

SHUTTLE CRITICAL ITEMS LIST - ORBITER

SUBSYSTEM :EW&I/MPS

FMEA NO 05-7J -2004 -1 REV:06/02/89

LOCATION :SEE TABLE 05-7J-2004-1

P/N RI QUANTITY
1. NB6WGE22-55XXXX 2

CRIT.FUNC: 1
CRIT. HDW: 1

VEHICLE	102	103	104	105
EFFECTIVITY	X	X	X	X

PHASE(S): PL LO X OO DO LS

REDUNDANCY SCREEN: A- N/A B- N/A C- N/A

APPROVED BY (NASA):

PREPARED BY: DES J BROWN *JK* APPROVED BY: DES *RV*
REL T KIMURA *TK* REL *W. J. ...*
QE J COURSEN *JK* QE *W. J. ...*

EW&I SSM *W. J. ...*
EW&I REL *W. J. ... 7/3/89*
SSM *W. J. ... 7/10/89*
REL *W. J. ... 7/10/89*
QE *W. J. ...*

ITEM:

CONNECTOR, PLUG, 55 #20 CONTACTS - LH2 AND LO2 ULLAGE PRESSUR
TRANSDUCER CIRCUITS.

FUNCTION:

PROVIDES MATE/DEMATE CAPABILITY FOR WIRING WHICH CONTAINS LH2 AND LO
ULLAGE PRESSURE DATA FROM THE EXTERNAL TANK (ET) TO THE POINT SENS
ELECTRONICS. FOR PLUG REFERENCE DESIGNATORS, SEE TABLE 05-7J-2004-1.

FAILURE MODE:

INADVERTENT DEMATING

CAUSE(S):

PIECE PART FAILURE, CONTAMINATION, VIBRATION, MECHANICAL SHOCK,
PROCESSING ANOMALY

EFFECT(S) ON:

(A)SUBSYSTEM (B)INTERFACES (C)MISSION (D)CREW/VEHICLE (E)FUNCTIONAL
CRITICALITY EFFECT:

(A) LOSS OF LH2 AND LO2 ULLAGE PRESSURE DATA FROM THE ET SENSORS TO THE
ORBITER TRANSDUCERS.

(B) ASSOCIATED FLOW CONTROL VALVES ARE COMMANDED OPEN.

SHUTTLE CRITICAL ITEMS LIST - ORBITER

SUBSYSTEM :EW&I/MPS

FMEA NO 05-7J -2004 -1 REV:06/02/89

(C,D) RESULTS IN EXCESSIVE ULLAGE PRESSURE CAUSING ET VENT VALVE TO RELIEVE EXCESS PRESSURE. POTENTIAL FIRE/EXPLOSION HAZARD EXTERIOR TO THE VEHICLE. POSSIBLE VIOLATION OF THE ET MAXIMUM STRUCTURAL CAPABILITY REQUIREMENTS. POSSIBLE LOSS OF CREW/VEHICLE.

REFERENCE CIL 05-6J-2032-1

DISPOSITION & RATIONALE:

(A)DESIGN (B)TEST (C)INSPECTION (D)FAILURE HISTORY (E)OPERATIONAL USE:

(A,B,C,D) DISPOSITION AND RATIONALE

REFER TO APPENDIX K, ITEM NO. 1 - TYPE NB CONNECTOR, CIRCULAR, MINIATURE

(B) GROUND TURNAROUND TEST

V41ADO.010, V41ADO.020, V41ADO.030 - ULL PRESS CNTL W/CK OUT CMDS (EVERY FLIGHT)

(E) OPERATIONAL USE

NO CREW ACTION CAN BE TAKEN.

TABLE 05-7J-2004-1

PART NUMBER	PLUG REFERENCE DESIGNATOR	CONNECTOR LOCATION
1. NB6WGE22-55XXX	50V77W12P533	RH ORB/ET UMBILICAL
	50V77W13P523	LH ORB/ET UMBILICAL