



PFR-138 Title: FM2 ESA LVPS Screws fell out during workmanship Vibration

Assembly : ESA		SubAssembly : LVPS	
Component : LVPS Screws		Units Affected:	Units fixed:
Originator: Michael Ludlam		<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Organization: UCB		Date: 31/JAN/06	
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Failure Occurred During (Check one ✓)

☒ Functional test ☐ Qualification test ☐ S/C Integration ☐ Launch operations ☐ Other (Flight Assy)

Environment when failure occurred:

☐ Ambient ☒ Vibration ☐ Shock ☐ Acoustic
☐ Thermal ☐ Vacuum ☐ Thermal-Vacuum ☐ EMI/EMC

Problem Description

After the FM2 IDPU/ESA workmanship vibration, whilst unpacking the instrument two screws fell from the unit. On closer inspection these were found to come from the ESA LVPS. Four screws hold the ESA LVPS to the ESA unit, two of these had fallen out, one was held by the IDPU thermostat Winchester connector and the last one was still fixed but loose.

Analyses Performed to Determine Cause

The ESA was removed from the IDPU and given to Chuck Carlson to check out. He verified that the ESA unit was functioning correctly and no damage had been done to the instrument. It was noted that washers had been used on the screws holding the LVPS to the ESA.

Corrective Action/ Resolution

The washers were removed from the screws and the torque setting for the screws was increased. All future ESA units will have the LVPS screws torqued to the higher value without the washers. This PFR will be closed upon successful completion of the IDPU/ESA workmanship vibration.

All work has been completed per Dr Charles Carlson 2/21/06

Acceptance:

MAM: Ron Jackson _____; MSE: Ellen Taylor _____

PM: Peter Harvey _____; Cognizant Engineer _____

Date of Closure _____