

CRITICAL ITEMS LIST (CIL)

SYSTEM: Thermal Protection System  
 SUBSYSTEM: Components  
 REV & DATE: J, 12-19-97  
 DCM & DATE:  
 ANALYSTS: B. Burkes/ R. Lauto

FUNCTIONAL CRIT: 1  
 PHASE(S): b  
 HAZARD REF: T.02

FAILURE MODE: Loss of SLA Material  
 FAILURE EFFECT: b) Loss of mission and vehicle/crew due to debris impacting Orbiter in critical areas.  
 Loss of mission and vehicle/crew due to structural failure caused by overheating.  
 TIME TO EFFECT: Seconds  
 FAILURE CAUSE(S): A: Material Deficiency  
 B: Process Deficiency  
 REDUNDANCY SCREENS: Not Applicable  
 FUNCTIONAL DESCRIPTION: This ablative material provides protection for the pressline cable tray support brackets and Barrymount (pressline) brackets from ascent heating environments.

FMEA ITEM CODE(S)	PART NO.	PART NAME	QTY	EFFECTIVITY
5.8.14.1	80971028492	Support Bracket, TPS Appl	1	LWT-54 & Up
	80971078478	Support Ftg, Cable Tray, TPS Appl	7	LWT-54 & Up
	80972028414	Fairing Assy, TPS Appl	9	LWT-54 & Up
	80974028424	Support Cable Tray, LM2 Tank	16	LWT-54 thru 63
	80974028424	Fitting, TPS Appl	1	LWT-54 thru 63
	80971078452	Fairing Support, TPS Appl	1	LWT-54 & Up
5.8.17.1	80971028488	Mount Slide Double, TPS Appl	26	LWT-54 & Up
	80971028488	Mount Slide Single, TPS Appl	23	LWT-54 & Up
	80971028488	Mount Slide Cap, TPS Appl	1	LWT-54 & Up
	80971028480	Guide Assy, TPS Appl	3	LWT-54 & Up
	80971028480	Support Assy, TPS Appl	4	LWT-54 & Up
	80972028416	SLA Closeout Installation	1	LWT-54 & Up
	80971008421	TPS Closeout Final Instl	1	LWT-54 & Up
	80971008436 80971008437	TPS C/O Instl P/L C/T, Final Assy TPS C/O Instl P/L C/T, Final Assy	1 1	LWT-54 thru 63 LWT-64 & Up

REMARKS: The pressline and cable tray support bracket related SLA applications (5.8.14.1) and the Barrymount bracket related SLA applications (5.8.17.1) 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): 5.8.14.1, 5.8.17.1

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

---

RATIONALE FOR RETENTION

---

STP1508, 1509, 1510, 1520, 1530, 3001, 3005, 5005, 5013 and 6005-11 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 Pressline Cable Tray Support Bracket related SLA applications (5.8.14.1) and the Barrymount (Pressline) Bracket related SLA applications (5.8.17.1) are certified. Reference HCS's MMC-ET-TMOS-L-T014 and T505. 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.