

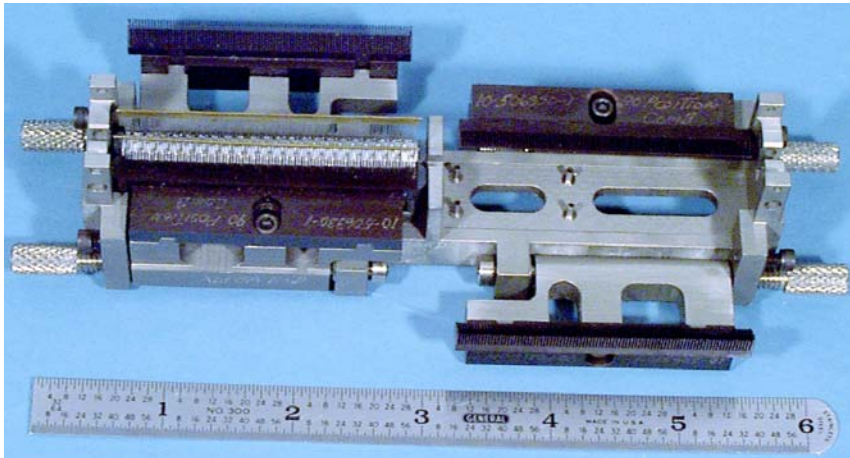
Producability Issues:

Assembly of Module Connectors to PWB's

360 LRM Product

Connectors shall be mounted to PWB's
after PWB's have been mounted to the
heatsink (if there is a heatsink)

A solder fixture can be purchased which
insures proper assembly of connector
inserts.

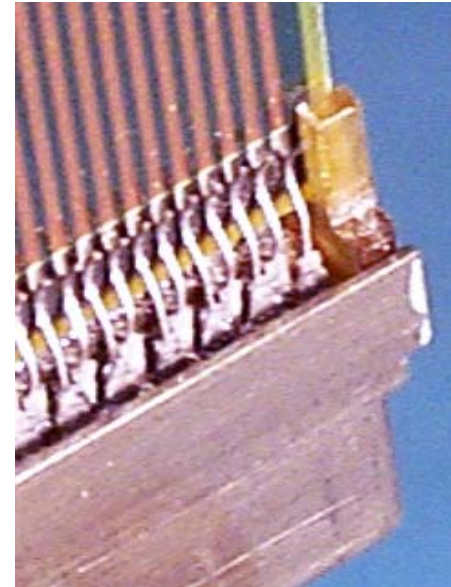


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472 LRM Product

Connectors shall be mounted to PWB's
before PWB's have been mounted to the
heatsink.

Each insert has slotted towers to guide the
board into the correct location prior to
soldering.



Amphenol Aerospace

L-39887-283

Termination Instructions for the Amphenol Aerospace LRM 472 Module Connector

The LRM 472 family of module connectors have been designed to be surface mounted to Rigid-Flex-Rigid printed circuit boards prior to their assembly to a heatsink. This document reviews the recommended procedure to terminate Amphenol 472 LRM connectors to a module package consisting of two Rigid-Flex-Rigid printed circuit boards.

