

CRITICAL ITEMS LIST (CIL)

SYSTEM:	Thermal Protection System	FUNCTIONAL CRIT:	1
SUBSYSTEM:	LH2 Forward Dome	PHASE(S):	a, b
REV & DATE:	J, 12-19-97	HAZARD REF:	T.02
DCN & DATE:			
ANALYSTS:	B. Burkes/R. Lauto		

FAILURE MODE: Loss of SOFI Material

FAILURE EFFECT: a) Loss of mission and vehicle/crew. Debris blockage of Intertank venting system causes excessive delta pressure across Forward LH2 Dome resulting in fire/explosion.
 b) Loss of mission and vehicle/crew. Debris blockage of Intertank venting system causes overpressure resulting in structural failure of Intertank.

TIME TO EFFECT: Seconds

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

REDUNDANCY SCREENS: Not Applicable

FUNCTIONAL DESCRIPTION: This foam provides insulation of the LH2 Tank Forward Dome.

FMEA ITEM CODE(S)	PART NO.	PART NAME	QTY	EFFECTIVITY
5.3.1.1	80974018410	LH2 Tank Forward Dome, TPS Application	1	LWT-54 & Up
	80974068426	Manhole Cover Assy, TPS Application	1	LWT-54 & Up
	80974068426	Mounting Plate Assy, TPS Application	1	LWT-54 & Up

REMARKS: The LH2 forward Dome SOFI applications are grouped as the failure mode, causes and effects are the same.

CRITICAL ITEMS LIST (CIL)
CONTINUATION SHEET

SYSTEM: Thermal Protection System
SUBSYSTEM: LM2 Forward Dome
FMEA ITEM CODE(S): 5.3.1.1

REV & DATE: J, 12-19-97
DCN & DATE:

RATIONALE FOR RETENTION

STP1513, 1536, 3003, 3004, 5009 and 6014 are applicable to this FMEA Item Code. See Page 1 for Retention Rationale specified by these STP's. The following additional Retention Rationale is also applicable to this FMEA Item Code:

DESIGN:

No additional Rationale for Retention is applicable.

TEST:

The LM2 Forward Dome SOP1 Application is certified. Reference MCS's MMC-ET-TM08-L-T003, 1504 and 1507. Refer to the MCS(s) for effectivity date 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.