

CRITICAL ITEMS LIST (CIL)

SYSTEM: ASI
 SUBSYSTEM: ET Interface Hardware
 REV & DATE: J, 12-19-97
 DCN & DATE:
 ANALYSTS: C. Rush/E. Howell

FUNCTIONAL CRIT: 1
 PHASE(S): b
 HAZARD REF: S.11

FAILURE MODE: Structural Failure

FAILURE EFFECT: b) Loss of mission and vehicle/crew due to LH2 tank structural failure or debris source to Orbiter from attaching hardware.

TIME TO EFFECT: Immediate

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

REDUNDANCY SCREENS: Not Applicable

FUNCTIONAL DESCRIPTION: Provides aerodynamic protection for GH2 pressline on aft crossbeam.

<u>FMEA ITEM CODE(S)</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY</u>	<u>EFFECTIVITY</u>
4.5.16.1	80911031720-019	Fairing Installation, GH2 Pressline	1	LWT-54 & Up

REMARKS:

CRITICAL ITEMS LIST (CIL)
CONTINUATION SHEET

SYSTEM: ASI
SUBSYSTEM: ET Interface Hardware
FMEA ITEM CODE(S): 4.5.16.1

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RATIONALE FOR RETENTION

DESIGN:

- A, B: The restricter plates are made from 2024-T81 aluminum alloy sheet stock. Materials selected for this part number are in accordance with MMC-ET-SE16 which assures repetitive conformance of composition and properties.
- B, C: 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.
- A: The restricter plates are designed to the required yield (1.1) and ultimate (1.4) safety factors (ET Stress Report 826-2188).

TEST:

The Fairing Installation, GH2 Pressline is certified. Reference HCS MMC-ET-TM08-L-S113 (LWT-54 thru 88) and HCS MMC-ET-TM08-L-S515 (LWT-89 & Up).

Vendor:

- B, C: Attaching fasteners are procured and tested to standard drawings 26L3, 33L3 and 33L4.

INSPECTION:

Vendor Inspection - Lockheed Martin Surveillance:

- A, B: Verify materials selection and verification controls (MMC-ET-SE16, drawing 80911031728 and standard drawings 26L3, 33L3, 33L4).
- A: Inspect dimensional conformance (drawing 80911031728).

MAF Quality Inspection:

- B, C: Inspect that attaching hardware is free from damage (drawing 80911031720 and STP2014).
- A, B: Verify fastener installation and witness torque (drawing 80911031720).

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.