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 loss of thrust vector control of the SRB or debris source to Orbiter.

TIME TO EFFECT: Immediate

FAILURE CAUSE(S): A: Improper Manufacture
B: Failure of Attaching Hardware

REDUNDANCY SCREENS: Not Applicable

FUNCTIONAL DESCRIPTION: Environmental protection for SRB cables.

FMEA ITEM CODE(S)	PART NO.	PART NAME	QTY	EFFECTIVITY
4.5.59.1	80911009125-130	Fairing Assembly, Upper	1	LWT-54 thru 73
	-140	Aft ET/SRB Fitting	1	LWT-74 & Up
4.5.60.1	80911009125-139	Fairing Assembly, Upper	1	LWT-54 thru 73
	-149	Aft ET/SRB Fitting	1	LWT-74 & Up

REMARKS: The fairing assemblies are grouped as the failure mode, causes and effects are the same.

CRITICAL ITEMS LIST (CIL)
CONTINUATION SHEET

SYSTEM:	ASI	REV & DATE:	J, 12-19-97
SUBSYSTEM:	ET Interface Hardware	DCN & DATE:	
FMEA ITEM CODE(S):	4.5.59.1, 4.5.60.1		

RATIONALE FOR RETENTION

DESIGN:

A, B: The fairing assembly consists of details made from 2219-T62, 2219-T87 and 6061-T6 aluminum alloy sheet and plate stock. Materials are selected in accordance with MMC-ET-SE16 which assures repetitive conformance of composition and properties.

A The fairing assembly is designed to the required yield (1.1) and ultimate (1.4) safety factors (ET Stress Report 826-2188).

B: The attaching hardware is selected from the Approved Standard Parts List (ASPL 826-3500). The hardware is installed per STP2014 and torqued using values specified on Engineering drawings. Tensile installation loads are sufficient to provide screening for major flaws in individual fasteners.

TEST:

The Fairing Assembly Upper Aft ET/SRB Fitting is certified. Reference HCS MMC-ET-TM08-L-S145 (LWT-54 thru 88) and HCS MMC-ET-TM08-L-S522 (LWT-89 & Up).

Vendor:

B: Attaching fasteners are procured and tested to standard drawings 26L2 and 33L3.

INSPECTION:

Vendor Inspection - Lockheed Martin Surveillance:

A, B: Verify materials selection and verification controls (MMC-ET-SE16, drawings 80911009124, 80911009125 and standard drawings 26L2 and 33L3).

A: Inspect dimensional conformance (drawing 80911009124).

A: Penetrant inspect part (drawing 80911009124 and STP2501 Type 1, Method A).

Launch Site:

B: Inspect that attaching hardware is free from damage (drawing 80911019139 and STP2014).

A, B: Witness fastener installation and torque (drawing 80911019139).

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.