

CRITICAL ITEMS LIST (CIL)

SYSTEM:	ASI	FUNCTIONAL CRIT:	1
SUBSYSTEM:	Nose Cone Assembly	PHASE(S):	b
REV & DATE:	J, 12-19-97	HAZARD REF:	S.11
DCN & DATE:			
ANALYSTS:	L. Hansen/E. Howell		

FAILURE MODE: Structural Failure

FAILURE EFFECT: b) Loss of mission and vehicle/crew due to debris source to orbiter.

TIME TO EFFECT: Immediate

FAILURE CAUSE(S):  
 A: Improper Manufacture of Bulkhead Panels  
 B: Failure of Attaching Hardware

REDUNDANCY SCREENS: Not Applicable

FUNCTIONAL DESCRIPTION: Provides structural support for forward fairing.

<u>FMEA ITEM CODE(S)</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY</u>	<u>EFFECTIVITY</u>
4.1.6.1	80911001220-010	Bulkhead Assembly	1	LWT-54 thru 57
	-019		1	LWT-58 thru 73
	-020		1	LWT-74 thru 80, 82-84
	80911001226-009		1	LWT-81, 85 & Up

REMARKS:

CRITICAL ITEMS LIST (CIL)  
CONTINUATION SHEET

SYSTEM: ASI  
SUBSYSTEM: Nose Cone Assembly  
FMEA ITEM CODE(S): 4.1.6.1

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

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RATIONALE FOR RETENTION

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DESIGN:

- A, B: The bulkhead assembly is completed by installation of the three aluminum bulkhead panels during ET final assembly. Materials are selected in accordance with MMC-ET-SE16 which assures repetitive conformance of composition and properties. The bulkhead 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 Bulkhead Assembly is certified. Reference NCS MMC-ET-TN08-L-S004.

Vendor:

- B: Attaching fasteners are procured and tested to Standard drawings 26L17 and 33L3.

INSPECTION:

Vendor Inspection - Lockheed Martin Procurement Quality Surveillance

- A, B: Verify materials selection and verification controls (MMC-ET-SE16; Standard drawings 26L17, 33L3 and drawing 80911041241 for LWT-54 thru 80, 82-84; Standard drawings 26L17, 33L1 and drawings NAS6303U, MS21076, and 80911041237 for LWT-81, 85 & up).
- A: Inspect dimensions (drawing 80911041241 for LWT-54 thru 80, 82-84; drawing 80911041237 for LWT-81, 85 & up).

MAF Quality Inspection:

- B: Inspect that attaching hardware is free from damage (STP2014; drawing 80911001220 for LWT-54 thru 80, 82-84; drawing 80911001226 for LWT-81, 85 & up).
- A, B: Verify installation and witness torque (STP2014; drawing 80911041200 for LWT-54 thru 80, 82-84; drawing 80911041230 for LWT-81, 85 & up).

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.