Rigid-Flex-Rigid Printed Circuit Board



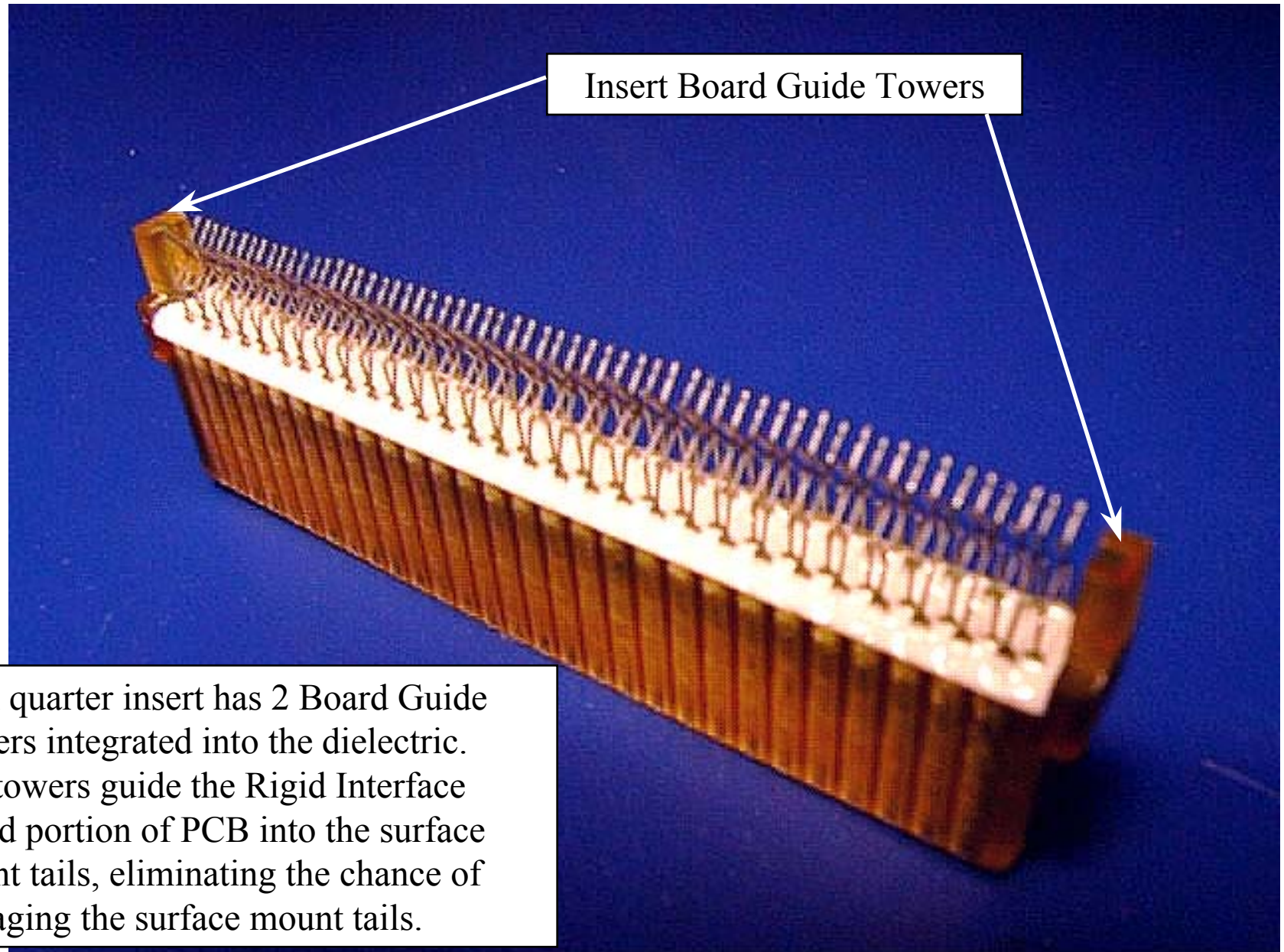
**Main Rigid Board
portion for Module
components**

Flex Portion

**Rigid Interface
Board Portion**

The Rigid-Flex-Rigid Printed Circuit Board is a single entity; not a combination of components. The Flex portion is critical, in that it absorbs the tolerance conditions of the module, permits access to the “hidden” solder joints, and permits the connector to tolerate lateral movement during actuation of thermal clamps.

