

MSFC PRACA : 2003-02-12 07:54

MSFC Problem Reporting and Corrective Action (PRACA) System
WHOLE RECORD REPORT(+ ADDENDUM)

MSFC Record # A00001	In-Flight Anomaly Number --	Contractor Report Number T-002	JSC# --	KSC# --
Problem Title TPS PRIMER PEELING ON LH2 TANK				
EICN# --	ELEMENT ET	Contractor MMMSS	FSCM# --	FCRIT 3
HCRIT --	Sys_Lvl N	Misc Codes A (1) B C D E F G H I J K L M N O		
HARDWARE EIM	NOMENCLATURE N/A	PART# N/A	SER/LOT# N/A	MANUFACTURER N/A
HARDWARE LRU	NOMENCLATURE LH2 TANK	PART# 82604000000	SER/LOT# STA	MANUFACTURER MMC
HARDWARE NCA	NOMENCLATURE PRIMER	PART# STM K379	SER/LOT# N/A	MANUFACTURER DESOTO
Test/Operation M - MFG	Prevailing Condtion --	F / U F	Fail Mode --	Cause --
System THERMAL	Defect --	Material --	Work Contact MELLOR	Fail Date 10/29/1977
Received at MSFC 06/27/1979	Date Isolated --	FMEA Reference 1.2.1	IFA: Mission Phase --	Mission Elapsed Time --
Location MAF		Symptom --		Time Cycle --
Effectivity Text ET-1 AND SUBS				
Vehicle Effectivity Codes				
Vehicle 1 --	Vehicle 2 --	Vehicle 3 --	Vehicle 4 --	Vehicle 5 --
Mission Effectivity Codes				
Mssn 1 --	Mssn 2 --	Mssn 3 --	Mssn 4 --	Mssn 5 --
Estimated Completion Dates				
MSFC Approved Defer Until Date --	Contractor Req Defer Until Date --	LVL 3 Close --	Remark / Action --	
Investigation / Resolution Summary				
Last MSFC Update 11/27/1987	CN RSLV SBMT 06/27/1979	Defer Date --	Add Date --	R/C Codes 2 - MFG -- --
Assignee				
Design B. DAVIS	Chief Engineer --	S & MA D. NEWMAN	Project G. CAVALARIS	Project MGR --
Approval				

Design B. DAVIS	Chief Engineer --	S & MA D. NEWMAN	Project J. ODOM	Project MGR --	
PAC Assignee C. NEWTON	PAC Review Complete CN	MSFC Closure Date 08/16/1979	Status C - CLOSED	F/A Completion --	
Problem Type --	SEV --	Program Name --	REVL --	OPRINC --	
FUNC MOD --	Software Effectivity -- - - - - -	Software Fail CD --		SUBTYPE --	Software Closure CD --
RES PERSON L2 --	Approval Signature L3 --				
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Contractor Status Summary					
Reliability/Quality Assurance Concerns, Recommendations:					
Problem Description 1. AREAS ON THE LH2 TANK EXHIBIT DEBONDING OF THE PRIMER. 2. REF: MARS T11711					
Contractor Investigation/Resolution 1. CAUSE: INCOMPLETE CLEANING OPERATIONS. 2. RESOLUTION: A) TANKS WILL BE DEOXIDIZED PRIOR TO PRIMING. B) ELAPSED TIME BETWEEN CLEANING & PRIMING LIMIT 96 HRS. C) CHEMICAL CONVERSION COATING APPLIED TO ALL LH2 & LO2 EXTERIOR TANK WELDS, EXCEPT IN THE AREAS COVERED BY SLA & LO2 & FORWARD LH2 DOMES					
MSFC Response/Concurrence					

MSFC Problem Reporting and Corrective Action (PRACA) System
ASSESSMENT ADDENDUM REPORT

MSFC Report# A00001	IFA# --	Contractor RPT# T-002	JSC# --	KSC# --	EICN# --
Asmnt Part# --	Asmnt Part Name --	Asmnt Serial/Lot# --			

HCRIT CD --	FCRIT CD --	CAUSE CD --	FAIL MODE --
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --
Correlated Part# --	Correlated Part# --	Correlated Part# --	
Associated LRU# --	Associated LRU# --	Associated LRU# --	
MAJOR DESIGN CHANGES			
APRV DATE --	DESCRIPTION OF CHANGES --		
ASSESSMENT TEXT			

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MSFC Problem Reporting and Corrective Action (PRACA) System
WHOLE RECORD REPORT(+ ADDENDUM)

MSFC Record # A00002	In-Flight Anomaly Number --	Contractor Report Number T-004A	JSC# --	KSC# --
Problem Title TPS TEST ARTICLE CRACKS				
EICN# --	ELEMENT ET	Contractor MMMSS	FSCM# --	FCRIT 3
HCRIT --	Sys_Lvl N	Misc Codes A (3) B C D E F G H I J K L M N O		
HARDWARE EIM	NOMENCLATURE N/A	PART# N/A	SER/LOT# N/A	MANUFACTURER N/A
HARDWARE LRU	NOMENCLATURE N/A	PART# N/A	SER/LOT# N/A	MANUFACTURER N/A
HARDWARE NCA	NOMENCLATURE TPS TEST ARTICLE	PART# 82600201161-009	SER/LOT# N/A	MANUFACTURER MMC
Test/Operation D - DEV	Prevailing Condition --	F / U F	Fail Mode --	Cause --
System THERMAL	Defect --	Material --	Work Contact CRIDER	Fail Date 10/25/1977
Received at MSFC 06/27/1979	Date Isolated --	FMEA Reference 1.2.5	IFA: Mission Phase --	Mission Elapsed Time --
Location WYLE LABS		Symptom --		Time Cycle --
Effectivity Text ET-1 AND SUBS				
Vehicle Effectivity Codes				
Vehicle 1 --	Vehicle 2 --	Vehicle 3 --	Vehicle 4 --	Vehicle 5 --
Mission Effectivity Codes				
Mssn 1 --	Mssn 2 --	Mssn 3 --	Mssn 4 --	Mssn 5 --
Estimated Completion Dates				
MSFC Approved Defer Until Date --	Contractor Req Defer Until Date --	LVL 3 Close --	Remark / Action --	
Investigation / Resolution Summary				
Last MSFC Update 11/27/1987	CN RSLV SBMT 03/24/1980	Defer Date --	Add Date --	R/C Codes 1 - DES -- --
Assignee				
Design B. DAVIS	Chief Engineer --	S & MA D. NEWMAN	Project G. CAVALARIS	Project MGR --
Approval				

Design B. DAVIS	Chief Engineer --	S & MA D. NEWMAN	Project J. ODOM	Project MGR --	
PAC Assignee C. NEWTON	PAC Review Complete CN	MSFC Closure Date 05/01/1980	Status C - CLOSED	F/A Completion --	
Problem Type --	SEV --	Program Name --	REVL --	OPRINC --	
FUNC MOD --	Software Effectivity -- - - - - -	Software Fail CD --		SUBTYPE --	Software Closure CD --
RES PERSON L2 --	Approval Signature L3 --				
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Contractor Status Summary					
Reliability/Quality Assurance Concerns, Recommendations:					
Problem Description TEST PANEL WAS SUBJECTED TO GRYOGENIC TEMPERATURE AND MECHANICAL AND ACOUSTIC LOADINGS FOR TPS DESIGN VERIFICATION TEST (TDC 826-2064-25) AT WYLE LABS ON 10-25-77. POST TEST INSPECTION REVEALED CRACKS IN SLA BOTH NORMAL TO AND PROPAGATING Laterally TO THE SUBSTRATE					
Contractor Investigation/Resolution CAUSE: OVERTEST DUE TO SLA BEING TOO THICK WHICH CAUSED ADDED STRAIN & BENDING MOMENTS. RESOLUTION: RETEST OF PANEL K SHOWED NO DELAMINATIONS AT STRAINS BELOW 110% OF THE ET AFT DOME TPS DESIGN STRAIN. SELECTIVE SLITTINGS OF THE AFT DOME LH2 TANK ABLATOR IN REGIONS OF EXCESSIVE SUBSTRATE FLEXURE WERE ADDED PER DWG 82674018008, DCN "P". EFFECTIVITY: ET-1 AND SUBS					
MSFC Response/Concurrence					

MSFC Problem Reporting and Corrective Action (PRACA) System
ASSESSMENT ADDENDUM REPORT

MSFC Report# A00002	IFA# --	Contractor RPT# T-004A	JSC# --	KSC# --	EICN# --
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Asmnt Part# --	Asmnt Part Name --	Asmnt Serial/Lot# --	
HCRIT CD --	FCRIT CD --	CAUSE CD --	FAIL MODE --
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --
Correlated Part# --	Correlated Part# --	Correlated Part# --	
Associated LRU# --	Associated LRU# --	Associated LRU# --	
MAJOR DESIGN CHANGES			
APRV DATE --	DESCRIPTION OF CHANGES --		
ASSESSMENT TEXT			

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MSFC Problem Reporting and Corrective Action (PRACA) System
WHOLE RECORD REPORT(+ ADDENDUM)

MSFC Record # A00003	In-Flight Anomaly Number --	Contractor Report Number T-007	JSC# --	KSC# --
Problem Title SPRAYABLE ABLATOR NOT PER SPEC				
EICN# --	ELEMENT ET	Contractor MMMSS	FSCM# --	FCRIT 3
HCRIT --	Sys_Lvl N	Misc Codes A (2) B C D E F G H I J K L M N O		
HARDWARE EIM	NOMENCLATURE EXTERNAL TANK	PART# 82601000000	SER/LOT# VARIOUS	MANUFACTURER MMC
HARDWARE LRU	NOMENCLATURE N/A	PART# N/A	SER/LOT# N/A	MANUFACTURER N/A
HARDWARE NCA	NOMENCLATURE SPRAYABLE ABLATOR	PART# STP/PI 1506	SER/LOT# N/A	MANUFACTURER MMC
Test/Operation M - MFG	Prevailing Condition --	F / U UC	Fail Mode --	Cause --
System THERMAL	Defect --	Material --	Work Contact J. DAME	Fail Date 03/01/1979
Received at MSFC 06/27/1979	Date Isolated --	FMEA Reference 1.2	IFA: Mission Phase --	Mission Elapsed Time --
Location MAF		Symptom --		Time Cycle --
Effectivity Text ET-3 AND SUBS				
Vehicle Effectivity Codes				
Vehicle 1 --	Vehicle 2 --	Vehicle 3 --	Vehicle 4 --	Vehicle 5 --
Mission Effectivity Codes				
Mssn 1 --	Mssn 2 --	Mssn 3 --	Mssn 4 --	Mssn 5 --
Estimated Completion Dates				
MSFC Approved Defer Until Date --	Contractor Req Defer Until Date --	LVL 3 Close --	Remark / Action --	
Investigation / Resolution Summary				
Last MSFC Update 12/19/1987	CN RSLV SBMT 06/27/1980	Defer Date --	Add Date --	R/C Codes 2 - MFG -- --
Assignee				
Design B. DAVIS	Chief Engineer --	S & MA D. NEWMAN	Project G.	Project MGR --

