

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 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: Access through fairing over ET bipod rotational mechanism.

<u>FMEA ITEM CODE(S)</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY</u>	<u>EFFECTIVITY</u>
4.5.39.1	80911031115-012	Cap, Access	2	LWT-54 & Up

REMARKS:

CRITICAL ITEMS LIST (CIL)
CONTINUATION SHEET

SYSTEM: ASI
SUBSYSTEM: ET Interface Hardware
FMEA ITEM CODE(S): 4.5.39.1

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

RATIONALE FOR RETENTION

DESIGN:

- A, B: The access cap is formed from 6061-T6 aluminum alloy sheet stock. Materials are selected in accordance with MMC-ET-SE16 which assures repetitive conformance of composition and properties. The access cap and attachment hardware are designed to the required ultimate safety factor of 1.4 (ET Stress Report 826-2188).
- B: Attaching hardware is selected from the Approved Standard Parts List (ASPL 826-3500), 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 Cap, Access is certified. Reference HCS MMC-ET-TM08-L-S131 (LWT-54 thru 88) and HCS MMC-ET-TM08-L-S508 (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, drawing 80911031115 and standard drawings 26L2, 33L3).
- A: Inspect dimensional conformance (drawing 80911031115).

MAF Quality Inspection:

- B: Inspect that attaching hardware is free from damage (drawing 80911051139 and STP2014).
- A, B: Verify fastener installation and witness torque (drawing 80911051139).

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.