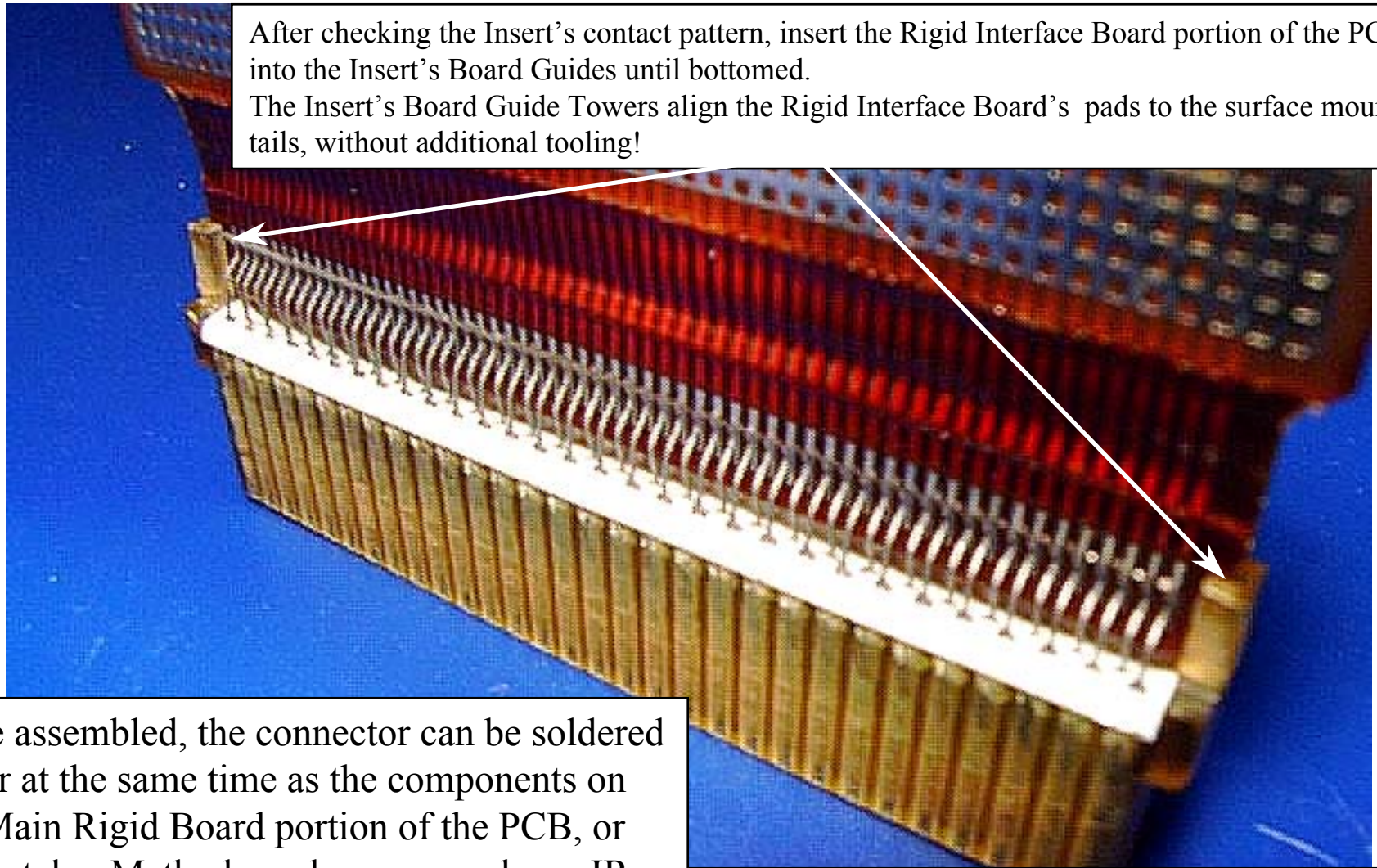
The 472 LRM Module Quarter Insert



Step 1: Assembly of the Rigid-Flex-Rigid PCB to the Quarter Insert

After checking the Insert's contact pattern, insert the Rigid Interface Board portion of the PCB into the Insert's Board Guides until bottomed.

