



**PFR-019 Title: EFI ETU SMA Harness Failure**

<b>Assembly : BEB to DFB SMA Harness</b>	<b>SubAssembly :</b>
<b>Component : SMA EFI ETU Harness</b>	
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**Failure Occurred During (Check one ✓)**

Functional test       Qualification test       S/C Integration       Launch operations

**Environment when failure occurred:**

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

**Problem Description**

The SMA Harness failure was discovered while running through the EFI AC/DC functional test with the ETU SMA Harness, ETU IDPU, F1 EFI Harness and F1 EFI SPBs and AXBs. V6 was found not to respond to changes in the BIAS6 setting.

**Analyses Performed to Determine Cause**

The ETU SMA harness was determined to be a bad part. Swapping the V5 and V6 SMA harnesses and observing that the lack of response followed the bad harness to V5 discovered the failure. Upon further inspection, this SMA harness had a missing center conductor. Flight quality SMA harnesses were installed and this eliminated the problem.

**Corrective Action/ Resolution**

Flight quality SMA harnesses will replace ETU SMA harnesses on the IDPU ETU. This failure will be prevented in the future by using flight quality SMA harnesses.

Acceptance:

MAM: Ron Jackson \_\_\_\_\_ ; MSE: Ellen Taylor \_\_\_\_\_

PM: Peter Harvey \_\_\_\_\_ ; Cognizant Engineer \_\_\_\_\_

Date of Closure \_\_\_\_\_