			CAVALARIS	
Approval				
Design B. DAVIS	Chief Engineer --	S & MA D. NEWMAN	Project J. ODOM	Project MGR --
PAC Assignee C. NEWTON	PAC Review Complete CN	MSFC Closure Date 07/14/1980	Status C - CLOSED	F/A Completion --
Problem Type --	SEV --	Program Name --	REVL --	OPRINC --
FUNC MOD --	Software Effectivity -- - - - - -	Software Fail CD --		SUBTYPE --
				Software Closure CD --
RES PERSON L2 --	Approval Signature L3 --			
Related Document Type --	Related Document ID --			
Related Document Title --				
Related Document Type --	Related Document ID --			
Related Document Title --				
Related Document Type --	Related Document ID --			
Related Document Title --				
Contractor Status Summary				
Reliability/Quality Assurance Concerns, Recommendations:				
Problem Description				
SPRAYABLE ABLATOR FAILS TO MEET SPECIFICATION REQUIREMENTS FOR PHYSICAL PROPERTIES. 1. THE APPLIED ABLATOR DOES NOT ACHIEVE FULL PROPERTIES (HARDNESS/TENSILE STRENGTH) AT OR NEAR THE SUBSTRATE. 2. THE CURED ABLATOR TENDS TO EXCEED MAXIMUM DENSITY REQUIREMENTS. 3. NUMEROUS MACHINING ERRORS. 4. INADEQUATE APPLICATION/DISTRIBUTION OF MATERIAL DURING MOLD/SPRAY APPLY. 5. PART DAMAGE DURING IN-HOUSE OPERATIONS. 6 FACILITY/EQUIPMENT PROBLEMS. REFERENCE: MARS T20515 (TYPICAL)				
Contractor Investigation/Resolution				
RESOLUTION - CAPS T007 - BASIC WAS DIVIDED INTO THREE SEPARATE CAPS CONTAINING ABOVE PROBLEMS CAPS T007-1 CLOSED. CAPS T007-2 IN SIGNATURE LOOP. CAPS T007-3 CLOSED. THIS BASIC CAPS T007 IS CLOSED. RESOLUTION DEFINED IN T007-1, 2, & 3				
MSFC Response/Concurrence				

MSFC Report# A00003	IFA# --	Contractor RPT# T-007	JSC# --	KSC# --	EICN# --
Asmnt Part# --	Asmnt Part Name --	Asmnt Serial/Lot# --			
HCRIT CD --	FCRIT CD --	CAUSE CD --	FAIL MODE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Correlated Part# --	Correlated Part# --	Correlated Part# --			
Associated LRU# --	Associated LRU# --	Associated LRU# --			
MAJOR DESIGN CHANGES					
APRV DATE --	DESCRIPTION OF CHANGES --				
ASSESSMENT TEXT					

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MSFC Problem Reporting and Corrective Action (PRACA) System
WHOLE RECORD REPORT(+ ADDENDUM)

MSFC Record # A00004	In-Flight Anomaly Number --	Contractor Report Number S-027	JSC# --	KSC# --
Problem Title LOX TANK KEENSERTS CORROSION				
EICN# --	ELEMENT ET	Contractor MMMSS	FSCM# --	FCRIT 3
HCRIT --	Sys_Lvl N	Misc Codes A (4) B C D E F G H I J K L M N O		
HARDWARE EIM	NOMENCLATURE EXTERNAL TANK	PART# 82601000000	SER/LOT# ET-3	MANUFACTURER MMC
HARDWARE LRU	NOMENCLATURE N/A	PART# N/A	SER/LOT# N/A	MANUFACTURER N/A
HARDWARE NCA	NOMENCLATURE LO2 TANK	PART# 82612001100	SER/LOT# 007	MANUFACTURER MMC
Test/Operation M - MFG	Prevailing Condtion --	F / U UC	Fail Mode --	Cause --
System STRUCTURAL	Defect --	Material --	Work Contact J. FINCHER	Fail Date 03/07/1979
Received at MSFC 06/27/1979	Date Isolated --	FMEA Reference 1.1.3	IFA: Mission Phase --	Mission Elapsed Time --
Location MAF		Symptom --		Time Cycle --
Effectivity Text NONE				
Vehicle Effectivity Codes				
Vehicle 1 --	Vehicle 2 --	Vehicle 3 --	Vehicle 4 --	Vehicle 5 --
Mission Effectivity Codes				
Mssn 1 --	Mssn 2 --	Mssn 3 --	Mssn 4 --	Mssn 5 --
Estimated Completion Dates				
MSFC Approved Defer Until Date --	Contractor Req Defer Until Date --	LVL 3 Close --	Remark / Action --	
Investigation / Resolution Summary				
Last MSFC Update 10/07/1987	CN RSLV SBMT 11/30/1981	Defer Date --	Add Date --	R/C Codes 0 - EXPL -- --
Assignee				
Design J. NICHOLS	Chief Engineer --	S & MA D. NEWMAN	Project M. PESSIN	Project MGR --
Approval				

Design J. NICHOLS	Chief Engineer --	S & MA D. NEWMAN	Project M. PESSIN	Project MGR --	
PAC Assignee M. GLASS	PAC Review Complete MG	MSFC Closure Date 12/10/1981	Status C - CLOSED	F/A Completion --	
Problem Type --	SEV --	Program Name --	REVL --	OPRINC --	
FUNC MOD --	Software Effectivity -- - - - - -	Software Fail CD --		SUBTYPE --	Software Closure CD --
RES PERSON L2 --	Approval Signature L3 --				
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Contractor Status Summary					
Reliability/Quality Assurance Concerns, Recommendations:					
Problem Description 1. (34) CORRODED KEENSERTS EXISTED ON THE INTER-RING WHERE THE OGIVE CLOSURE PLATE IS INSTALLED. A RESIDUE OF BLACK COLOR EXISTED AT THE LOCKING KEYS & OUTER KEENSERT SURFACE. 2. (22) KEENSERT DISCREPANCIES NOTED ON DR-08406 PRIOR TO HYDROSTATIC TEST WERE REPLACED PER MARS-T-12361 AN ADDITIONAL (12) KEENSERTS NOTED ON DR-08129 AFTER HYDROSTATIC TEST WERE REPLACED PER MARS-T-12361					
Contractor Investigation/Resolution 12/1/81 CAUSE - SPECIFIC CAUSE OF KEENSERT CORROSION HAS NOT BEEN ISOLATED. ET-4 WAS MONITORED DETERMINE CAUSE, HOWEVER NO DISCREAPNCY WAS NOTED & ET-4 EXHIBITED NO CORROSION, THEREFORE THE MOST LIKELY ET-3 CORROSION RESULTED FROM EXCESSIVE MOISTURE IN BLDG. 103 CAUSED BY A LEAKING ROOF. RECURRENCE CONTROL - NONE REQ'D, ISOLATED OCCURRENCE					
MSFC Response/Concurrence					

MSFC Problem Reporting and Corrective Action (PRACA) System
ASSESSMENT ADDENDUM REPORT

MSFC Report#	IFA#	Contractor RPT#	JSC#	KSC#	EICN#
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A00004	--	S-027	--	--	--
Asmnt Part# --	Asmnt Part Name --	Asmnt Serial/Lot# --			
HCRIT CD --	FCRIT CD --	CAUSE CD --	FAIL MODE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Correlated Part# --	Correlated Part# --	Correlated Part# --			
Associated LRU# --	Associated LRU# --	Associated LRU# --			
MAJOR DESIGN CHANGES					
APRV DATE --	DESCRIPTION OF CHANGES --				
ASSESSMENT TEXT					

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MSFC Problem Reporting and Corrective Action (PRACA) System
WHOLE RECORD REPORT(+ ADDENDUM)

MSFC Record # A00005	In-Flight Anomaly Number --	Contractor Report Number S-020	JSC# --	KSC# --
Problem Title LH2/L02 TANK WELD DEFECTS				
EICN# --	ELEMENT ET	Contractor MMMSS	FSCM# --	FCRIT 3
HCRIT --	Sys_Lvl N	Misc Codes A (2) B C D E F G H I J K L M N O		
HARDWARE EIM	NOMENCLATURE EXTERNAL TANK	PART# 82601000000	SER/LOT# ET-1	MANUFACTURER MMC
HARDWARE LRU	NOMENCLATURE LO2 TANK WELDS	PART# 82612000000	SER/LOT# ET-1	MANUFACTURER MMC
HARDWARE NCA	NOMENCLATURE LH2 TANK WELDS	PART# 82614000000	SER/LOT# ET-1	MANUFACTURER MMC
Test/Operation M - MFG	Prevailing Condtion --	F / U UC	Fail Mode --	Cause --
System STRUCTURAL	Defect DE - WLDBRS	Material --	Work Contact CUNNINGHAM	Fail Date 03/30/1978
Received at MSFC 06/27/1979	Date Isolated --	FMEA Reference 1.1.1	IFA: Mission Phase --	Mission Elapsed Time --
Location MAF		Symptom --		Time Cycle --
Effectivity Text ET-6 AND SUBS				
Vehicle Effectivity Codes				
Vehicle 1 --	Vehicle 2 --	Vehicle 3 --	Vehicle 4 --	Vehicle 5 --
Mission Effectivity Codes				
Mssn 1 --	Mssn 2 --	Mssn 3 --	Mssn 4 --	Mssn 5 --
Estimated Completion Dates				
MSFC Approved Defer Until Date --	Contractor Req Defer Until Date --	LVL 3 Close --	Remark / Action --	
Investigation / Resolution Summary				
Last MSFC Update 10/07/1987	CN RSLV SBMT 07/02/1980	Defer Date --	Add Date --	R/C Codes 2 - MFG -- --
Assignee				
Design E. BRYAN	Chief Engineer --	S & MA D. NEWMAN	Project M. PESSIN	Project MGR --
Approval				

