

CRITICAL ITEMS LIST (CIL)

SYSTEM: ASI  
 SUBSYSTEM: ET Interface Hardware  
 REV & DATE: J, 12-19-97  
 DCN & DATE: 005, 6-30-00  
 ANALYSTS: C. Rush/E. Howell

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

FAILURE MODE: Structural Failure

FAILURE EFFECT: a) Loss of mission and vehicle/crew due to fire/explosion.  
 b) Loss of mission and vehicle/crew due to collapse of interface system resulting in fire/explosion.

TIME TO EFFECT: Immediate

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

REDUNDANCY SCREENS: Not Applicable

FUNCTIONAL DESCRIPTION: Interface and structural load path between ET and thrust strut.

FMEA ITEM CODE(S)	PART NO.	PART NAME	QTY	EFFECTIVITY
4.5.19.1	80911071788-009 -019	Thrust Strut End Fitting Assy	1 1	LWT-54 thru 114 LWT-115 & Up
4.5.20.1	80911071788-010 -020	Thrust Strut End Fitting Assy	1 1	LWT-54 thru 114 LWT-115 & Up

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

CRITICAL ITEMS LIST (CIL)  
CONTINUATION SHEET

SYSTEM: ASI  
SUBSYSTEM: ET Interface Hardware  
FMEA ITEM CODE(S): 4.5.19.1, 4.5.20.1

REV & DATE: J, 12-19-97  
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RATIONALE FOR RETENTION

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DESIGN:

- A-C: The strut end is machined from 2219-T411 aluminum alloy die forging. The retaining ring is machined from 2219-T87 aluminum alloy plate. Materials selected for this part number are in accordance with MMC-ET-SE16 which assures repetitive conformance of composition and properties. Surface integrity is assured by penetrant inspection per STP2501. The fitting, bearing 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 Thrust Strut End Fitting Assembly is certified. Reference HCS MMC-ET-TM08-L-S116 (LWT-54 thru 88) and HCS MMC-ET-TM08-L-S516 (LWT-89 & Up).

Vendor

- B, C: Attaching fasteners and bearing are procured and tested to standard drawings NAS1219, 34L3 and 36L9.

INSPECTION:

Vendor Inspection - Lockheed Martin Surveillance:

- A-C: Verify materials selection and verification controls (MMC-ET-SE16, STM5163, STM-Q-250, drawing 80911071709, 80911071788 and standard drawings-NAS1219, 34L3, 36L9).
- A: Inspect dimensional conformance (drawing 80911071788).
- A: Penetrant inspect part (drawing 80911071788 and STP2501 Type 1 Method A).
- A, B: Verify installation and witness torque (drawing 80911071788).
- B: Verify locking feature (STP2014).
- B: Inspect that attaching hardware is free from damage (drawing 80911071788 and STP2014).
- C: Verify installation of bearing (drawing 80911071788).

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.