

| NAME<br>P/N<br>QTY  | FUNCTION   | FAILURE<br>MODE &<br>CAUSES  | MISSION<br>PHASE   | FAILURE EFFECT   | FAILURE DETECTION<br>FLIGHT/GROUND   | TIME TO<br>EFFECT/<br>ACTIONS  | CRIT                                   | REMARKS/<br>HAZARD   | REF   |
|---|--|--|--------------------|--|--|--|--|--|-------|
| PRIMARY OXYGEN<br>PRESSURE SENSOR,<br>ITEM 112<br>-----<br>AV778328-1/-2<br>(1) | Measures the<br>primary O2 bottle<br>pressure. Pressure<br>sensor range is<br>0-1100 psia. | 112FMD4:<br>Drifts high.<br><br>CAUSE:<br>Stress relief of<br>the bourdon tube<br>with time; failure<br>of the<br>potentiometer<br>linkage due to<br>increased<br>friction;<br>mechanical shock<br>loading of the<br>linkage which<br>causes a<br>misalignment of<br>the relative<br>element relative<br>to the wiper. | PRE-EVA<br><br>EVA | END ITEM:<br>False indication<br>of high tank<br>pressure and low<br>O2 consumption<br>rate.<br><br>OPE INTERFACE:<br>Failure to detect<br>150 psia low tank<br>pressure failure<br>limit. Projected<br>time EVA remaining<br>is higher than<br>actual amount of<br>O2 would justify.<br><br>MISSION:<br>None for single<br>failure. Terminate<br>EVA when periodic<br>status check<br>reveals high<br>primary O2<br>pressure and over<br>100% O2 left.<br>Failure of primary<br>O2 supply would<br>not result in loss<br>of crewmember or<br>vehicle.<br><br>CREW/VEHICLE:<br>Possible loss of<br>crewmember with<br>loss of SOP. | FLIGHT:<br>Yes. CAS will<br>tell crewmember<br>when SOP comes<br>"LOW".<br><br>GROUND:<br>Yes. FEMU-B-D01,<br>Para.<br>7.3.3.2.1.1.19,<br>Transducer and DON<br>Gage Calibration<br>Check. | None.<br><br>TIME<br>AVAILABLE:<br>N/A<br><br>TIME<br>REQUIRED:<br>N/A | 3/18<br><br>A-PASS<br>B-PASS<br>C-PASS | The redundant path<br>for mission<br>success is the<br>primary oxygen<br>supply. During the<br>recharge sequence<br>or pre-EVA<br>checkout, compare<br>the sensor readout<br>with the vehicle<br>pressure reading. | None. |