Wilhelmsen Ships Service

UNITOR by Wilhelmsen

UWI 500TP

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Make sure that the machine is disconnected from the main line before removing the cover.

According to the diagnosis of fault as per Troubleshooting Manual, to replace the necessary components accordingly or replace all.

Steps section:

- Section 1: Steps for Replacing Power Board.
- Section 2: Steps for Replacing Supplies Board.
- Section 3: Step for Replacing Diode Isotope.
- Section 4: Step for Replacing TP Board (Three Phase Supply Protection Board).

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Section 1: Steps for Replacing Power Board.

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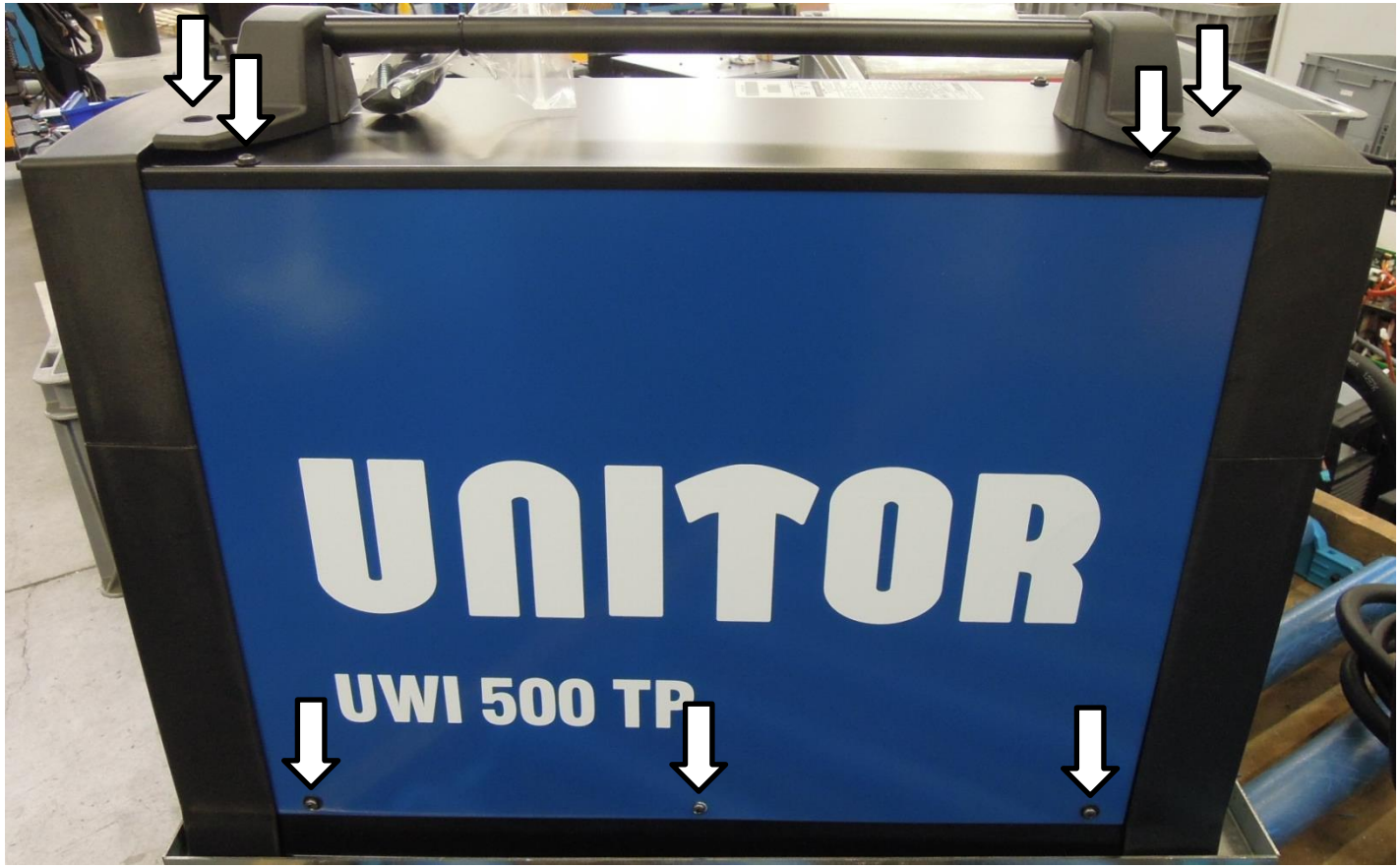
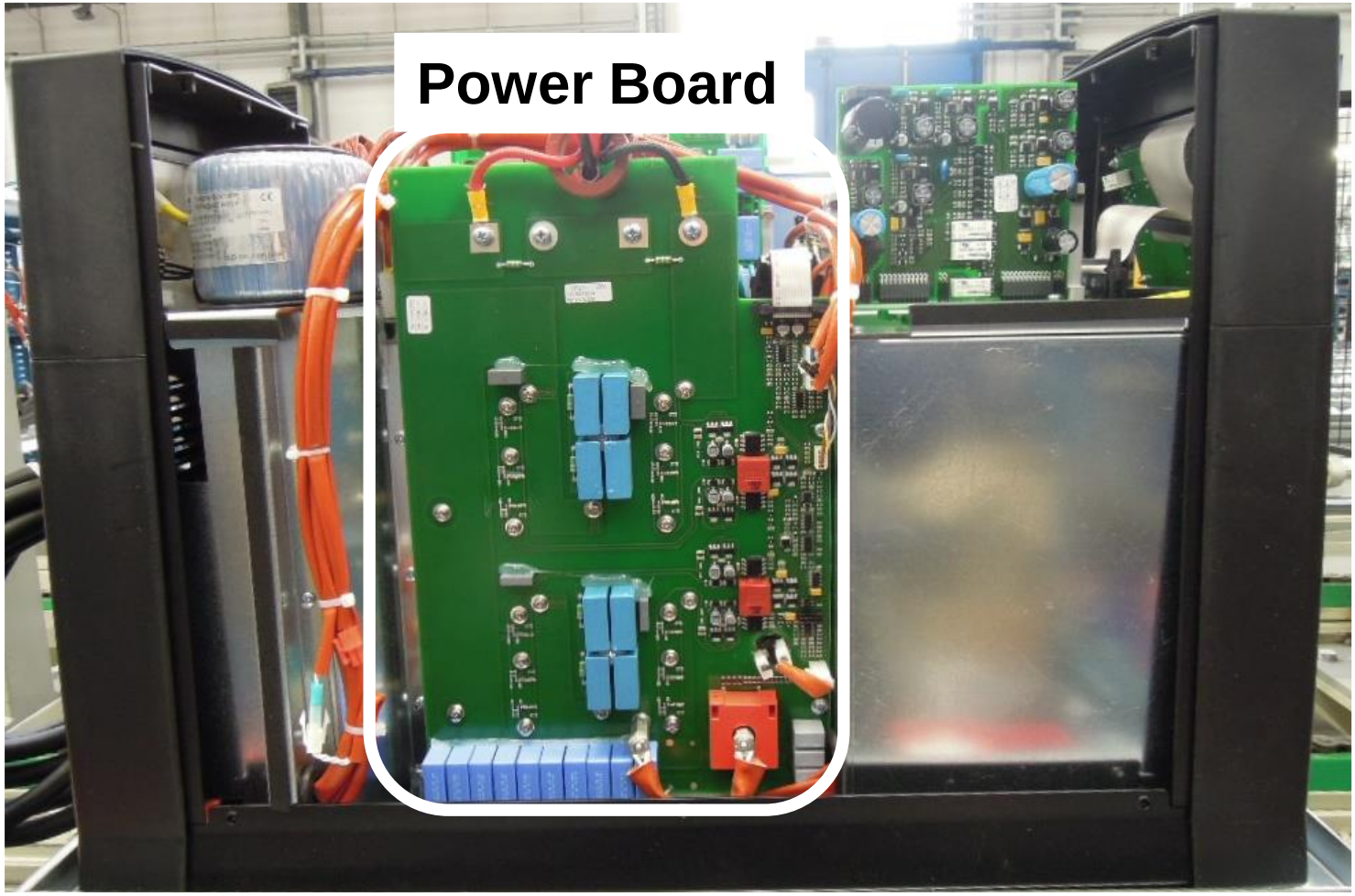
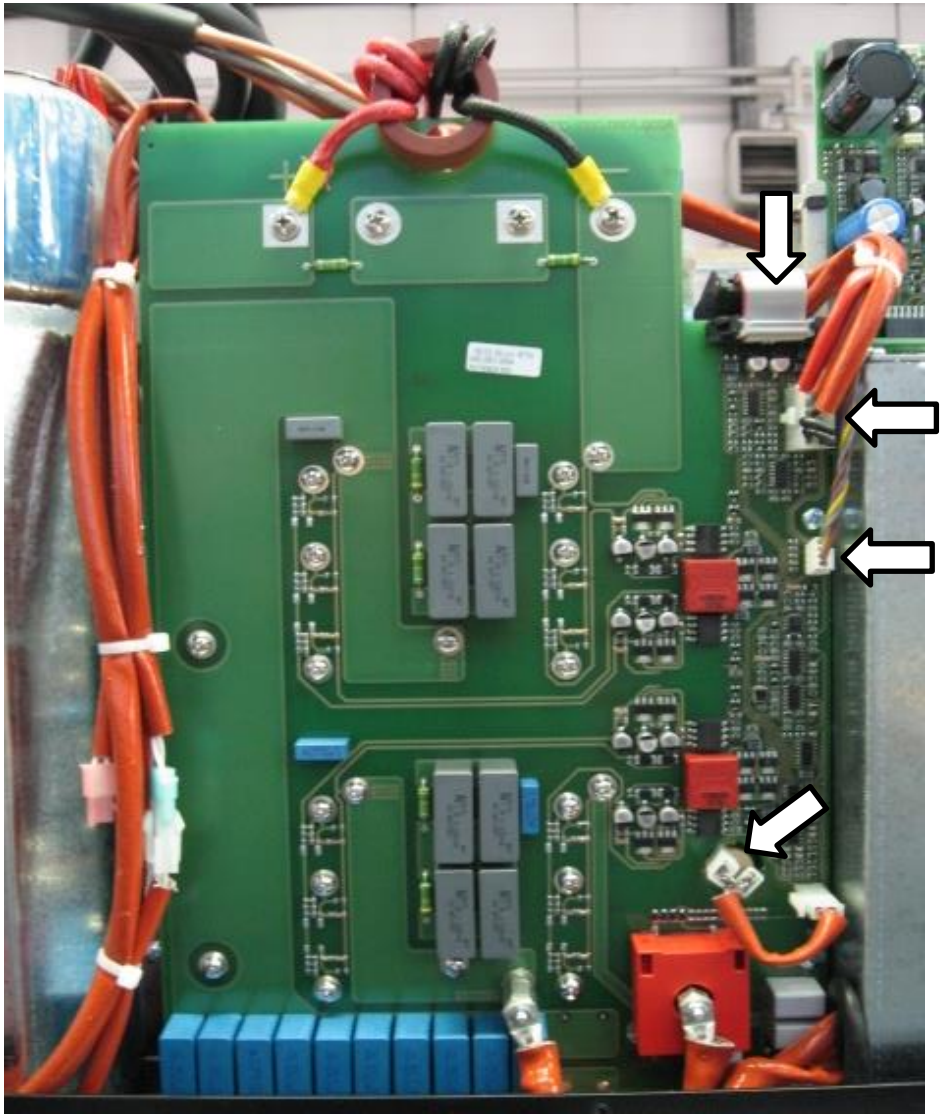
Step 1: Remove the cover (11 Philips screws).