Design E. BRYAN	Chief Engineer --	S & MA D. NEWMAN	Project J. ODOM	Project MGR --	
PAC Assignee C. NEWTON	PAC Review Complete CN	MSFC Closure Date 07/25/1980	Status C - CLOSED	F/A Completion --	
Problem Type --	SEV --	Program Name --	REVL --	OPRINC --	
FUNC MOD --	Software Effectivity -- - - - - -	Software Fail CD --		SUBTYPE --	Software Closure CD --
RES PERSON L2 --	Approval Signature L3 --				
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Contractor Status Summary					
Reliability/Quality Assurance Concerns, Recommendations:					
Problem Description 1. THE NUMBER OF DEFECTS IN CIRCUMFERENTIAL WELDS ON THE ET-1 LO2 AND LH2 TANKS HAS INCREASED OR HAS CONTINUED AT A LEVEL WHICH SHOULD BE IMPROVED. SEE CAPS S-020A FOR TABULATION. 2. REFERENCE: MARS T13743					
Contractor Investigation/Resolution 1) CAUSE: A) GALLING OF JOINT EDGES DURING POSITIONING OF BARRELS PRIOR TO WELDING. B) INSUFFICIENT MANDREL PRESSURE TO ROUND OUT & ALIGN COMPONENTS. C) FIT-UP PROBLEMS WHICH NECESSITATED BREAKING INITIAL TACK WELDS RESULTING IN EXCESS POROSITY & OXIDE INCLUSION DEFECTS. 2) RESOLUTION: SINCE IMPLEMENT OF THIS CAPS, DEFECTS ON THE LH2 TANK HAVE CONTINUALLY SHOWED DOWNWARD TREND, & ON ET-5, THE DEFECTS RATE IS BELOW THE 10 DEFECTS/1000 INCHES GOAL. DEFECTS ON THE LO2 TANK HAVE SHOWN A CONTINUING DOWNWARD TREND BUT IS NOT WITHIN THE 10/1000 INCH GOAL ACTIONS TAKEN ARE IDENTIFIED BELOW: A) ET-2 LO2/02 WELDS: ELEVEN ACTIONS HAVE BEEN IMPLEMENTED & PROCEDURES INCORPORATED IN THE MPP OR TOOL OPERATING PROCEDURE 5018. SEE CAPS S-020B, TASK II FOR SPECIFICS B) ET-2 LO2/03 & 04 WELDS: NINE ACTIONS HAVE BEEN IMPLEMENTED & PROCEDURES INCORPORATED IN THE MPP OR TOOL OPERATING PROCEDURE 5018 SEE CAPS S-020B, TASK III FOR SPECIFICS. C) LH2 H-1 THRU H-8 WELDS: FIVE ACTIONS HAVE BEEN IMPLEMENTED & PROCEDURES INCORPORATED IN THE MPP OR TOOL OPERATING PROCEDURE 5019. SEE CAPS S-020B, TASK IV FOR SPECIFICS. D) WELD FIXTURE: INSPECTION/MAINTENANCE PROVISIONS FOUND ADEQUATE. E) WELDTRIM: ORIGINAL WELD TRIM FOR LO2/LH2 BARRELS WAS MOVED					

TO AN OFF FIXTURE FROM FOR ET-4 & UP. F) ET-6 LO2/03 & 04 WELDS: SEVEN ACTIONS IMPLEMENTED IN MPP TO FURTHER REDUCE THE LO2 TANK WELD DEFECTS SEE CAPS S-020B, TASK VII FOR SPECIFICS

MSFC Response/Concurrence

MSFC Problem Reporting and Corrective Action (PRACA) System
ASSESSMENT ADDENDUM REPORT

MSFC Report# A00005	IFA# --	Contractor RPT# S-020	JSC# --	KSC# --	EICN# --
Asmnt Part# --	Asmnt Part Name --	Asmnt Serial/Lot# --			
HCRIT CD --	FCRIT CD --	CAUSE CD --	FAIL MODE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Correlated Part# --	Correlated Part# --	Correlated Part# --			
Associated LRU# --	Associated LRU# --	Associated LRU# --			
MAJOR DESIGN CHANGES					
APRV DATE --	DESCRIPTION OF CHANGES --				
ASSESSMENT TEXT					

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MSFC Problem Reporting and Corrective Action (PRACA) System
WHOLE RECORD REPORT(+ ADDENDUM)

MSFC Record # A00006	In-Flight Anomaly Number --	Contractor Report Number E-017	JSC# --	KSC# --
Problem Title LEVEL (ECD) SENSOR FAILURE				
EICN# --	ELEMENT ET	Contractor MMMSS	FSCM# --	FCRIT 3
HCRIT --	Sys_Lvl N	Misc Codes A (1) B C D E F G H I J K L M N O		
HARDWARE EIM	NOMENCLATURE N/A	PART# N/A	SER/LOT# N/A	MANUFACTURER N/A
HARDWARE LRU	NOMENCLATURE N/A	PART# N/A	SER/LOT# N/A	MANUFACTURER N/A
HARDWARE NCA	NOMENCLATURE LH2 LEVEL SENSOR	PART# MC432-0205-0001	SER/LOT# 154	MANUFACTURER SIMMONDS
Test/Operation Q - QAL	Prevailing Condtion --	F / U F	Fail Mode --	Cause --
System ELECTRICAL	Defect --	Material --	Work Contact SILBERT	Fail Date 08/09/1978
Received at MSFC 06/27/1979	Date Isolated --	FMEA Reference 3.1.1.1	IFA: Mission Phase --	Mission Elapsed Time --
Location MMC-DENVER		Symptom --		Time Cycle --
Effectivity Text ET-1 AND SUBS				
Vehicle Effectivity Codes				
Vehicle 1 --	Vehicle 2 --	Vehicle 3 --	Vehicle 4 --	Vehicle 5 --
Mission Effectivity Codes				
Mssn 1 --	Mssn 2 --	Mssn 3 --	Mssn 4 --	Mssn 5 --
Estimated Completion Dates				
MSFC Approved Defer Until Date --	Contractor Req Defer Until Date --	LVL 3 Close --	Remark / Action --	
Investigation / Resolution Summary				
Last MSFC Update 10/07/1987	CN RSLV SBMT 07/25/1979	Defer Date --	Add Date --	R/C Codes 1 - DES -- --
Assignee				
Design L. GUZINKSKY	Chief Engineer --	S & MA D. NEWMAN	Project R. ABRAHAM	Project MGR --

Approval					
Design L. GUZINSKY	Chief Engineer --	S & MA D. NEWMAN	Project J. ODOM	Project MGR --	
PAC Assignee C. NEWTON	PAC Review Complete CN	MSFC Closure Date 08/16/1979	Status C - CLOSED	F/A Completion --	
Problem Type --	SEV --	Program Name --	REVL --	OPRINC --	
FUNC MOD --	Software Effectivity -- - - - - -	Software Fail CD --		SUBTYPE --	Software Closure CD --
RES PERSON L2 --	Approval Signature L3 --				
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Contractor Status Summary					
Reliability/Quality Assurance Concerns, Recommendations:					
Problem Description					
DURING 120 SECOND QUAL TEST BOOST VIBRATION THE LEVEL SENSOR FAILED OPEN APPROX. 30 SECONDS DURING Y-AXIS TEST. THE TEST UNIT SUCCESSFULLY COMPLETED X- AND Z-AXIS VIBRATION TESTS. REF: MARS T07695					
Contractor Investigation/Resolution					
1) CAUSE: INSUFFICIENT INTERNAL STRESS RELIEF AT JUNCTION OF LEAD WIRE 2) RESOLUTION: ECO SENSOR REDESIGNED PER B00826 TO WITHSTAND ET VIBRATION LEVELS. QUAL TEST COMPLETE AT WYLE LABS					
MSFC Response/Concurrence					

MSFC Problem Reporting and Corrective Action (PRACA) System
ASSESSMENT ADDENDUM REPORT

MSFC Report# A00006	IFA# --	Contractor RPT# E-017	JSC# --	KSC# --	EICN# --
Asmnt Part# --	Asmnt Part Name --	Asmnt Serial/Lot# --			

HCRIT CD --	FCRIT CD --	CAUSE CD --	FAIL MODE --
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --
Correlated Part# --	Correlated Part# --	Correlated Part# --	
Associated LRU# --	Associated LRU# --	Associated LRU# --	
MAJOR DESIGN CHANGES			
APRV DATE --	DESCRIPTION OF CHANGES --		
ASSESSMENT TEXT			

MSFC PRACA : 2003-02-12 07:54

MSFC Problem Reporting and Corrective Action (PRACA) System
WHOLE RECORD REPORT(+ ADDENDUM)

MSFC Record # A00007	In-Flight Anomaly Number --	Contractor Report Number E-018	JSC# --	KSC# --
Problem Title LO2 ULLAGE PRESSURE TRANSDUCER SIGNAL DROP OUT				
EICN# --	ELEMENT ET	Contractor MMMSS	FSCM# --	FCRIT 3
HCRIT --	Sys_Lvl N	Misc Codes A (2) B C D E F G H I J K L M N O		
HARDWARE EIM	NOMENCLATURE N/A	PART# N/A	SER/LOT# N/A	MANUFACTURER N/A
HARDWARE LRU	NOMENCLATURE N/A	PART# N/A	SER/LOT# N/A	MANUFACTURER N/A
HARDWARE NCA	NOMENCLATURE LO2 ULL PRES TRNSDCR	PART# PD7400098-029	SER/LOT# 107	MANUFACTURER GULTON
Test/Operation A - ATP	Prevailing Condtion --	F / U F	Fail Mode --	Cause --
System ELECTRICAL	Defect --	Material --	Work Contact SILBERT	Fail Date 08/10/1978
Received at MSFC 06/27/1979	Date Isolated --	FMEA Reference 3.1.1.9	IFA: Mission Phase --	Mission Elapsed Time --
Location GULTON		Symptom --		Time Cycle --
Effectivity Text NONE				
Vehicle Effectivity Codes				
Vehicle 1 --	Vehicle 2 --	Vehicle 3 --	Vehicle 4 --	Vehicle 5 --
Mission Effectivity Codes				
Mssn 1 --	Mssn 2 --	Mssn 3 --	Mssn 4 --	Mssn 5 --
Estimated Completion Dates				
MSFC Approved Defer Until Date --	Contractor Req Defer Until Date --	LVL 3 Close --	Remark / Action --	
Investigation / Resolution Summary				
Last MSFC Update 10/07/1987	CN RSLV SBMT 05/01/1980	Defer Date --	Add Date --	R/C Codes 0 - EXPL -- --
Assignee				
Design L. GUZINSKY	Chief Engineer --	S & MA D. NEWMAN	Project R. ABRAHAM	Project MGR --

Approval					
Design L. GUZINSKY	Chief Engineer --	S & MA D. NEWMAN	Project J. ODOM	Project MGR --	
PAC Assignee C. NEWTON	PAC Review Complete CN	MSFC Closure Date 05/21/1980	Status E - CLOSED-E	F/A Completion --	
Problem Type --	SEV --	Program Name --	REVL --	OPRINC --	
FUNC MOD --	Software Effectivity -- - - - - -	Software Fail CD --		SUBTYPE --	Software Closure CD --
RES PERSON L2 --	Approval Signature L3 --				
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Contractor Status Summary					
Reliability/Quality Assurance Concerns, Recommendations:					
Problem Description 1. UNIT SIGNAL OUTPUT DROPPED OUT DURING ATP NOISE TEST. 2. REF. DOC. - MARS T08966					
Contractor Investigation/Resolution 1. CAUSE: TEST METHOD EXCEEDED FLIGHT REQUIREMENTS & UNIT DID NOT INCLUDE NEW BELLOWS CONFIG. 2. RESOLUTION: NO RECURRENCE CONTROL REQUIRED ON HARDWARE DUE TO FAILURE BEING OVERTEST (EXPLAINED)					
MSFC Response/Concurrence					

