO NASA COMM & TRACK COUNTERPART. CREDIBLE FAILURE MODE THAT SHOULD BE COVERED BY NASA POWER DIVISION. NASA INITIALLY HAD A COMPARABLE FMEA/CIL, BUT NASA CONSOLIDATED BATTERY RELATED CILS AND RESOLUTION ACTION ASSIGNED TO NASA EP5/BATTERY SECTION, LITHIUM CELL EVALUATION.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88  
 ASSESSMENT ID: COMTRK-11007  
 NASA FMEA #: 05-6PH-24800-1

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 11007  
 ITEM: GCIL DRIVER, NETWORK SIGNAL PROCESSOR

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 3 /1R ]	[ P ]	[ NA ]	[ P ]	[ ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[ N / ]	[ ]	[ N ]	[ ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
 INADEQUATE [ ]

REMARKS:

IOA 11007 REFERS TO NSP ONLY, NASA FMEA COVERS ENTIRE S-BAND SYSTEM, AND RELATES THE 3/1R CRITICALITY TO LOSS OF THE TWO S-BAND PM STRINGS, LEAVING ONLY UHF VOICE FOR STATE VECTOR UPDATES. A SINGLE FMEA CANNOT COVER ALL THE POTENTIAL DEGREES OF CRITICALITY FOR THE S-BAND PM SYSTEM. LOSS OF FIRST NSP DOWNLINK CALLS FOR MINIMUM DURATION FLIGHT, AND THUS QUALIFIES AS 2/1R.  
 IOA ACCEPTS NASA CRITICALITY BASED ON THE INTERPRETATION THAT A MINIMUM DURATION FLIGHT DOES NOT REPRESENT A LOSS OF MISSION.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/14/88  
 ASSESSMENT ID: COMTRK-24066X  
 NASA FMEA #: 05-2R-5300-7

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             24066  
 ITEM:                 KU BD DMA (DEPLOYED ELECTRONIC ASSY) TEMPERATURE  
 SENSOR

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 3 / 2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]        [    ]        [    ]        [    ]        [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
 INADEQUATE [    ]

REMARKS:

LOSS OF MEASUREMENT DOES NOT HINDER HEATER OPERATON. A SECOND FAILURE, THE THERMOSTAT, COULD ALLOW FOR OVERHEATING OR FREEZING RESULTING IN DAMAGE TO GIMBAL THUS JEOPARDIZING THE SECURING OF DA. FLIGHT DIRECTOR MAY CURTAIL MISSION TO PRECLUDE THIS. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/14/88  
 ASSESSMENT ID: COMTRK-27056X  
 NASA FMEA #: 05-2C-22200-4

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 27056  
 ITEM: TACAN

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 1 /1 ]	[   ]	[   ]	[   ]	[ X ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]    [   ]    [   ]    [   ]    [   ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [   ]

REMARKS:

DURING NEAR IN OPERATION S-BAND OR UHF VOICE LINK SHOULD PROVIDE STATE VECTOR UPDATE CAPABILITY, BUT UNDER WORST CASE CONDITIONS IMMEDIATELY AFTER BLACKOUT STATE VECTOR UPDATE CAPABILITY MAY BE LOSS. NASA FMEA 05-2C-22200-4 DELETED. NO LONGER A CREDIBLE FAILURE MODE. HARDWARE WAS REDESIGNED.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/16/88  
ASSESSMENT ID: COMTRK-28378X  
NASA FMEA #: 2.4.4.2

NASA DATA:  
BASELINE [   ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 28378  
ITEM: PAN AND TILT UNIT LIMIT SWITCH

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY	REDUNDANCY SCREENS			CIL ITEM
	FLIGHT HDW/FUNC	A	B	C	
NASA	[ 2 / 2 ]	[   ]	[   ]	[   ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[   / N ]	[ N ]	[ N ]	[ N ]	[   ]

RECOMMENDATIONS: (If different from NASA)

[   /   ]   [   ]   [   ]   [   ]   [   ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [   ]

REMARKS:

UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION, RMS JETTISON, AND KUBAND RADAR FOR RENDEZ AND STATION KEEPING.  
IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/16/88  
 ASSESSMENT ID: COMTRK-28380X  
 NASA FMEA #: 4.4.4.2

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             28380  
 ITEM:                 PAN AND TILT UNIT LIMIT SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /N ]	[    ]	[    ]	[    ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

RMS TVC DOES NOT PROVIDE HIGH CRITICALITY FUNCTION LIKE MONITORING RMS MOVEMENT AND P/L BAY DOOR LATCH CLOSURE. UNLIKE REDUNDANCY PROVIDED VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION, RMS JETTISON. OTHER RMS TVC AND KUBAND RADAR FOR RENDEZ AND STATION KEEPING. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/16/88	NASA DATA:
ASSESSMENT ID: COMTRK-28384X	BASELINE [    ]
NASA FMEA #: 2.1.6.4	NEW [ X ]
SUBSYSTEM: COMM AND TRACK	
MDAC ID: 28384	
ITEM: MONOCHROME LENS ASSEMBLY IRIS LIMIT SWITCH	
LEAD ANALYST: W.C. LONG	

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]	[    ]	[    ]	[    ]	[    ]
				(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE	[ X ]
INADEQUATE	[    ]

REMARKS:

UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION, RMS JETTISON, AND KUBAND RADAR FOR RENDEZ AND STATION KEEPING.  
IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/16/88  
 ASSESSMENT ID: COMTRK-28386X  
 NASA FMEA #: 5.1.6.4

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             28386  
 ITEM:                MONOCHROME LENS ASSEMBLY IRIS LIMIT SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

