

CRITICAL ITEMS LIST (CIL)

SYSTEM:	ASI	FUNCTIONAL CRIT:	1
SUBSYSTEM:	Support Hardware	PHASE(S):	b
REV & DATE:	J, 12-19-97	HAZARD REF:	S.11
DCN & DATE:			
ANALYSTS:	H. Keefe/E. Howell		

FAILURE MODE: Structural Failure

FAILURE EFFECT: b) Loss of mission and vehicle/crew due to 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 flexible support for the G02/GH2 pressurization line on the tank.

<u>FMEA ITEM CODE(S)</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY</u>	<u>EFFECTIVITY</u>
4.4.19.1	54L7-2	Mount - Biaxial (Sliding)	26	LWT-54 & Up

REMARKS:

CRITICAL ITEMS LIST (CIL)  
CONTINUATION SHEET

SYSTEM: ASI  
SUBSYSTEM: Support Hardware  
FMEA ITEM CODE(S): 4.4.19.1

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

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DESIGN:

- A, B: The Biaxial Mount housing is made of 304L stainless steel and the cushions are 304 CRES wire mesh. Materials selected for this part number are in accordance with MMC-ET-SE16 which assures repetitive conformance of composition and properties. Acceptable characteristics of welded parts are assured by conformance to MIL-W-8611. The biaxial sliding mount is designed to the required yield (1.1) and ultimate (1.4) safety factors (Barry Stress Report WD 92885-1-001).
- B: 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.

TEST:

The Mount Biaxial (Sliding) is certified. Reference MCS MMC-ET-TM08-L-S084 (LWT-54 thru 88) and MCS MMC-ET-TM08-L-S524 (LWT-89 & Up).

Vendor:

- B: Attaching fasteners are procured and tested to standard drawings 26L2 and 34L1.

INSPECTION:

Vendor Inspection - Lockheed Martin Surveillance:

- A, B: Verify materials selection and verification controls (MMC-ET-SE16, and standard drawings 54L7-2, 26L2 and 34L1).
- A: Inspect weld assembly (standard drawing 54L7).
- A: Inspect dimensional conformance (standard drawing 54L7-2).

MAF Quality Inspection:

- B: Inspect that attaching hardware is free from damage (drawing 80921021009 and STP2014).
- A, B: Verify installation and witness torque (drawing 80921021009 and STP2014).
- B: Verify locking feature (drawing 80921021009 and STP2014).

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.