MSFC Problem Reporting and Corrective Action (PRACA) System
ASSESSMENT ADDENDUM REPORT

MSFC Report# A00007	IFA# --	Contractor RPT# E-018	JSC# --	KSC# --	EICN# --
Asmnt Part# --	Asmnt Part Name --	Asmnt Serial/Lot# --			

HCRIT CD --	FCRIT CD --	CAUSE CD --	FAIL MODE --
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --
Correlated Part# --	Correlated Part# --	Correlated Part# --	
Associated LRU# --	Associated LRU# --	Associated LRU# --	
MAJOR DESIGN CHANGES			
APRV DATE --	DESCRIPTION OF CHANGES --		
ASSESSMENT TEXT			

MSFC PRACA : 2003-02-12 07:54

MSFC Problem Reporting and Corrective Action (PRACA) System
WHOLE RECORD REPORT(+ ADDENDUM)

MSFC Record # A00008	In-Flight Anomaly Number --	Contractor Report Number E-023	JSC# --	KSC# --
Problem Title MECHANICAL JOINT LEAK TEST FAILURE				
EICN# --	ELEMENT ET	Contractor MMMSS	FSCM# --	FCRIT 1
HCRIT --	Sys_Lvl Y	Misc Codes A (2) B (X) C D E F G H I J K L M N O		
HARDWARE EIM	NOMENCLATURE EXTERNAL TANK	PART# 82601000000	SER/LOT# ET-1	MANUFACTURER MMC
HARDWARE LRU	NOMENCLATURE EXTERNAL TANK	PART# 82601000000	SER/LOT# ET-1	MANUFACTURER MMC
HARDWARE NCA	NOMENCLATURE EXTERNAL TANK	PART# 82601000000	SER/LOT# ET-1	MANUFACTURER MMC
Test/Operation A - ATP	Prevailing Condtion --	F / U F	Fail Mode --	Cause --
System ELECTRICAL	Defect --	Material --	Work Contact FINCHER	Fail Date 06/08/1979
Received at MSFC 06/27/1979	Date Isolated --	FMEA Reference 3.2.1.1	IFA: Mission Phase --	Mission Elapsed Time --
Location MAF		Symptom MV - EXT LEAK		Time Cycle --
Effectivity Text ET-1 AND SUBS				
Vehicle Effectivity Codes				
Vehicle 1 --	Vehicle 2 --	Vehicle 3 --	Vehicle 4 --	Vehicle 5 --
Mission Effectivity Codes				
Mssn 1 --	Mssn 2 --	Mssn 3 --	Mssn 4 --	Mssn 5 --
Estimated Completion Dates				
MSFC Approved Defer Until Date --	Contractor Req Defer Until Date --	LVL 3 Close --	Remark / Action --	
Investigation / Resolution Summary				
Last MSFC Update 10/07/1987	CN RSLV SBMT 06/27/1979	Defer Date --	Add Date --	R/C Codes 5 - TRNG -- --
Assignee				
Design L. GUZINSKY	Chief Engineer --	S & MA D. NEWMAN	Project R. ABRAHAM	Project MGR --
Approval				

Design L. GUZINSKY	Chief Engineer --	S & MA D. NEWMAN	Project J. ODOM	Project MGR --	
PAC Assignee C. NEWTON	PAC Review Complete CN	MSFC Closure Date 09/06/1979	Status C - CLOSED	F/A Completion --	
Problem Type --	SEV --	Program Name --	REVL --	OPRINC --	
FUNC MOD --	Software Effectivity -- - - - - -	Software Fail CD --		SUBTYPE --	Software Closure CD --
RES PERSON L2 --	Approval Signature L3 --				
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Contractor Status Summary					
Reliability/Quality Assurance Concerns, Recommendations:					
Problem Description 1. THE FOLLOWING JOINTS FAILED LEAK CHECK PER PROCEDURE SET 8C15-AT: 1 303A4 - ULLAGE TRANSDUCER 2. 302A1J1 - FEED THRU CONNECTOR 3. 314A205 - INSTRUMENTATION BOSS 4. 314A217 - SENSOR ON L02 COVER 2. REFERENCE DOC - MARS T25981 & T25992					
Contractor Investigation/Resolution 1. CAUSE: IMPROPER SEAL INSTALLATION. 2. RESOLUTION: PERSONNEL INSTRUCTED ON PROPER SEAL INSTALLATION & SEAL INSPECTION MADE A MANDATORY INSPECTION POINT					
MSFC Response/Concurrence					

MSFC Problem Reporting and Corrective Action (PRACA) System
ASSESSMENT ADDENDUM REPORT

MSFC Report# A00008	IFA# --	Contractor RPT# E-023	JSC# --	KSC# --	EICN# --
Asmnt Part# --	Asmnt Part Name --	Asmnt Serial/Lot# --			

HCRIT CD --	FCRIT CD --	CAUSE CD --	FAIL MODE MV - EXT LEAK
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --
Correlated Part# --	Correlated Part# --	Correlated Part# --	
Associated LRU# --	Associated LRU# --	Associated LRU# --	
MAJOR DESIGN CHANGES			
APRV DATE --	DESCRIPTION OF CHANGES --		
ASSESSMENT TEXT			

MSFC PRACA : 2003-02-12 07:54

MSFC Problem Reporting and Corrective Action (PRACA) System
WHOLE RECORD REPORT(+ ADDENDUM)

MSFC Record # A00009	In-Flight Anomaly Number --	Contractor Report Number E-022	JSC# --	KSC# --
Problem Title SURFACE TEMP SENSORS FAILURE - OPEN				
EICN# --	ELEMENT ET	Contractor MMMSS	FSCM# --	FCRIT 3
HCRIT --	Sys_Lvl N	Misc Codes A (1) B C D E F G H I J K L M N O		
HARDWARE EIM	NOMENCLATURE N/A	PART# N/A	SER/LOT# N/A	MANUFACTURER N/A
HARDWARE LRU	NOMENCLATURE N/A	PART# N/A	SER/LOT# N/A	MANUFACTURER N/A
HARDWARE NCA	NOMENCLATURE TEMPERATURE SENSOR	PART# PD7400107-XXX	SER/LOT# SEE CAPS	MANUFACTURER HY-CAL
Test/Operation A - ATP	Prevailing Condtion --	F / U F	Fail Mode --	Cause --
System ELECTRICAL	Defect --	Material --	Work Contact SILBERT	Fail Date 03/08/1979
Received at MSFC 06/27/1979	Date Isolated --	FMEA Reference 3.3.1	IFA: Mission Phase --	Mission Elapsed Time --
Location HY-CAL VDR		Symptom --		Time Cycle --
Effectivity Text ET-1 AND SUBS				
Vehicle Effectivity Codes				
Vehicle 1 --	Vehicle 2 --	Vehicle 3 --	Vehicle 4 --	Vehicle 5 --
Mission Effectivity Codes				
Mssn 1 --	Mssn 2 --	Mssn 3 --	Mssn 4 --	Mssn 5 --
Estimated Completion Dates				
MSFC Approved Defer Until Date --	Contractor Req Defer Until Date --	LVL 3 Close --	Remark / Action --	
Investigation / Resolution Summary				
Last MSFC Update 10/07/1987	CN RSLV SBMT 09/06/1979	Defer Date --	Add Date --	R/C Codes 2 - MFG -- --
Assignee				
Design L. GUZINSKY	Chief Engineer --	S & MA D. NEWMAN	Project R. ABRAHAM	Project MGR --

Approval					
Design L. GUZINSKY	Chief Engineer --	S & MA D. NEWMAN	Project J. ODOM	Project MGR --	
PAC Assignee C. NEWTON	PAC Review Complete CN	MSFC Closure Date 09/27/1979	Status C - CLOSED	F/A Completion --	
Problem Type --	SEV --	Program Name --	REVL --	OPRINC --	
FUNC MOD --	Software Effectivity -- - - - - -	Software Fail CD --		SUBTYPE --	Software Closure CD --
RES PERSON L2 --	Approval Signature L3 --				
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Contractor Status Summary					
Reliability/Quality Assurance Concerns, Recommendations:					
Problem Description					
1. FIVE OF 70 PARTS SUBMITTED TO PRE-ATP FAILED OPEN DURING LN2 CRYO CYCLES. SIXTEEN OF 65 PARTS SUBMITTED TO FULL ATP FAILED OPEN DURING THERMAL CYCLING. THREE PARTS FAILED OPEN DURING FINAL CABLIBRATION. 2 REF. DOC. - MARS T18322, T18337, T18340, T18342. 3. THREE PARTS FAILED OPEN DURING FINAL CALIBRATION. 4. REF: MARS T18322 & OTHERS					
Contractor Investigation/Resolution					
1. CAUSE: SEE CAPS E-022A FAILURE ANALYSIS REPORTS. 2. RESOLUTION: REVISED EPOXY CURE TEMPERATURES DURING BONDING & REDUCED THE +500 DEGS F CALIBRATION POINT DURING ATP TO +/- 350 DEGS F					
MSFC Response/Concurrence					

MSFC Problem Reporting and Corrective Action (PRACA) System
ASSESSMENT ADDENDUM REPORT

MSFC Report# A00009	IFA# --	Contractor RPT# E-022	JSC# --	KSC# --	EICN# --
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Asmnt Part# --	Asmnt Part Name --	Asmnt Serial/Lot# --	
HCRIT CD --	FCRIT CD --	CAUSE CD --	FAIL MODE --
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --
Correlated Part# --	Correlated Part# --	Correlated Part# --	
Associated LRU# --	Associated LRU# --	Associated LRU# --	
MAJOR DESIGN CHANGES			
APRV DATE --	DESCRIPTION OF CHANGES --		
ASSESSMENT TEXT			

MSFC PRACA : 2003-02-12 07:54

MSFC Problem Reporting and Corrective Action (PRACA) System
WHOLE RECORD REPORT(+ ADDENDUM)

