

# CRITICAL ITEMS LIST

ASSY NOMENCLATURE: SILVER-ZINC BATTERY CHARGER

Page 1 of 1

Assy P/N: 528-20769

| FUNCTION   | FMEA |     | CRIT                          | FAILURE MODE AND CAUSE  | FAILURE EFFECT  | RATIONALE FOR ACCEPTANCE  |
|--|------|-----|-------------------------------|---|---|---|
|  | REF  | REV |                               |   |   |   |
| Charges Silver-Zinc Battery using 28V Orbiter Power Supply | FM2  | N/C | 2/2                           | <u>MODE:</u><br>Output voltage exceeds 21.8 v   | <u>End Item Output Voltage over 21.8 VDC</u>  | <p><b>1. DESIGN</b></p> <p>Both 21.8 and 23.6 V comparator circuits employ established reliability parts, the printed wiring board is fabricated to NHB 5300.4(3I) standard. Electrical stress analysis has been performed to verify no component in either circuit is stressed above 50% of rating. Heat producing components are located at board edge away from sensing circuitry and in contact with conductive heat sink.</p> <p><b>2. TEST</b></p> <p>21.8 v nominal cutoff circuit and 23.6 OVP are independent circuits checked during fabrication. Both circuits are performance tested during PDA in accordance with Document # P528/ATP-010 and PIA in accordance with Document # P528/PIA-01001</p> <ul style="list-style-type: none"> <li>• Certified in accordance with Document # P528 CERT-01001, Para 4.2.3.6.</li> </ul> <p><b>3. INSPECTION</b></p> <p>PDA in accordance with Document # P528/ATP-01001 and PIA in accordance with Document # P528/PIA-01001 test results are verified by Quality Assurance.</p> <p><b>4. FAILURE HISTORY</b> This is a new item. There is no failure history to date.</p> |
|  |      |     | A - N/A<br>B - N/A<br>C - N/A | <u>CAUSES:</u><br>Failure of 21.8 v cutoff circuit<br><br>Failure of Electronic Component | <u>GFE Interface 23.6 v</u><br>overvoltage protection circuit will "error."<br>Terminate the charge.<br><br>Mission Loss of Mission Objectives<br><br><u>Crew/Vehicle</u><br>None<br><br><u>Time to Effect</u><br>Immediate |   |

DATE: 3/16/92

REVISION: BASIC

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