

CRITICAL ITEMS LIST (CIL)

SYSTEM:	AS1	FUNCTIONAL CRIT:	1
SUBSYSTEM:	Propulsion	PHASE(S):	b
REV & DATE:	J, 12-19-97	HAZARD REF:	5.11
DCN & DATE:			
ANALYSTS:	C. Rush/E. Howell		

FAILURE MODE: Structural Failure

FAILURE EFFECT: b) Loss of mission and vehicle/crew due to debris source to Orbiter from bonding strap clamp or attaching hardware.

TIME TO EFFECT: Immediate

FAILURE CAUSE(S): Failure of Attaching Hardware and Clamps

REDUNDANCY SCREENS: Not Applicable

FUNCTIONAL DESCRIPTION: Transports pressure during prelaunch and during launch to maintain ullage pressure in the LO2 and LH2 tank.

<u>FMEA ITEM</u> <u>CODE(S)</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY</u>	<u>EFFECTIVITY</u>
4.6.1.1	80521021009-030 -509	O2 & H2 Pressline Installation	1 1	LWT-54 thru 88 LWT-89 & Up

REMARKS:

CRITICAL ITEMS LIST (CIL)
CONTINUATION SHEET

SYSTEM: ASI
SUBSYSTEM: Propulsion
FMEA ITEM CODE(S): 4.6.1.1

REV & DATE: J, 12-19-97
DCN & DATE:

RATIONALE FOR RETENTION

DESIGN:

Materials selected for this part number are in accordance with MMC-ET-SE16 which assures repetitive conformance of composition and properties. Attaching hardware and the bonding strap clamp are selected from the Approved Standard Parts List (ASPL 826-3500). Bolts are 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. (ET Stress Report 826-2188).

TEST:

Vendor:

The GQ2 & GQ2 Pressline Installation is certified. Reference MCS MMC-ET-TM08-L-S169 (LWT-54 thru 88) and MCS MMC-ET-TM08-L-5524 (LWT-89 & Up).

INSPECTION:

Vendor Inspection - Lockheed Martin Surveillance:

Verify materials selection and verification controls (MMC-ET-SE16 and standard drawings 33L2, 26L17, 33L1, and 45L5).

MAF Quality Inspection:

Inspect that attaching hardware is free from damage (drawing 80921021009 and STP2014).

Verify installation and witness torque (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.