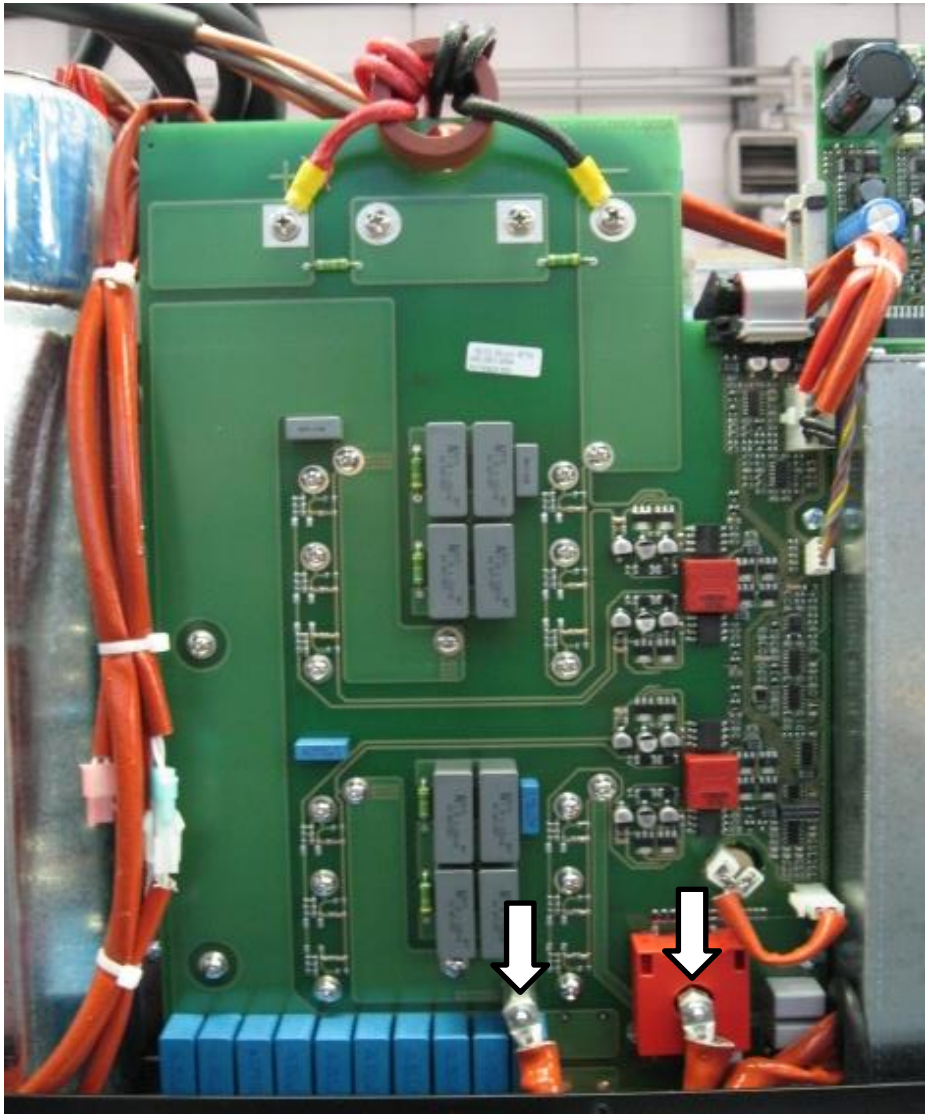



Power Board



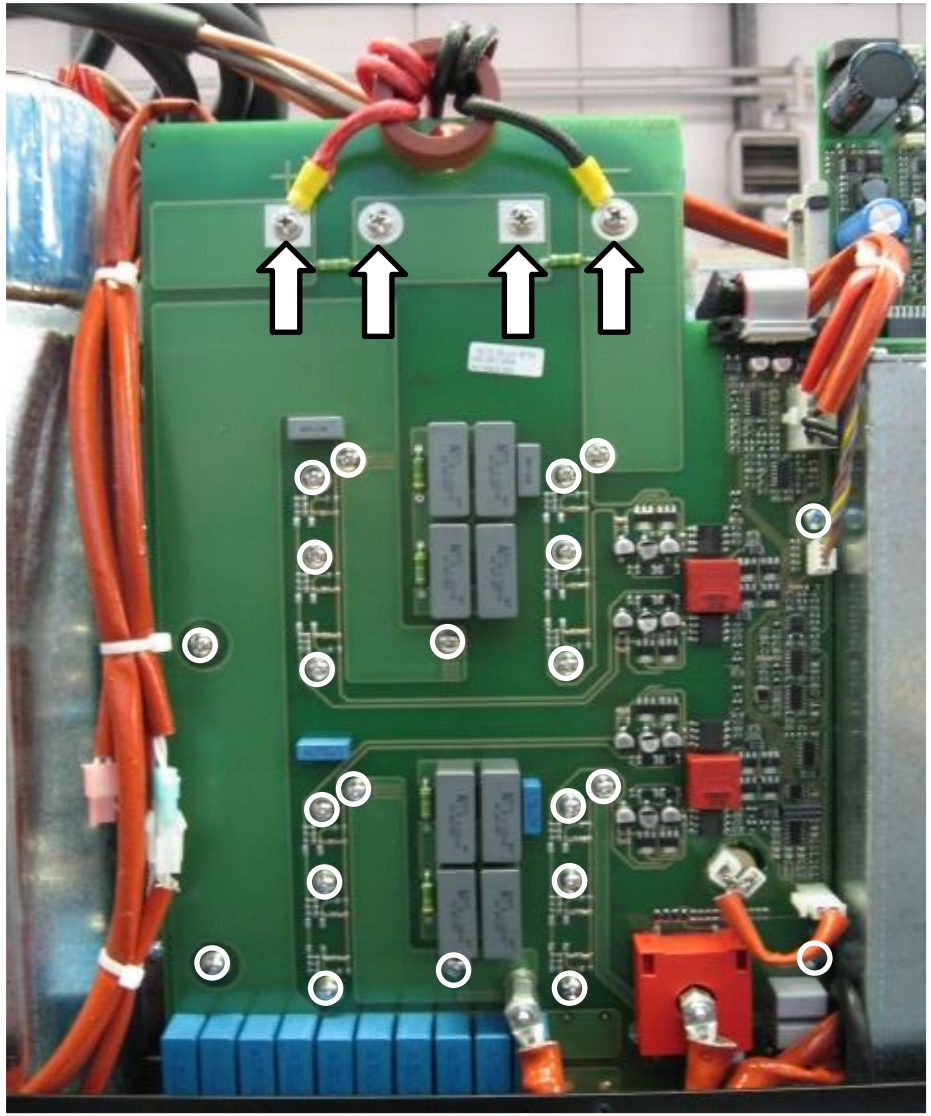
Step 1.1: Removal of the PCB.