MSFC Record # A00010	In-Flight Anomaly Number --	Contractor Report Number P-016	JSC# --	KSC# --
Problem Title MICROSWITCH FAILED ON VENT RELIEF VALVE				
EICN# --	ELEMENT ET	Contractor MMMSS	FSCM# --	FCRIT 3
HCRIT --	Sys_Lvl N	Misc Codes A (2) B C D E F G H I J K L M N O		
HARDWARE EIM	NOMENCLATURE ET-MPTA	PART# 82601000200-009	SER/LOT# 9000002	MANUFACTURER MMC
HARDWARE LRU	NOMENCLATURE VENT RELIEF VALVE	PART# PD4700187-029	SER/LOT# 000003	MANUFACTURER --
HARDWARE NCA	NOMENCLATURE MICROSWITCH	PART# 1HM25	SER/LOT# N/A	MANUFACTURER MINN-HNYWELL
Test/Operation Q - QAL	Prevailing Condtion --	F / U F	Fail Mode --	Cause --
System PROPULSION	Defect --	Material --	Work Contact MARTIN	Fail Date 12/19/1977
Received at MSFC 06/27/1979	Date Isolated --	FMEA Reference 3.1.1.10	IFA: Mission Phase --	Mission Elapsed Time --
Location NSTL		Symptom --		Time Cycle --
Effectivity Text ET-1 AND SUBS				
Vehicle Effectivity Codes				
Vehicle 1 --	Vehicle 2 --	Vehicle 3 --	Vehicle 4 --	Vehicle 5 --
Mission Effectivity Codes				
Mssn 1 --	Mssn 2 --	Mssn 3 --	Mssn 4 --	Mssn 5 --
Estimated Completion Dates				
MSFC Approved Defer Until Date --	Contractor Req Defer Until Date --	LVL 3 Close --	Remark / Action --	
Investigation / Resolution Summary				
Last MSFC Update 10/07/1987	CN RSLV SBMT 05/01/1980	Defer Date --	Add Date --	R/C Codes 4 - TEST -- --
Assignee				
Design R. ZAGRODZKY	Chief Engineer --	S & MA D. NEWMAN	Project C. CRANE	Project MGR --
Approval				

Design R. ZAGRODZKY	Chief Engineer --	S & MA D. NEWMAN	Project J. ODOM	Project MGR --	
PAC Assignee C. NEWTON	PAC Review Complete CN	MSFC Closure Date 06/11/1980	Status C - CLOSED	F/A Completion --	
Problem Type --	SEV --	Program Name --	REVL --	OPRINC --	
FUNC MOD --	Software Effectivity -- - - - - -	Software Fail CD --		SUBTYPE --	Software Closure CD --
RES PERSON L2 --	Approval Signature L3 --				
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Contractor Status Summary					
Reliability/Quality Assurance Concerns, Recommendations:					
Problem Description 1. DURING MPTA 40% LOX AND SUBSEQUENT 100% LH2 TANKING TEST AT NSTL, THE SUBJECT MICROSWITCH ON THE PRIMARY VENT AND RELIEF VALVE FAILED TO INDICATE WHEN THE VALVE WAS ACTUATED. ANOMALY WAS NOTED AFTER CRYOGENIC LOADING, WHEN THE VALVE WAS COMMANDED CLOSED. 2. REF: MARS T11079 & T13171					
Contractor Investigation/Resolution 1. CAUSE: CRYO-PUMPING OCCURRED AS A RESULT OF NOT MAINTAINING POSITIVE OUTFLOW ON THE VALVE WHEN VALVE IS CHILLED DOWN. THE MOISTURE IN THE SWITCH CAVITY PREVENTED THE SWITCH FROM INDICATING PROPERLY. 2 RESOLUTION: PROCEDURAL PROVISIONS HAVE BEEN MADE WHICH WILL MAINTIAN POSITIVE OUTFLOW PROPELLANT LOADING & DRAIN CYCLE. REF OMRSD, FILE II RISK OF MOISTURE IS ACCEPTABLE. SWITCH IS INFORMATION ONLY					
MSFC Response/Concurrence					

MSFC Problem Reporting and Corrective Action (PRACA) System
ASSESSMENT ADDENDUM REPORT

MSFC Report#	IFA#	Contractor RPT#	JSC#	KSC#	EICN#
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A00010	--	P-016	--	--	--
Asmnt Part# --	Asmnt Part Name --	Asmnt Serial/Lot# --			
HCRIT CD --	FCRIT CD --	CAUSE CD --	FAIL MODE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Correlated Part# --	Correlated Part# --	Correlated Part# --			
Associated LRU# --	Associated LRU# --	Associated LRU# --			
MAJOR DESIGN CHANGES					
APRV DATE --	DESCRIPTION OF CHANGES --				
ASSESSMENT TEXT					

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MSFC Problem Reporting and Corrective Action (PRACA) System

WHOLE RECORD REPORT(+ ADDENDUM)

MSFC Record # A00011	In-Flight Anomaly Number --	Contractor Report Number P-015	JSC# --	KSC# --
Problem Title LH2 SIPHON SCREEN TEAR				
EICN# --	ELEMENT ET	Contractor MMMSS	FSCM# --	FCRIT 1
HCRIT --	Sys_Lvl N	Misc Codes A (2) B C D E F G H I J K L M N O		
HARDWARE EIM	NOMENCLATURE EXTERNAL TANK	PART# 82601000000	SER/LOT# MPTA	MANUFACTURER MMC
HARDWARE LRU	NOMENCLATURE LH2 TANK	PART# 82612000000	SER/LOT# MPTA	MANUFACTURER MMC
HARDWARE NCA	NOMENCLATURE LH2 SIPHON SCREEN	PART# PD4800176-029	SER/LOT# 099	MANUFACTURER WINTEC
Test/Operation D - DEV	Prevailing Condtion --	F / U F	Fail Mode --	Cause --
System PROPULSION	Defect DC - BROKEN	Material --	Work Contact FINCHER	Fail Date 03/07/1978
Received at MSFC 06/27/1979	Date Isolated --	FMEA Reference 2.5.2	IFA: Mission Phase --	Mission Elapsed Time --
Location MMC-DENVER		Symptom --		Time Cycle --
Effectivity Text NONE				
Vehicle Effectivity Codes				
Vehicle 1 --	Vehicle 2 --	Vehicle 3 --	Vehicle 4 --	Vehicle 5 --
Mission Effectivity Codes				
Mssn 1 --	Mssn 2 --	Mssn 3 --	Mssn 4 --	Mssn 5 --
Estimated Completion Dates				
MSFC Approved Defer Until Date --	Contractor Req Defer Until Date --	LVL 3 Close --	Remark / Action --	
Investigation / Resolution Summary				
Last MSFC Update 10/07/1987	CN RSLV SBMT 02/27/1980	Defer Date --	Add Date --	R/C Codes A - PURG -- --
Assignee				
Design E. BRYAN	Chief Engineer --	S & MA D. NEWMAN	Project C. CRANE	Project MGR --
Approval				

Design E. BRYAN	Chief Engineer --	S & MA D. NEWMAN	Project J. ODOM	Project MGR --	
PAC Assignee C. NEWTON	PAC Review Complete CN	MSFC Closure Date 03/27/1980	Status C - CLOSED	F/A Completion --	
Problem Type --	SEV --	Program Name --	REVL --	OPRINC --	
FUNC MOD --	Software Effectivity -- - - - - -	Software Fail CD --		SUBTYPE --	Software Closure CD --
RES PERSON L2 --	Approval Signature L3 --				
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Contractor Status Summary					
Reliability/Quality Assurance Concerns, Recommendations:					
Problem Description 1. THE UPSTREAM SUPPORT SCREEN TORE APPROX 6 INCHES ALONG THE CENTER OF ITS ATTACHING WELD TO THE OUTER CIRCUMFERENTIAL SUPPORT. 2. REF. DOC. - MARS T00714, CAPS P-001 & P-009. 3. CONSTRAINT - NONE					
Contractor Investigation/Resolution CAUSE - THE CAUSE OF THE SCREEN SEPARATION IS FATIGUE FAILURE OF THE SCREEN MATERIAL IN THE REGION OF THE ATTACHING WELD. THE FATIGUE WAS INDUCED BY THE FLEXING OF THE SCREEN ELEMENT DURING VIBRATION TESTING RESOLUTION - (1) SCREENS ALL PASSES REQMTS OF QUAL TEST PROCEDURE PRIOR TO CONTINUED TEST CERTIFICATION. (2) FOURTEEN SCREENS WERE INSPEC FOR WELD QUAL BY PRODUCTION ENGINEERING WHICH WERE FABED WITH ET-1. (3) VENDOR FABRICATED PRODUCTION SCREENS WITH NO SIGNIFICANT TIME INTERVAL DELAY BETWEEN FIRST & LAST SCREENS WITH SAME PERSONNEL. NO MARS ACTIVITY HAS OCCURRED FOR SCREEN INSTALLED ON ET-1. (4) THEREFORE, FAILURE LIMITED TO MPTA & NO AFFECT ON ET-1 & SUBS. EFFECTIVITY - NONE					
MSFC Response/Concurrence					

MSFC Report# A00011	IFA# --	Contractor RPT# P-015	JSC# --	KSC# --	EICN# --
Asmnt Part# --	Asmnt Part Name --	Asmnt Serial/Lot# --			
HCRIT CD --	FCRIT CD --	CAUSE CD --	FAIL MODE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Correlated Part# --	Correlated Part# --	Correlated Part# --			
Associated LRU# --	Associated LRU# --	Associated LRU# --			
MAJOR DESIGN CHANGES					
APRV DATE --	DESCRIPTION OF CHANGES --				
ASSESSMENT TEXT					

MSFC PRACA : 2003-02-12 07:54

MSFC Problem Reporting and Corrective Action (PRACA) System
WHOLE RECORD REPORT(+ ADDENDUM)

MSFC Record # A00012	In-Flight Anomaly Number --	Contractor Report Number P-025	JSC# --	KSC# --
Problem Title FRACTURED PYRO BOLT				
EICN# --	ELEMENT ET	Contractor MMMSS	FSCM# --	FCRIT 1
HCRIT --	Sys_Lvl N	Misc Codes A (2) B (X) C D E F G H I J K L M N O		
HARDWARE EIM	NOMENCLATURE N/A	PART# N/A	SER/LOT# N/A	MANUFACTURER N/A
HARDWARE LRU	NOMENCLATURE GND UMB CARR PLT	PART# 82629021000-029	SER/LOT# N/A	MANUFACTURER --
HARDWARE NCA	NOMENCLATURE PYRO BOLT	PART# PD5000020-029	SER/LOT# 0000018&19	MANUFACTURER HI-SHEAR
Test/Operation D - DEV	Prevailing Condtion --	F / U F	Fail Mode --	Cause --
System PROPULSION	Defect --	Material --	Work Contact ALOST	Fail Date 10/25/1978
Received at MSFC 06/27/1979	Date Isolated --	FMEA Reference 2.4.1	IFA: Mission Phase --	Mission Elapsed Time --
Location KSC		Symptom MW - INT LEAK		Time Cycle --
Effectivity Text ET-1 AND SUBS				
Vehicle Effectivity Codes				
Vehicle 1 --	Vehicle 2 --	Vehicle 3 --	Vehicle 4 --	Vehicle 5 --
Mission Effectivity Codes				
Mssn 1 --	Mssn 2 --	Mssn 3 --	Mssn 4 --	Mssn 5 --
Estimated Completion Dates				
MSFC Approved Defer Until Date --	Contractor Req Defer Until Date --	LVL 3 Close --	Remark / Action --	
Investigation / Resolution Summary				
Last MSFC Update 10/07/1987	CN RSLV SBMT 10/02/1979	Defer Date --	Add Date --	R/C Codes 1 - DES -- --
Assignee				
Design R. ZAGRODZKY	Chief Engineer --	S & MA D. NEWMAN	Project C. CRANE	Project MGR --
Approval				

