

CRITICAL ITEMS LIST (CIL)

SYSTEM:	Thermal Protection System	FUNCTIONAL CRIT:	1
SUBSYSTEM:	LO2 Barrel/Ogive	PHASE(S):	b, c
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: b) Loss of mission and vehicle/crew due to structural failure caused by overheating.
 Loss of mission and vehicle/crew due to early engine shutdown or fire/explosion caused by loss of propellant quality.
 Loss of mission and vehicle/crew due to debris impacting Orbiter in critical areas.
 c) Loss of life caused by ET impacting outside the footprint due to early breakup during reentry.
 Loss due to debris impacting Orbiter in critical area during TAL abort.

TIME TO EFFECT: Seconds

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

REUNDANCY SCREENS: Not Applicable

FUNCTIONAL DESCRIPTION: This SOFI material provides insulation and thermal protection for the LO2 Tank Barrel/Ogive from prelaunch, ascent and reentry environments.

<u>FMEA ITEM CODE(S)</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY</u>	<u>EFFECTIVITY</u>
5.5.2.1	80971118408	LO2 Tank Foam Installation	1	LVT-54 & Up

REMARKS:

CRITICAL ITEMS LIST (CIL)
CONTINUATION SHEET

SYSTEM: Thermal Protection System
SUBSYSTEM: LO2 Barrel/Ogive
FMEA ITEM CODE(S): 5.5.2.1

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

STP1503 or 1518 (manufacturing option), 1512, 1532, 1535, 1536, 3004, 5009, 5013 and 6014 are applicable to this FMEA Item Code. See Page 1 for the 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 LO2 Tank Foam Installation is certified. Reference HCS's MMC-ET-TNOB-L-1005, T501 and T503. 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 FRACA data base.