Disconnect the wiring connectors flat, thermal and hall sensor, remove the socket from the thermal protector 60 °.



Step 1.2: Removal of the PCB.

Remove the nuts from the spacers that hold the braids of the transformer .



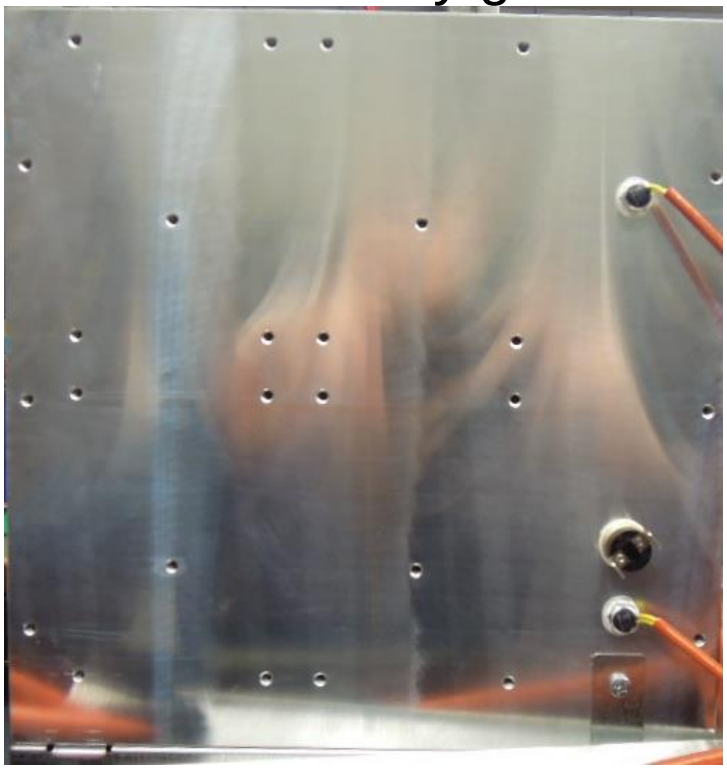
Step 1.3: Removal of the PCB.

Remove the 4 screws that fix the 2 condensers at the Power Inverter.

Remove completely the highlighted screws in the circles (totally 22 pieces).

STEP 2: remove the modules from the heat sink.

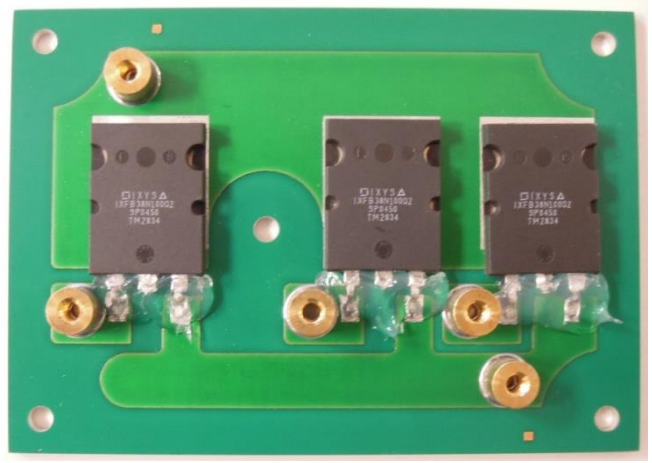
Using a rag or a not abrasive paper foil soaked with alcohol or diluents, clean with care the surface of the heat sinker. **PAY ATTENTION** : do not leave any grease traces on it.