Design R. ZAGRODZKY	Chief Engineer --	S & MA D. NEWMAN	Project J. ODOM	Project MGR --	
PAC Assignee C. NEWTON	PAC Review Complete CN	MSFC Closure Date 10/26/1979	Status C - CLOSED	F/A Completion --	
Problem Type --	SEV --	Program Name --	REVL --	OPRINC --	
FUNC MOD --	Software Effectivity -- - - - - -	Software Fail CD --		SUBTYPE --	Software Closure CD --
RES PERSON L2 --	Approval Signature L3 --				
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Contractor Status Summary					
Reliability/Quality Assurance Concerns, Recommendations:					
Problem Description DURING UMBILICAL CARRIER PLATE TESTING AT KSC, THE FOLLOWING FAILURES TO PYRO BOLTS OCCURRED: 1. DURING DROP TEST NO. 1 & NO. 4, BOLT S/N 000018 & S/N 000019 SHOWED EVIDENCE OF EXHAUSTING. MARS T19402 2 SUDDEN RELEASE OF PRESSURE 30 HOURS AFTER FIRING. MARS T19534 BOLT S/N 000024. 3. BOLT S/N 000025 WAS DISCOVERED IN A STORAGE LOCKER WITH A PRESSURE CARTRIDGE ASSEMBLY SEPARATED FROM BOLT. SIMILAR CIRCUMSTANCE FOR S/N 026 & S/N 027. MARS T19534 4. DURING GH2 VENT SYSTEM DROP TEST NO. 10, S/N 000022 BROKE PREMATURELY DURING RANDOM MOTION TESTS. MARS T16945					
Contractor Investigation/Resolution RESOLUTION: 1. ANALYSIS OF BOLTS FOR THE BLOW-BY CONDITION RESULTED IN A DETERMINATION THAT THE BOLT/STEM "O" RING WILL BE REPLACED WITH AN OMNI SEAL AND VERIFIED BY QUAL TEST. QUALIFICATION TEST COMPLETE (CLOSED). 2. S/N 0000018 AND S/N 0000019 BOLTS ANALYZED AND DETERMINED "O" RING SEAL LEAKED. REF. MARS T19402. (CLOSED). 3. A FAILURE ANALYSIS PLAN WAS IMPLEMENTED WITH THE EXCEPTION OF FIRING NOS. 4 THRU 7 WHICH NOT NECESSARY. THE CONCLUSIONS OF THE FAILURE ANALYSIS WERE: A. A PRESSURE CARTRIDGE FAILED AS THE RESULT OF SUSTAINED FLAW GROWTH IN THE PRESENCE OF AN AGGRESSIVE ATMOSPHERE & A STATIC LOAD. THE AGGRESSIVE ATMOSPHERE IS ATTRIBUTED TO COMBUS- TION PRODUCTS & THE STATIC LOAD IS DUE TO RESIDUAL PRESSURE IN THE CARTRIDGE. B. THE MODE OF FRACTURE WAS INTERGRANULAR. C. NO EVIDENCE OF PRE-EXISTING FLAWS WAS FOUND. CRACKS					

APPARENTLY WERE INITIATED DURING FIRING. D. THE PRESENCE OF A SHARP RADIUS ON THE MAIN CHARGE CAVITY OF THE PRESSURE CARTRIDGE MAY HAVE CONTRIBUTED TO THE FAILURE. IN EACH OF THE 5 CARTRIDGES WHICH WERE EXAMINED, CRACKS INITIATED IN THIS RADIUS & PROPAGATED THROUGH THE WALL THICKNESS. THE RESULTS HAVE CAUSED A REDESIGN TO ELIMINATE THE STRESS RISER AND INCREASED CARTRIDGE WALL THICKNESS. IN ADDITION, PROPER HEAT TREATMENT OF THE CARTRIDGE CLARIFIED ON DRAWING. REF. ETFA-29 (CLOSED) 4. S/N 0000022 FAILURE ANALYSIS INDICATED FAILURE WAS DUE TO MOTION SIMULATOR MISALIGNMENT MARS T16945. (CLOSED) 5. S/N 0000024 INITIATORS FORWARDED TO JSC FOR FAILURE ANALYSIS. NO ABNORMAL CHARACTERISTICS NOTED. REF. MARS T19534. DESIGN CHANGE TO INSTALL ORIFICE PLATE BETWEEN CARTRIDGE AND NSI. COMPLETE. QUALIFICATION TEST IS COMPLETE

MSFC Response/Concurrence

MSFC Problem Reporting and Corrective Action (PRACA) System
ASSESSMENT ADDENDUM REPORT

MSFC Report# A00012	IFA# --	Contractor RPT# P-025	JSC# --	KSC# --	EICN# --
Asmnt Part# --	Asmnt Part Name --	Asmnt Serial/Lot# --			
HCRIT CD --	FCRIT CD --	CAUSE CD --	FAIL MODE MW - INT LEAK		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Correlated Part# --	Correlated Part# --	Correlated Part# --			
Associated LRU# --	Associated LRU# --	Associated LRU# --			
MAJOR DESIGN CHANGES					
APRV DATE --	DESCRIPTION OF CHANGES --				
ASSESSMENT TEXT					

MSFC PRACA : 2003-02-12 07:54

MSFC Problem Reporting and Corrective Action (PRACA) System

WHOLE RECORD REPORT(+ ADDENDUM)

MSFC Record # A00013	In-Flight Anomaly Number --	Contractor Report Number P-026	JSC# --	KSC# --
Problem Title BROKEN HYDROGEN VENT DISCONNECT				
EICN# --	ELEMENT ET	Contractor MMMSS	FSCM# --	FCRIT 3
HCRIT --	Sys_Lvl N	Misc Codes A (2) B C D E F G H I J K L M N O		
HARDWARE EIM	NOMENCLATURE N/A	PART# N/A	SER/LOT# N/A	MANUFACTURER N/A
HARDWARE LRU	NOMENCLATURE GND UMB CARRIER	PART# 82429021000-029	SER/LOT# N/A	MANUFACTURER MMC
HARDWARE NCA	NOMENCLATURE DISCONNECT HYD VENT	PART# PD4800173-029	SER/LOT# 034	MANUFACTURER ROMECC
Test/Operation L - FLD	Prevailing Condtion --	F / U F	Fail Mode --	Cause --
System PROPULSION	Defect DC - BROKEN	Material --	Work Contact ALOST	Fail Date 11/17/1978
Received at MSFC 06/27/1979	Date Isolated --	FMEA Reference 2.2.4	IFA: Mission Phase --	Mission Elapsed Time --
Location KSC		Symptom --		Time Cycle --
Effectivity Text ET-7 AND SUBS				
Vehicle Effectivity Codes				
Vehicle 1 --	Vehicle 2 --	Vehicle 3 --	Vehicle 4 --	Vehicle 5 --
Mission Effectivity Codes				
Mssn 1 --	Mssn 2 --	Mssn 3 --	Mssn 4 --	Mssn 5 --
Estimated Completion Dates				
MSFC Approved Defer Until Date --	Contractor Req Defer Until Date --	LVL 3 Close --	Remark / Action --	
Investigation / Resolution Summary				
Last MSFC Update 10/07/1987	CN RSLV SBMT 06/11/1980	Defer Date --	Add Date --	R/C Codes 8 - SHIP -- --
Assignee				
Design R. ZAGRODZKY	Chief Engineer --	S & MA D. NEWMAN	Project C. CRANE	Project MGR --

Approval					
Design R. ZAGRODZKY	Chief Engineer --	S & MA D. NEWMAN	Project J. ODOM	Project MGR --	
PAC Assignee C. NEWTON	PAC Review Complete CN	MSFC Closure Date 07/02/1980	Status C - CLOSED	F/A Completion --	
Problem Type --	SEV --	Program Name --	REVL --	OPRINC --	
FUNC MOD --	Software Effectivity -- - - - - -	Software Fail CD --		SUBTYPE --	Software Closure CD --
RES PERSON L2 --	Approval Signature L3 --				
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Contractor Status Summary					
Reliability/Quality Assurance Concerns, Recommendations:					
Problem Description					
1. WHEN SHIPPING COVER WAS REMOVED AT KSC IT WAS FOUND THAT THE POPPET STEM WAS BROKEN, FRACTURE OCCURRED AT THE STEM SEAL GROOVE ADJACENT TO THE POPPET SEAT. 2. REF. DOC. - MARS T19407 & T13941					
Contractor Investigation/Resolution					
1. CAUSE: RESULTS OF FAILURE ANALYSIS OF POPPET INDICATES OVERLOAD BREAKAGE CAUSED BY LOADS. 2. RESOLUTION: (A) SPECIAL PACKAGING OF GUCP-JUN H30433-5ZT. SPECIAL PACKAGING FOR QD COVERED IN REV-AB SCID DOC. (B) LOCATION OF ALL PREVIOUSLY SHIPPED UNITS DETERMINED & RECEIVAL INSPECTIONS PERFORM WITH NO INDICATION OF DEFECTS. (C) EFFECTIVITY: INCREMENT II & SPARES					
MSFC Response/Concurrence					

MSFC Problem Reporting and Corrective Action (PRACA) System
ASSESSMENT ADDENDUM REPORT

MSFC Report#	IFA#	Contractor RPT#	JSC#	KSC#	EICN#
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A00013	--	P-026	--	--	--
Asmnt Part# --	Asmnt Part Name --	Asmnt Serial/Lot# --			
HCRIT CD --	FCRIT CD --	CAUSE CD --	FAIL MODE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Correlated Part# --	Correlated Part# --	Correlated Part# --			
Associated LRU# --	Associated LRU# --	Associated LRU# --			
MAJOR DESIGN CHANGES					
APRV DATE --	DESCRIPTION OF CHANGES --				
ASSESSMENT TEXT					

MSFC PRACA : 2003-02-12 07:54

MSFC Problem Reporting and Corrective Action (PRACA) System
WHOLE RECORD REPORT(+ ADDENDUM)