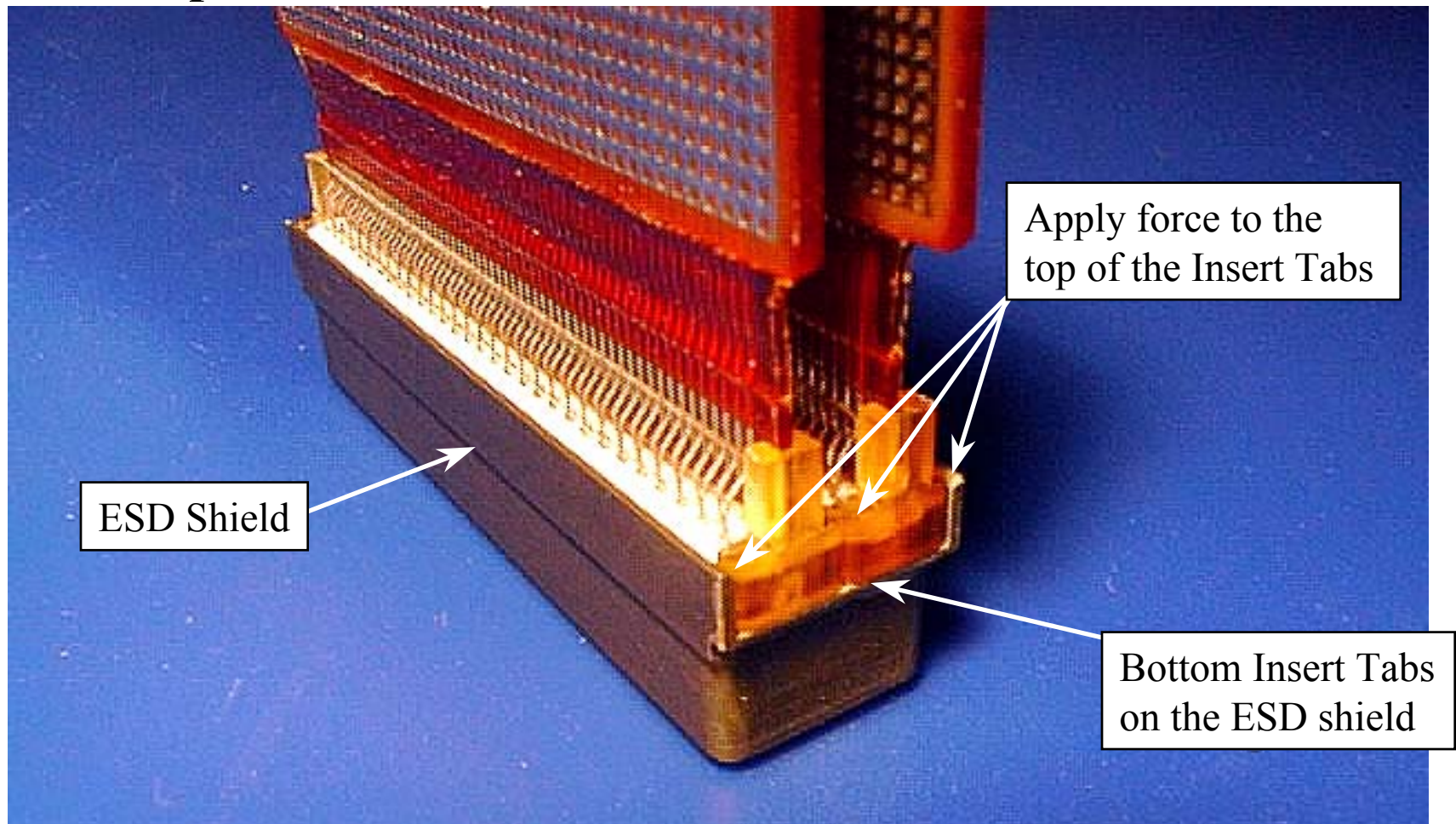
The Insert's Board Guide Towers align the Rigid Interface Board's pads to the surface mount tails, without additional tooling!



Once assembled, the connector can be soldered either at the same time as the components on the Main Rigid Board portion of the PCB, or separately. Methods such as vapor phase, IR, and hot bar can be used.