RMS TVC DOES NOT PROVIDE HIGH CRITICALITY FUNCTION LIKE MONITORING RMS MOVEMENT AND P/L BAY DOOR LATCH CLOSURE. UNLIKE REDUNDANCY PROVIDED VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION, RMS JETTISON. OTHER RMS TVC AND KUBAND RADAR FOR RENDEZ AND STATION KEEPING. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/16/88  
 ASSESSMENT ID: COMTRK-28388X  
 NASA FMEA #: 4.1.6.4

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             28388  
 ITEM:                MONOCHROME LENS ASSEMBLY IRIS LIMIT SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 3 /2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N /N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
 INADEQUATE [    ]

REMARKS:

RMS TVC DOES NOT PROVIDE HIGH CRITICALITY FUNCTION LIKE MONITORING RMS MOVEMENT AND P/L BAY DOOR LATCH CLOSURE. UNLIKE REDUNDANCY PROVIDED VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION, RMS JETTISON. OTHER RMS TVC AND KUBAND RADAR FOR RENDEZ AND STATION KEEPING. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/16/88  
 ASSESSMENT ID: COMTRK-28390X  
 NASA FMEA #: 2.3.6.4

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             28390  
 ITEM:                 WIDE ANGLE LENS ASSEMBLY IRIS, FOCUS, ZOOM LIMIT  
 SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 / 1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    / N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [    ]

REMARKS:

UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION, RMS JETTISON, AND KUBAND RADAR FOR RENDEZ AND STATION KEEPING.  
 IOA ACCEPTS THE NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/16/88  
ASSESSMENT ID: COMTRK-28394X  
NASA FMEA #: 4.3.6.4

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
MDAC ID:             28394  
ITEM:                WIDE ANGLE LENS ASSEMBLY IRIS, FOCUS, ZOOM LIMIT SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 3 / 2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]        [    ]        [    ]        [    ]        [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
INADEQUATE [    ]

REMARKS:

RMS TVC DOES NOT PROVIDE HIGH CRITICALITY FUNCTION LIKE MONITORING RMS MOVEMENT AND P/L BAY DOOR LATCH CLOSURE. UNLIKE REDUNDANCY PROVIDED VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION, RMS JETTISON. OTHER RMS TVC AND KUBAND RADAR FOR RENDEZ AND STATION KEEPING. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/16/88  
 ASSESSMENT ID: COMTRK-28396X  
 NASA FMEA #: 5.3.6.4

NASA DATA:  
 BASELINE [ ]  
 NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
 MDAC ID: 28396  
 ITEM: WIDE ANGLE LENS ASSEMBLY IRIS, FOCUS, ZOOM LIMIT SWITCH

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[ ]	[ ]	[ ]	[ X ] *
IOA	[ 3 / 2R ]	[ P ]	[ P ]	[ P ]	[ ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
 INADEQUATE [ ]

REMARKS:

RMS TVC DOES NOT PROVIDE HIGH CRITICALITY FUNCTION LIKE MONITORING RMS MOVEMENT AND P/L BAY DOOR LATCH CLOSURE. UNLIKE REDUNDANCY PROVIDED VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION, RMS JETTISON. OTHER RMS TVC AND KUBAND RADAR FOR RENDEZ AND STATION KEEPING. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/16/88  
 ASSESSMENT ID: COMTRK-28400X  
 NASA FMEA #: 2.2.6.4

NASA DATA:  
 BASELINE [    ]  
 NEW [ X ]

SUBSYSTEM:            COMM AND TRACK  
 MDAC ID:             28400  
 ITEM:                COLOR LENS ASSEMBLY IRIS LIMIT SWITCH

LEAD ANALYST:        W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 /2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 2 /1R ]	[ P ]	[ P ]	[ P ]	[ X ]
COMPARE	[    /N ]	[ N ]	[ N ]	[ N ]	[    ]

RECOMMENDATIONS:    (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
 (ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE    [ X ]  
 INADEQUATE [    ]

REMARKS:

UNLIKE REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION, RMS JETTISON, AND KUBAND RADAR FOR RENDEZ AND STATION KEEPING.

IOA ACCEPTS NASA WORST CASE CRITICALITY. NASA ASSIGNED DUAL CRITICALITIES (2/2 AND 3/1R), AND IOA COMBINED TO OBTAIN ONE CRITICALITY.

APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/16/88  
ASSESSMENT ID: COMTRK-28402X  
NASA FMEA #: 4.2.6.4

NASA DATA:  
BASELINE [    ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 28402  
ITEM: COLOR LENS ASSEMBLY IRIS LIMIT SWITCH

LEAD ANALYST: W.C. LONG

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[ 2 / 2 ]	[    ]	[    ]	[    ]	[ X ] *
IOA	[ 3 / 2R ]	[ P ]	[ P ]	[ P ]	[    ]
COMPARE	[ N / N ]	[ N ]	[ N ]	[ N ]	[ N ]

RECOMMENDATIONS: (If different from NASA)

[    /    ]    [    ]    [    ]    [    ]    [    ]  
(ADD/DELETE)

\* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [    ]

REMARKS:

RMS TVC DOES NOT PROVIDE HIGH CRITICALITY FUNCTION LIKE MONITORING RMS MOVEMENT AND P/L BAY DOOR LATCH CLOSURE. UNLIKE REDUNDANCY PROVIDED VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW VISUAL INSPECTION, RMS JETTISON. OTHER RMS TVC AND KUBAND RADAR FOR RENDEZ AND STATION KEEPING. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY BASED ON THEIR MORE CONSERVATIVE APPROACH TO ASSIGNING CRITICALITY.









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