

CRITICAL ITEMS LIST (CIL)

SYSTEM: ASI
 SUBSYSTEM: Electrical Cable Trays
 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 ET structural failure or debris source to Orbiter from support.
 TIME TO EFFECT: Immediate
 FAILURE CAUSE(S): Improper Manufacture
 REDUNDANCY SCREENS: Not Applicable
 FUNCTIONAL DESCRIPTION: Support for fairing assembly routed under crossbeam, from crossbeam to LH vertical strut and LH2 umbilical tray.

<u>FMEA ITEM CODE(S)</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY</u>	<u>EFFECTIVITY</u>
4.3.44.1	80911071880-170	Cable Tray Support	1	LWT-54 & Up

REMARKS:

CRITICAL ITEMS LIST (CIL)
CONTINUATION SHEET

SYSTEM: ASI
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RATIONALE FOR RETENTION

DESIGN:

The cable tray support is machined from 2219-T87 aluminum alloy plate stock. Materials selected for this part number are in accordance with MMC-ET-SE16 which assures repetitive conformance of composition and properties.

The cable tray support is designed to the required yield (1.1) and ultimate (1.4) safety factors (ET Stress Report 826-2188).

TEST:

The Cable Tray Support is certified. Reference HCS MMC-ET-TM08-L-S030 (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 and drawing 80911071804).

Inspect dimensional conformance (drawing 80911071804).

Penetrant inspect part (drawing 80911071804 and STP2501 Type 1, Method A).

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.