CRITICAL ITEMS LIST (CIL)

SYSTEM:	ASI	FUNCTIONAL CRIT:	1
SUBSYSTEM:	Support Hardware	PHASE(S):	b
REV & DATE:	J, 12-19-97	HAZARD REF:	P.03, 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: Provide flexible, sliding support for the GO2/GH2 pressurization lines.

FMEA ITEM CODE(S)	PART NO.	PART NAME	QTY	EFFECTIVITY
4.4.1.1	54L1-2A	Line Mount (Sliding)	25	LWT-54 & Up

REMARKS:

SYSTEM:	ASI	REV & DATE:	J, 12-19-97
SUBSYSTEM:	Support Hardware	DCN & DATE:	
FMEA ITEM CODE(S):	4.4.1.1		

RATIONALE FOR RETENTION

DESIGN:

A, B: The Line Mount housing is made of 304L CRES 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.

A: The Line 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 Line Mount (Sliding) is certified. Reference HCS MMC-ET-TM08-L-S071 (LWT-54 thru 88) and HCS MMC-ET-TM08-L-S524 (LWT-89 & Up).

Vendor:

B: Attaching fasteners are procured and tested to standard drawings 26L2, 26L3 and 34L1.

INSPECTION:

Vendor Inspection - Lockheed Martin Surveillance:

A, B: Verify materials selection and verification controls (MMC-ET-SE16, standard drawings 54L1-2A, 26L2, 34L1 and 26L3).

A: Inspect weld assembly (standard drawing, 54L1).

A: Inspect dimensional conformance (standard drawing 54L1-2A).

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.