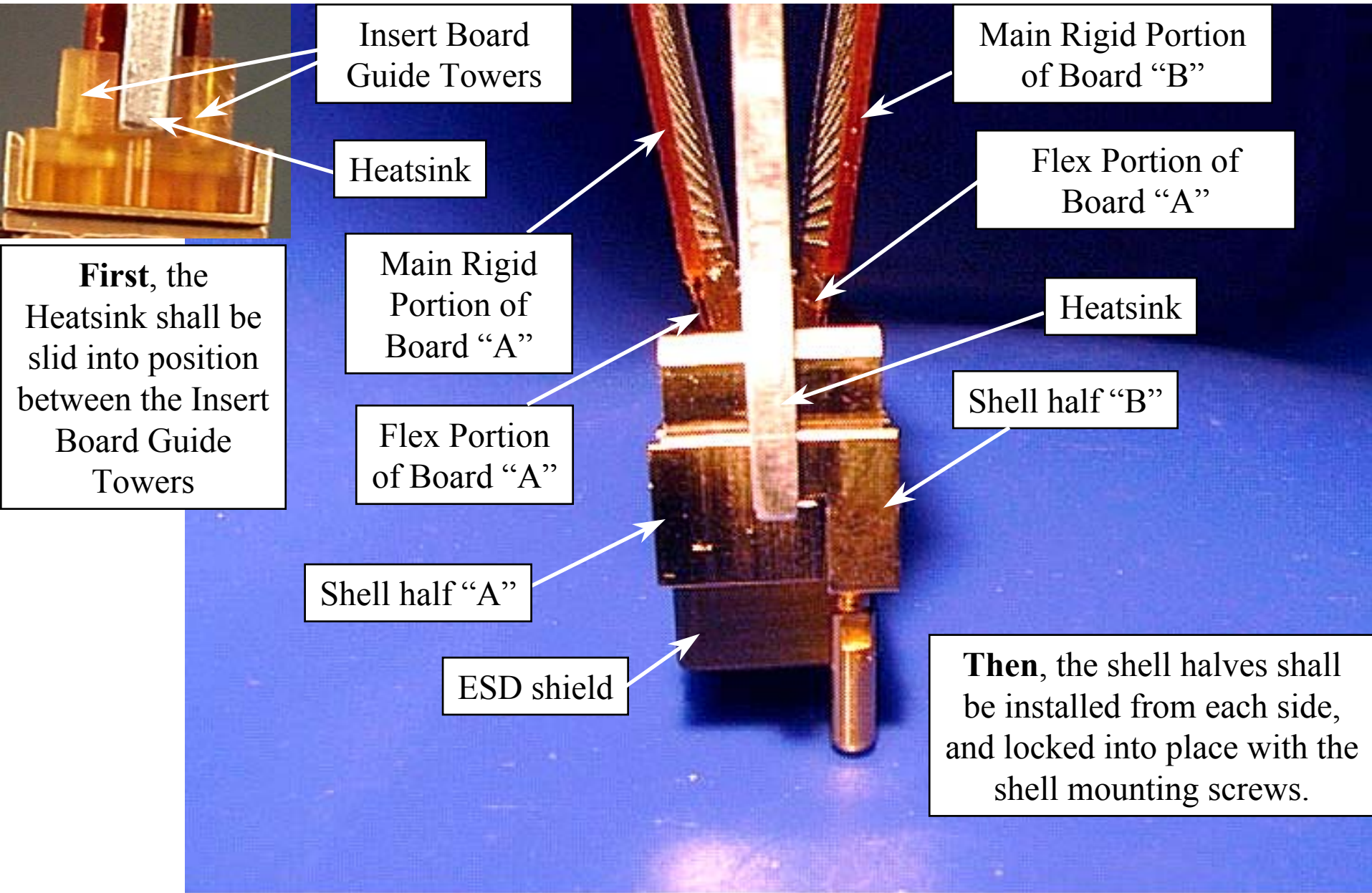
After soldering, the Insert Board Guide Towers provide physical support to isolate the tails and solder joints from mechanical stress.

Step 2: Install terminated inserts into the ESD shield



The terminated inserts shall then be inserted into the ESD shield. Be sure to align the contact pattern of the inserts to that of the ESD shield prior to insertion. The inserts shall be installed until the insert tabs bottom on the ESD shield. Apply a force to the top of the tabs to avoid damaging the assembly.

Step 3: Assembly of the connector to the heatsink



Step 4: Bonding the Main Rigid portion of the PCB to the Heatsink

The heatsink may either be precoated with a bonding agent prior to the assembly of the connector (Step 3), or a bonding agent may now be introduced between the Main Rigid portion of the PCB's and the heatsink.

The assembly shall then be installed in a simple fixture which centers the ESD shield on the heatsink laterally, and simultaneously exerts a force on the ESD shield toward the heatsink.

The Main Rigid portion of the PCB shall then be brought down onto the surfaces of the heatsink. Techniques such as Vacuum Bag assembly (sometimes used in the manufacture of PCB's) can then be used to insure uniform pressure is applied to the Main Rigid Portions of the PCB's while the bonding agent cures.

Assembling the Main Rigid Board portions of the PCB to the heatsink last is intended to ensure that the Flex portion is not stressed in the static condition. It also eliminates issues such as "A" side to "B" side registration of surface mount pads.

