

CRITICAL ITEMS LIST (CIL)

SYSTEM:	Thermal Protection System	FUNCTIONAL CRIT:	1
SUBSYSTEM:	Components	PHASE(S):	b
REV & DATE:	J, 12-19-97	HAZARD REF:	T.02
DCN & DATE:			
ANALYSTS:	B. Burkes/R. Lauto		

FAILURE MODE: Loss of SLA Material

FAILURE EFFECT: b) Loss of mission and vehicle/crew due to structural failure caused by overheating resulting in fire/explosion.

TIME TO EFFECT: Seconds

FAILURE CAUSE(S):
 A: Material Deficiency
 R: Process Deficiency

REDUNDANCY SCREENS: Not Applicable

FUNCTIONAL DESCRIPTION: This ablative material protects the LH2 feedline and LH2 recirculation line from aerodynamic and plume radiation heating during ascent and reentry.

<u>FMEA ITEM CODE(S)</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY</u>	<u>EFFECTIVITY</u>
5.8.4.1	80971028413	Feedline Assy, Ablator Appl	1	LVT-54 & Up
5.8.6.1	80971028411	LH2 Recirc Line Assy, SLA Appl	1	LVT-54 & Up
	80971068422	TPS C/O, SLA & Foam, Blocg 420 (View D)	1	LVT-54 & Up

REMARKS: The LH2 feedline SLA applications (5.8.4.1) and the LH2 recirculation line SLA applications (5.8.6.1) are grouped as the failure mode, causes and effects are the same.

CRITICAL ITEMS LIST (CIL)
CONTINUATION SHEET

SYSTEM: Thermal Protection System
SUBSYSTEM: Components
FMEA ITEM CODE(S): 5.8.4.1, 5.8.6.1

REV & DATE: J, 12-19-97
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RATIONALE FOR RETENTION

STP1506, 1508, 1509, 1510, 1520, 1522, 1530, 1532, 3004, 3008, 5013 and 6005-II are applicable to these FMEA Item Codes. See Page 1 for Retention Rationale specified by these STP's. The following additional Retention Rationale is also applicable to these FMEA Item Codes:

DESIGN:

No additional Rationale for Retention is applicable.

TEST:

The LH2 Feedline Assembly, Ablator Application (5.8.4.1) and the LH2 Recirculation Line SLA Application (5.8.6.1) are certified. Reference HCS's MMC-ET-TM08-L-T009 and T505; HCS's MMC-ET-TM08-L-T001 and T503 (5.8.6.1). Refer to the HCS(s) for effectivity data applicable to specific part numbers and material type.

INSPECTION:

No additional Rationale for Retention is applicable.

FAILURE HISTORY:

Current data on test failures, unexplained anomalies and other failures experienced during ground processing activity can be found in the PRACA data base.