

CRITICAL ITEMS LIST (CIL)

SYSTEM: ASI
 SUBSYSTEM: Intertank
 REV & DATE: J, 12-19-97
 DCN & DATE:
 ANALYSTS: J. Hicks/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 L02 tank structural failure 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: Provides environmental protection to lines and cables from L02 cable tray into the intertank.

<u>FMEA ITEM CODE(S)</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY</u>	<u>EFFECTIVITY</u>
4.2.7.1	80911041206-030	Cover, Cable Tray, L02 Tank	1	LWT-54 & Up

REMARKS:

CRITICAL ITEMS LIST (CIL)
CONTINUATION SHEET

SYSTEM: ASI
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RATIONALE FOR RETENTION

DESIGN:

- A, B: The aft cable tray cover is constructed of aluminum. Materials selected for this part number are in accordance with MMC-ET-SE16 which assures repetitive conformance of composition and properties. The aft cable tray and attachment hardware are designed to the required ultimate safety factor of 1.4 (ET Stress Report 826-Z188).
- B: Attaching hardware is selected from the Approved Standard Parts Lists (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 Cover, Cable Tray, LO2 Tank is certified. Reference HCS MMC-ET-TM08-L-S009 (LWT-54 thru 88) and HCS MMC-ET-TM08-L-S510 (LWT-89 & Up).

Vendor

- B: Attaching hardware is procured and tested to standard drawings 26L17 and 33L3.

INSPECTION:

Vendor Inspection - Lockheed Martin Surveillance:

- A, B: Verify materials selection and verification controls (MMC-ET-SE16, drawing 80911041206 and standard drawings 26L17, 33L3).
- A: Inspect dimensional conformance (drawing 80911041206).

Launch Site:

- B: Inspect that attaching hardware is free from damage (drawing 80911019201 and STP2014).
- A, B: Verify installation and witness torque (drawing 80911019201).

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.