

FAILURE MODES AND EFFECTS ANALYSIS

PAGE 1 OF 6

REFERENCE DESIGNATOR:

NAME/QUANTITY: LBNP Vacuum Regulator (Manual)

DRAWING REFERENCE: SED46105224

PROJECT: ORBITER

LRU NAME/QUANTITY: LBNPDS (1)

LRU PART NUMBER: SED46105885

SUBSYSTEM: LBNP

EFFECTIVITY: All Orbiters

FAILURE MODE NUMBER LBNP-1		CRITICALITY 3/1R	FAILURE EFFECT	FAILURE DETECTION METHOD
FUNCTION Regulates the amount of vacuum applied to the crewmember's lower body.			END ITEM LBNP chamber will be exposed to a higher vacuum	FLIGHT 1. Pressure Meter (Electronic) 2. Pressure Meter (Manual) 3. Subject sensation/observer input 4. Blood pressure measurement SED46104770-307 (ABPM) 5. EKG
FAILURE MODE AND CAUSE Regulator fails open (will not adjust) Cause (1) Mechanical Part			MISSION Loss of DSO objective.	GROUND Yes, EKG Measurement and Blood Pressure
REDUNDANCY SCREENS A - PASS B - PASS C - PASS		REMAINING PATHS 1. Relief valve 2. Manual relief valve		CORRECTIVE ACTION 1. Open manual relief valve 2. Manually separate waist seal 3. Disconnect any one of quick disconnects #1-2
MISSION PHASE		TIME TO EFFECT	TIME TO CORRECT	REMARKS
ORBIT		SECONDS	SECONDS	
			CREW/VEHICLE Possible crewmember injury if the blood pressure and/or heart rate is reduced beyond acceptable limits.	
			INTERFACE	