Problem/Failure Report
THM_PFR_093

PFR-093 Title: DFB Face Plate Mechanical Damage

Assembly : IDPU	**SubAssembly : DFB**
Component :Face Plate	
Originator: Turin	**Organization: UCB**
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Failure Occurred During (Check one √)

X Functional test □ Qualification test □ S/C Integration □ Launch operations

Environment when failure occurred:

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

Problem Description

The DFB face plate was damaged during extraction of the board from the IDPU chassis. During the attempt to pull the board out, the face panel was bent.

Analyses Performed to Determine Cause

The wedge locks that clamp the PC boards into the IDPU chassis have a tendency to self lock, and can be difficult to loosen. There is a removal bar that can be screwed to connector standoffs and used to apply force to the board during extraction. On this board, the extraction bar attached to standoffs that are about 2" away from the nearest attachment of the face plate to the PCB. The person trying to remove the board in this case tried to force the board out by pulling hard on the removal tool. The face plate is mostly cut away in this area, and it bent here due to excessive load on the weak part.

Corrective Action/ Resolution

The face plate was partially removed from the PCB (it is captured by connector wiring). Two plastic-jawed vices were used to gently bend the plate back to its original shape. This operation was successful, it is indistinguishable from the other units. In order to prevent this from happening again, new extraction tools were built that hold the face plates directly adjacent to the attachments between the PCB and face plates so that the load is transmitted without applying a bending load to the face plates.

Acceptance:

MAM: Ron Jackson_____; MSE: Ellen Taylor_____

PM: Peter Harvey_____; Cognizant Engineer_____

Date of Closure_____