MSFC Record # A00014	In-Flight Anomaly Number --	Contractor Report Number P-029	JSC# --	KSC# --
Problem Title BROKEN PIN IN CONNECTOR OF NSI DETONATOR				
EICN# --	ELEMENT ET	Contractor MMSS	FSCM# --	FCRIT 3
HCRIT --	Sys_Lvl Y	Misc Codes A (2) B C D E F G H I J K L M N O		
HARDWARE EIM	NOMENCLATURE N/A	PART# N/A	SER/LOT# N/A	MANUFACTURER N/A
HARDWARE LRU	NOMENCLATURE N/A	PART# N/A	SER/LOT# N/A	MANUFACTURER N/A
HARDWARE NCA	NOMENCLATURE NSI DETONATOR (GFP)	PART# ME-453-0021-0009	SER/LOT# 003	MANUFACTURER PYRONETICS
Test/Operation Q - QAL	Prevailing Condtion --	F / U F	Fail Mode --	Cause --
System PROPULSION	Defect --	Material --	Work Contact FINCHER	Fail Date 10/17/1978
Received at MSFC 06/27/1979	Date Isolated --	FMEA Reference 3.5	IFA: Mission Phase --	Mission Elapsed Time --
Location PYRONETICS		Symptom --		Time Cycle --
Effectivity Text ET-1 & SUBS				
Vehicle Effectivity Codes				
Vehicle 1 --	Vehicle 2 --	Vehicle 3 --	Vehicle 4 --	Vehicle 5 --
Mission Effectivity Codes				
Mssn 1 --	Mssn 2 --	Mssn 3 --	Mssn 4 --	Mssn 5 --
Estimated Completion Dates				
MSFC Approved Defer Until Date --	Contractor Req Defer Until Date --	LVL 3 Close --	Remark / Action --	
Investigation / Resolution Summary				
Last MSFC Update 10/07/1987	CN RSLV SBMT 04/21/1980	Defer Date --	Add Date --	R/C Codes 1 - DES -- --
Assignee				
Design R. ZAGRODZKY	Chief Engineer --	S & MA D. NEWMAN	Project C. CRANE	Project MGR --

Approval					
Design R. ZAGRODZKY	Chief Engineer --	S & MA D. NEWMAN	Project J. ODOM	Project MGR --	
PAC Assignee C. NEWTON	PAC Review Complete CN	MSFC Closure Date 05/21/1980	Status C - CLOSED	F/A Completion --	
Problem Type --	SEV --	Program Name --	REVL --	OPRINC --	
FUNC MOD --	Software Effectivity -- - - - - -	Software Fail CD --		SUBTYPE --	Software Closure CD --
RES PERSON L2 --	Approval Signature L3 --				
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Contractor Status Summary					
Reliability/Quality Assurance Concerns, Recommendations:					
Problem Description 1. ON COMPLETION OF QUAL TEST OF RANDOM VIBRATION IN THE X-X AXIS ON PYRONETICS P/N 1366-1 VALVE (PD4700193) THE MMC SUPPLIED 40M38298, NBS9GE8-2SE CONNECTOR COULD NOT BE REMOVED BY STANDARD MEANS FROM THE GFE-ME453-0021-0009 NSI. SUBSEQUENT CONTINUITY CHECK THRU CONNECTOR LEAD WIRES INDICATED AN OPEN CIRCUIT. A BROKEN PIN WAS FOUND WHEN THE CONNECTOR WAS REMOVED. 2. REF. DOC. - MARS T07782					
Contractor Investigation/Resolution 1. CAUSE: INADQUATE DESIGN FOR VIBRATION LEVELS FOR THE TUMBLE VALVE MOUNTED, NSI/40M CONNECTOR INTERFACE. 2. RESOLUTION: REDESIGN 40M039298 CONNECTOR BY REMOVING THE CONNECTOR COUPLING RING VARIOUS SPRINGS, WASHER & LOCK RINGS & REPLACE WITH MMC/DENVER ST81.D141 COUPLING RING REF B00966. REQUIRE COMPLETED. 4/25/80 - CLOSURE DISTRIBUTED					
MSFC Response/Concurrence					

MSFC Report# A00014	IFA# --	Contractor RPT# P-029	JSC# --	KSC# --	EICN# --
Asmnt Part# --	Asmnt Part Name --	Asmnt Serial/Lot# --			
HCRIT CD --	FCRIT CD --	CAUSE CD --	FAIL MODE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Correlated Part# --	Correlated Part# --	Correlated Part# --			
Associated LRU# --	Associated LRU# --	Associated LRU# --			
MAJOR DESIGN CHANGES					
APRV DATE --	DESCRIPTION OF CHANGES --				
ASSESSMENT TEXT					

MSFC PRACA : 2003-02-12 07:54

MSFC Problem Reporting and Corrective Action (PRACA) System
WHOLE RECORD REPORT(+ ADDENDUM)

MSFC Record # A00015	In-Flight Anomaly Number --	Contractor Report Number S-018	JSC# --	KSC# --
Problem Title TANK DOMES OUT OF DIMENSIONAL TOLERANCE				
EICN# --	ELEMENT ET	Contractor MMMSS	FSCM# --	FCRIT 3
HCRIT --	Sys_Lvl N	Misc Codes A (2) B (X) C D E F G H I J K L M N O		
HARDWARE EIM	NOMENCLATURE ET	PART# 82601000000	SER/LOT# VARIOUS	MANUFACTURER MMC
HARDWARE LRU	NOMENCLATURE N/A	PART# N/A	SER/LOT# N/A	MANUFACTURER N/A
HARDWARE NCA	NOMENCLATURE TANK DOMES	PART# 8261220000	SER/LOT# VARIOUS	MANUFACTURER MMC
Test/Operation M - MFG	Prevailing Condition --	F / U UC	Fail Mode --	Cause --
System STRUCTURAL	Defect MD - M SIZE	Material --	Work Contact CUNNINGHAM	Fail Date 05/01/1978
Received at MSFC 06/28/1979	Date Isolated --	FMEA Reference 1.1.1	IFA: Mission Phase --	Mission Elapsed Time --
Location MAF		Symptom --		Time Cycle --
Effectivity Text ET-7 & SUBS				
Vehicle Effectivity Codes				
Vehicle 1 --	Vehicle 2 --	Vehicle 3 --	Vehicle 4 --	Vehicle 5 --
Mission Effectivity Codes				
Mssn 1 --	Mssn 2 --	Mssn 3 --	Mssn 4 --	Mssn 5 --
Estimated Completion Dates				
MSFC Approved Defer Until Date --	Contractor Req Defer Until Date --	LVL 3 Close --	Remark / Action --	
Investigation / Resolution Summary				
Last MSFC Update 10/07/1987	CN RSLV SBMT 06/23/1980	Defer Date --	Add Date --	R/C Codes 2 - MFG -- --
Assignee				
Design E. BRYAN	Chief Engineer --	S & MA D. NEWMAN	Project P. BRIDWELL	Project MGR --
Approval				

Design E. BRYAN	Chief Engineer --	S & MA D. NEWMAN	Project J. ODOM	Project MGR --	
PAC Assignee C. NEWTON	PAC Review Complete CN	MSFC Closure Date 07/14/1980	Status C - CLOSED	F/A Completion --	
Problem Type --	SEV --	Program Name --	REVL --	OPRINC --	
FUNC MOD --	Software Effectivity -- - - - - -	Software Fail CD --		SUBTYPE --	Software Closure CD --
RES PERSON L2 --	Approval Signature L3 --				
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Contractor Status Summary					
Reliability/Quality Assurance Concerns, Recommendations:					
Problem Description 1. PART NUMBER: LH2 FWD DOME - 82614420000-010 LH2 AFT DOME - 82614100000-020 LO2 DOME - 82612200000-000 2. TANK DOMES CONTINUE TO BE BUILT WITH OUT OF TOLERANCE DIMENSIONS, THE I.S.L. CHORD TANGS REMAIN OUT OF PLANE. THIS AFFECTS VARIOUS OTHER DIMENSIONS. 3. REFERENCE: 11 ASSOCIATED MARS, T04130 TYPICAL					
Contractor Investigation/Resolution CAUSE: (1) STRESS ACCUMULATION INHERENT IN WELD PROCESS. (2) ENGINEERING DRAWINGS TOO RESTRICTIVE ON TOLERANCES. RESOLUTION: (1) LONGER START-UP & RUN-OFF TABS HAVE BEEN PROVIDED FOR CHORD TO 1/4 PANEL WELDS ON TOOL T01A5002 CHANGE N & THE END CHORD LOCATORS HAVE BEEN MOVED CLOSER TO THE END OF THE TANG ON TOOL TR01A5004. AN OBSERVATION SHOT HAS BEEN PROVIDED FOR INSPECTION PURPOSES ON T01A5004 CHANGE "M". THE CHANGES EQUALIZE STRESS AT WELD STARTUP AREAS & HOLD PARTS IN PLACE, THEREBY REDUCING WAVINESS TO THE CHORD. (2) DESIGN CHANGES HAVE BEEN IMPLEMENTED TO INCREASE TOTAL WAVINESS ON LO2 & LH2 FWD DOME TANGS TO .200 & ON LH2 AFT DOME TANGS TO .140". REFER THE H30418 FOR THE LO2 TANK & S30430 FOR THE LH2 TANK.THE DESIGN CHANGES HAVE ELIMINATED THE NEED FOR MISMATCH SRI PREVIOUSLY IDENTIFIED AS A CL ACTION. (3) THE T0207018 TOOL HAS BEEN REVISED TO INCORPORATED THE DESIGN CHANGES. THE REVISION A THE CAPABITLIY TO INDEX BLIND TAPPED HOLE DRILL PLATES TO THE DOME CHORD TANK & RAISE THE OF THE SHEAR PIN TARGET PLATES. ALL CORRECTIVE ACTION TASKS HAVE BEEN IMPLEMENTED &					

SINCE IMPLEMENTATION ON ET-4 THERE HAVE BEEN NO PROBLEMS IN THIS AREA
6/27/80 - CLOSURE DISTRIBUTED

MSFC Response/Concurrence

MSFC Problem Reporting and Corrective Action (PRACA) System
ASSESSMENT ADDENDUM REPORT

MSFC Report# A00015	IFA# --	Contractor RPT# S-018	JSC# --	KSC# --	EICN# --
Asmnt Part# --	Asmnt Part Name --	Asmnt Serial/Lot# --			
HCRIT CD --	FCRIT CD --	CAUSE CD --	FAIL MODE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Correlated Part# --	Correlated Part# --	Correlated Part# --			
Associated LRU# --	Associated LRU# --	Associated LRU# --			
MAJOR DESIGN CHANGES					
APRV DATE --	DESCRIPTION OF CHANGES --				
ASSESSMENT TEXT					

MSFC PRACA : 2003-02-12 07:54

MSFC Problem Reporting and Corrective Action (PRACA) System
WHOLE RECORD REPORT(+ ADDENDUM)

