CRITICAL ITEMS LIST (CIL)

SYSTEM:	ASI	FUNCTIONAL CRIT:	1
SUBSYSTEM:	ET Interface Hardware	PHASE(S):	b
REV & DATE:	J, 12-19-97	HAZARD REF:	S.11
DCN & DATE:			
ANALYSTS:	C. Rush/E. Howell		

FAILURE MODE: Structural Failure

FAILURE EFFECT: b) Loss of mission and vehicle/crew due to collapse of interface system resulting in fire/explosion.

TIME TO EFFECT: Immediate

FAILURE CAUSE(S): Improper Manufacture

REDUNDANCY SCREENS: Not Applicable

FUNCTIONAL DESCRIPTION: Provides structural load path from ET to Orbiter/ET interface.

FMEA ITEM CODE(S)	PART NO.	PART NAME	QTY	EFFECTIVITY
4.5.23.1	80911031742-002	Pin (Thrust Strut, Lower)	2	LWT-54 & Up

REMARKS:

SYSTEM:	ASI	REV & DATE:	J, 12-19-97
SUBSYSTEM:	ET Interface Hardware	DCN & DATE:	
FMEA ITEM CODE(S):	4.5.23.1		

RATIONALE FOR RETENTION

DESIGN:

The pins are made from AMS-5663 PPT HT Inconel bar stock and are CAD plated. Materials are selected in accordance with MMC-ET-SE16 which assures repetitive conformance of composition and properties. Surface integrity is assured by penetrant inspection per STP2501. The pin is designed to the required ultimate safety factor of 1.4 (ET Stress Report 826-2188).

TEST:

The Pin (Thrust Strut, Lower) is certified. Reference HCS MMC-ET-TM08-L-S118 (LWT-54 thru 88) and HCS MMC-ET-TM08-L-S516 (LWT-89 & Up).

INSPECTION:

Vendor Inspection - Lockheed Martin Surveillance:

Verify materials selection and verification controls (MMC-ET-SE16, drawing 80911031742).

Penetrant inspect part (drawing 80911031742 and STP2501 Type 1 Method A).

Inspect dimensional conformance (drawing 80911031742).

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.