



**PFR-063 Title: FM2 ESA SMA Connector Wiring Problem**

Assembly : ESA	SubAssembly : SMA Circuit											
Component : Winchester Connector	Units Affected:						Units fixed:					
Originator: Michael Ludlam	-	x	-	-	-	-	-	x	-	-	-	-
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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**

*(In this section it is important to document the specific symptoms which exhibited the problem. In the event we see it happen again, we would like to know as much as possible.)*

SMA Circuit did not fire to open ESA Covers when run during ESA Integration of FM2 unit with IDPU.

**Analyses Performed to Determine Cause**

*(How do we know how the failure happened? Was it a bad part, bad handling, what? )*

The ETU test plate was fired by the IDPU correctly. The ESA was removed from the clean room and inspected. Visual inspection showed no loose connectors or obvious problems. Winchester connector inside ESA was demated and the ESA cover test box used to fire open the SMA at this point. The ESA cover opened correctly. The cover was closed and the same procedure was repeated with the Winchester connector reconnected and the ESA cover test box connected via the 25way connector. The Cover did not fire. A pin to pin check of the connections between the 25way connector and the Winchester connector was made and error in the wiring was found.

**Corrective Action/ Resolution**

*(How do we fix the unit? And how do we make sure it doesn't happen again?)*

The Winchester connector was correctly rewired and verified by using the ESA Cover test box to fire the SMA device on the FM2.

Acceptance:

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

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

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