MSFC Record # A00016	In-Flight Anomaly Number --	Contractor Report Number S-029	JSC# --	KSC# --
Problem Title LH2 DOME ASSEMBLIES OIL CANNING				
EICN# --	ELEMENT ET	Contractor MMMSS	FSCM# --	FCRIT 3
HCRIT --	Sys_Lvl N	Misc Codes A (2) B (X) C D E F G H I J K L M N O		
HARDWARE EIM	NOMENCLATURE ET	PART# 82601000000	SER/LOT# ET-4	MANUFACTURER MMC
HARDWARE LRU	NOMENCLATURE N/A	PART# N/A	SER/LOT# N/A	MANUFACTURER N/A
HARDWARE NCA	NOMENCLATURE LH2 DOME ASSY	PART# 82614100035	SER/LOT# ET-4	MANUFACTURER MMC
Test/Operation M - MFG	Prevailing Condtion --	F / U UC	Fail Mode --	Cause --
System STRUCTURAL	Defect --	Material --	Work Contact FINCHER	Fail Date 03/07/1979
Received at MSFC 06/28/1979	Date Isolated --	FMEA Reference 1.1.1	IFA: Mission Phase --	Mission Elapsed Time --
Location MAF		Symptom --		Time Cycle --
Effectivity Text ET-4 & SUBS				
Vehicle Effectivity Codes				
Vehicle 1 --	Vehicle 2 --	Vehicle 3 --	Vehicle 4 --	Vehicle 5 --
Mission Effectivity Codes				
Mssn 1 --	Mssn 2 --	Mssn 3 --	Mssn 4 --	Mssn 5 --
Estimated Completion Dates				
MSFC Approved Defer Until Date --	Contractor Req Defer Until Date --	LVL 3 Close --	Remark / Action --	
Investigation / Resolution Summary				
Last MSFC Update 10/07/1987	CN RSLV SBMT 06/04/1980	Defer Date --	Add Date --	R/C Codes 1 - DES -- --
Assignee				
Design E. BRYAN	Chief Engineer --	S & MA D. NEWMAN	Project M. PESSIN	Project MGR --
Approval				

Design E. BRYAN	Chief Engineer --	S & MA D. NEWMAN	Project J. ODOM	Project MGR --	
PAC Assignee C. NEWTON	PAC Review Complete CN	MSFC Closure Date 07/02/1980	Status C - CLOSED	F/A Completion --	
Problem Type --	SEV --	Program Name --	REVL --	OPRINC --	
FUNC MOD --	Software Effectivity -- - - - - -	Software Fail CD --		SUBTYPE --	Software Closure CD --
RES PERSON L2 --	Approval Signature L3 --				
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Contractor Status Summary					
Reliability/Quality Assurance Concerns, Recommendations:					
Problem Description MARS T19197 & T19198 INDICATE OIL CANNING OF LH2 DOMES. THE FREQUENCY OF OCCURRENCE OF THIS CONDITION WHICH IS COMMON TO THE LH2 FORWARD AND AFT DOME REQUIRES INVESTIGATION TO ELIMINATE THE OIL CANNING CONDITION					
Contractor Investigation/Resolution CAUSE: MULTIPLE CAUSES ALL RELATED TO MANUFACTURING/FABRICATION/ASSEMBLY. RESOLUTION: SEVERAL RECURRENCE CONTROL ACTIONS HAVE BEEN IMPLEMENTED AS WOULD BE EXPECTED MULTIPLE CAUSES. CHORD CONTOUR - AIR HARBOR BUILDING NEW MACHINE CAPABLE OF MAINTAINING DWG DIMENSIONAL TOLERANCES CHORD WAVINESS - REWORKED MISLOCATED CLAMP. QUARTER PANEL - NOT ENOUGH MATERIAL ON PANEL, DCN RELEASED (REF E30533) CHANGED DOME STIFFNESS BY INCREASING MILL PATTERN FROM 6" TO 10". SPECIFIC CHANGES ARE DETAILED IN ATTACHED #1 TO CAPS S-029A					
MSFC Response/Concurrence					

MSFC Report# A00016	IFA# --	Contractor RPT# S-029	JSC# --	KSC# --	EICN# --
Asmnt Part# --	Asmnt Part Name --	Asmnt Serial/Lot# --			
HCRIT CD --	FCRIT CD --	CAUSE CD --	FAIL MODE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Correlated Part# --	Correlated Part# --	Correlated Part# --			
Associated LRU# --	Associated LRU# --	Associated LRU# --			
MAJOR DESIGN CHANGES					
APRV DATE --	DESCRIPTION OF CHANGES --				
ASSESSMENT TEXT					

MSFC PRACA : 2003-02-12 07:54

MSFC Problem Reporting and Corrective Action (PRACA) System
WHOLE RECORD REPORT(+ ADDENDUM)

MSFC Record # A00017	In-Flight Anomaly Number --	Contractor Report Number S-021	JSC# --	KSC# --
Problem Title RING FRAME/ROLL TIE OUT OF DIMENTIONAL TOLERANCE				
EICN# --	ELEMENT ET	Contractor MMMSS	FSCM# --	FCRIT 3
HCRIT --	Sys_Lvl N	Misc Codes A (3) B C D E F G H I J K L M N O		
HARDWARE EIM	NOMENCLATURE ET	PART# 82601000000	SER/LOT# ET-1,-2,-3	MANUFACTURER MMC
HARDWARE LRU	NOMENCLATURE N/A	PART# N/A	SER/LOT# N/A	MANUFACTURER N/A
HARDWARE NCA	NOMENCLATURE ROLL TIE INSTL	PART# 8213000031-010	SER/LOT# N/A	MANUFACTURER MMC
Test/Operation M - MFG	Prevailing Condtion --	F / U UC	Fail Mode --	Cause --
System STRUCTURAL	Defect MD - M SIZE	Material --	Work Contact WESTPHAL	Fail Date 04/14/1978
Received at MSFC 06/28/1979	Date Isolated --	FMEA Reference 1.1	IFA: Mission Phase --	Mission Elapsed Time --
Location MAF		Symptom --		Time Cycle --
Effectivity Text ET-1 AND SUBS				
Vehicle Effectivity Codes				
Vehicle 1 --	Vehicle 2 --	Vehicle 3 --	Vehicle 4 --	Vehicle 5 --
Mission Effectivity Codes				
Mssn 1 --	Mssn 2 --	Mssn 3 --	Mssn 4 --	Mssn 5 --
Estimated Completion Dates				
MSFC Approved Defer Until Date --	Contractor Req Defer Until Date --	LVL 3 Close --	Remark / Action --	
Investigation / Resolution Summary				
Last MSFC Update 10/07/1987	CN RSLV SBMT 07/18/1980	Defer Date --	Add Date --	R/C Codes 2 - MFG -- --
Assignee				
Design E. BRYAN	Chief Engineer --	S & MA D. NEWMAN	Project M. PESSIN	Project MGR --
Approval				

Design E. BRYAN	Chief Engineer --	S & MA C. NEWMAN	Project J. ODOM	Project MGR --	
PAC Assignee M. GLASS	PAC Review Complete MG	MSFC Closure Date 08/15/1980	Status C - CLOSED	F/A Completion --	
Problem Type --	SEV --	Program Name --	REVL --	OPRINC --	
FUNC MOD --	Software Effectivity -- - - - - -	Software Fail CD --		SUBTYPE --	Software Closure CD --
RES PERSON L2 --	Approval Signature L3 --				
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Related Document Type --	Related Document ID --				
Related Document Title --					
Contractor Status Summary					
Reliability/Quality Assurance Concerns, Recommendations:					
Problem Description 1. ET-1 INTERTANK RING FRAMES OUT OF PLANE AT INBOARD FLANGES AT STATIONS 941 AND 1034 WHICH PREVENTS THE PROPER INSTALLATION OF ROLL TIES. MARS T12445. 2. ET-2 FRAME LOCATION DIMENSIONS ARE NOT TO DRAWING REQUIREMENTS BETWEEN +Z AND +Y AXES AT STATIONS 941.4 AND 985.675. MARS T14367. 3. ET-3 RING FRAME AT STA 1034.20 FOUND TO BE OUT OF PLANARITY TOLERANCE DURING OPTICAL PLANARITY CHECK PER DC&R S-78-04. MARS T16854					
Contractor Investigation/Resolution CAUSE - INBOARD FLANGES OF FRAMES MOVED WHEN RELEASED FROM INTERTANK FIXTURE POSITION I. INVESTI- GATIONS INDICATE MOVEMENT DUE TO IMPROPER USE OF FRAME LOCATORS & ALSO ACCUMULATIONOF FRAME & FRAME LOCATOR TOLERANCES. ALSO TWO LOCATOR BUSHINGS WERE FOUND REMOVED FROM FIXTURE CAUSING MISLOCATION OF 985.675 FRAME. 7/22/80 RESOLUTION - ET-1 WAS MEASURED & MODIFIED TO AN ACCEPTABLE CONDITION PER MARS T12445 ET-2 FRAME MEASUREMENTS WERE TAKEN ON POSITIONS I & II & MODIFIED PER MARS T14367. ET-3 PERPENDICULARITY OF OUTER CHORD FLANGES TO FRAME WEBS INSTALLED IN POS I CHECKED WITHIN DRAWING TOL REF MARS T16854. ET-4,5,6 PLANARITY OF INTERTANK POSITION I FRAME LOCATORS TO BE VERIFIED IN POSITION II BY OPTICAL MEASUREMENTS TO DRAWING REQUIREMENT. REF DC&R S-78-04, MARS T29880 (ET4), MARS T2964 (ET-5) MARS T26283 (ET-6). ET-7 PLANNING REVISED TO INSPECT PLANARITY DURING BUILD REF MARS T-26247 RECURRENCE CONTROL - - LOCATOR PLANARITY TOL REVISED FROM +/-050 TO +/-030 & VERIFIED DURING TO6A7004 USE PERIODIC INSPECTION. - ROLL TIES					

AND/OR POSITIONING BRACES TO BE INSTALLED IN INTERTANK POSITION I PRIOR TO FIT OF STRINGER PANELS REF L/C M320-441 TOOL ORDER T06A7004. -
 FIXTURE WAS REWORKED, PLANNING AFTER REVISED TO INCLUDE VERIFICATION OF
 LOCATOR REPOSITIONING AFTER CHORD HOLE DRILLING REF TCN66-T06A7004
 7/22/80 - CLOSURE DISTRIBUTED

MSFC Response/Concurrence

MSFC Problem Reporting and Corrective Action (PRACA) System
 ASSESSMENT ADDENDUM REPORT

MSFC Report# A00017	IFA# --	Contractor RPT# S-021	JSC# --	KSC# --	EICN# --
Asmnt Part# --	Asmnt Part Name --	Asmnt Serial/Lot# --			
HCRIT CD --	FCRIT CD --	CAUSE CD --	FAIL MODE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Asmnt FMEA --	Asmnt FM --	FMEA CSE --	FMEA SCSE --		
Correlated Part# --	Correlated Part# --	Correlated Part# --			
Associated LRU# --	Associated LRU# --	Associated LRU# --			
MAJOR DESIGN CHANGES					
APRV DATE --	DESCRIPTION OF CHANGES --				
ASSESSMENT TEXT					