

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 SOFI Material

FAILURE EFFECT: b) Loss of mission and vehicle/crew due to debris impacting Orbiter in critical areas.

TIME TO EFFECT: Seconds

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

REDUNDANCY SCREENS: Not Applicable

FUNCTIONAL DESCRIPTION: This SOFI material prevents ice formation during prelaunch.

<u>FMEA ITEM CODE(S)</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY</u>	<u>EFFECTIVITY</u>
5.8.25.1	80971008456	TPS Closeout Insl (Views D, AA, RH & J.)	1	LWT-54 & Up
	80971068433	TPS C/O, He Inj Box-Bldg 420	1	LWT-54 & Up
	80971068434	Foam C/O - F/L Crossbeam	1	LWT-54 & Up
5.8.27.1	80971078429	End Ftg, Strut-Foam Appl	2	LWT-54 & Up
	80971078429	Thrust Strut, Foam Appl	2	LWT-54 & Up
	80971008459	SLA & Foam Closeout Ftg, LH2 Tank (Views B, C & AP)	1	LWT-54 & Up
5.8.29.1	80971078439	Vertical Strut, Foam Appl	2	LWT-54 thru 63
	80971078443	SOFI Closeout LH VS/CT Assy	1	LWT-54 & Up
	80971078443	SOFI Closeout RH VS/CT Assy	1	LWT-54 & Up
5.8.31.1	80971028440	Diagonal Strut Assy Foam, Lower	1	LWT-54 & Up
	80971008459	TPS Closeout - Ftg LH2 Tank (Views AD, D & AL)	1	LWT-54 & Up
5.8.35.1	80971008434	TPS Closeout - Fwd Bipod	1	LWT-54 & Up

REMARKS: The crossbeam SOFI applications (5.8.25.1), the thrust strut SOFI applications (5.8.27.1), the vertical strut SOFI applications (5.8.29.1), the diagonal strut SOFI applications (5.8.31.1) and the forward Bipod closeout applications 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): 5.8.25.1, 5.8.27.1, 5.8.29.1,
5.8.31.1, 5.8.35.1

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

STP1503, 1513, 1518, 1532, 1536, 3001, 3003, 5013 and 6014 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 Crossbeam SOFI Applications (5.8.25.1), Thrust Strut SOFI Applications (5.8.27.1), Vertical Strut SOFI Applications (5.8.29.1), Diagonal Strut SOFI Applications (5.8.31.1), and Bipod Closeout Foam Applications (5.8.35.1) are certified. Reference HCS's HMC-ET-TM08-L-7019, T503, T504 and T507; HCS HMC-ET-TM08-L-T501 (5.8.27.1 & 5.8.31.1) and HCS HMC-ET-TM08-L-7020 (5.8.35.1). 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.