After this you are ready for puting in the new modules and Power Board.

STEP 3: Preparation of the modules to replace.

Take modules to replace and clean the surface with a non-abrasive cloth .



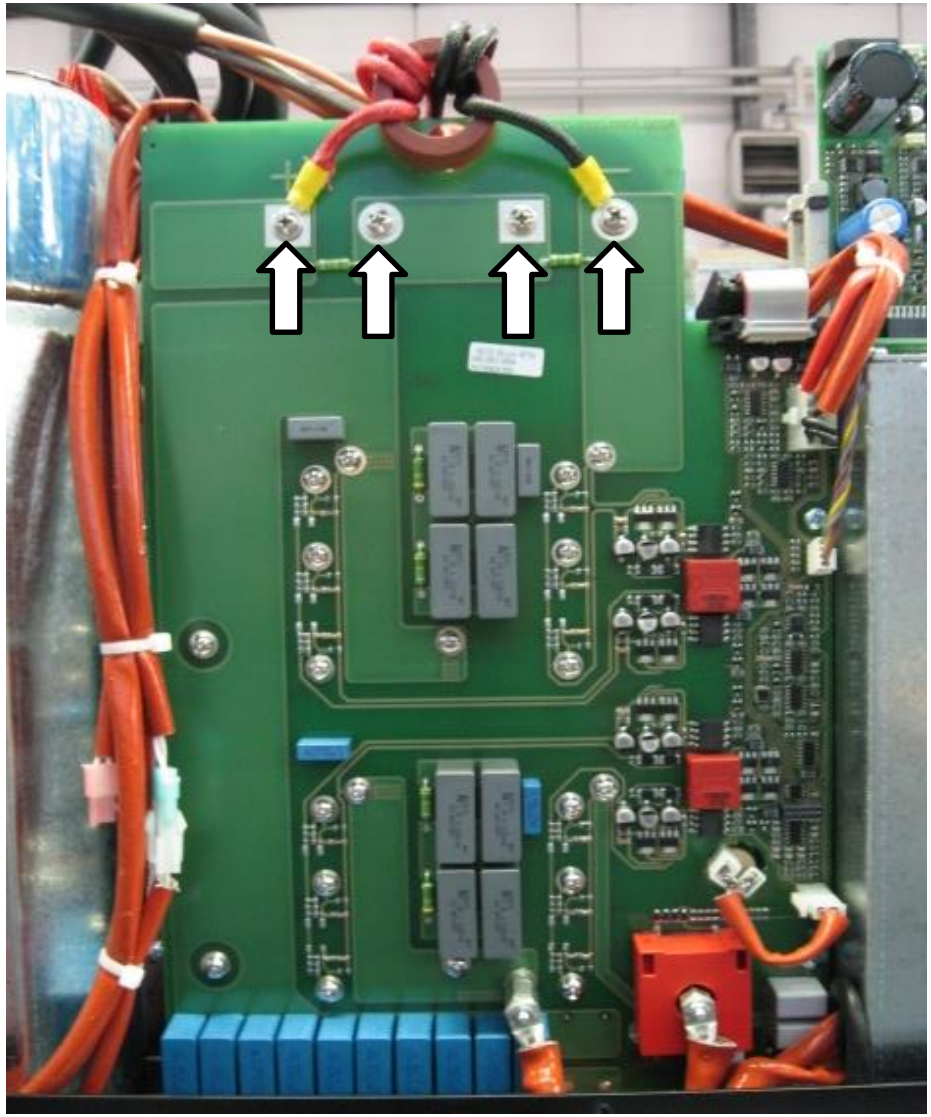
STEP 4: application of thermal grease.

Brush a thin layer of thermal grease on the surface of the modules .

Prepare M4h12 5 screws with flat washers M4 for each module .

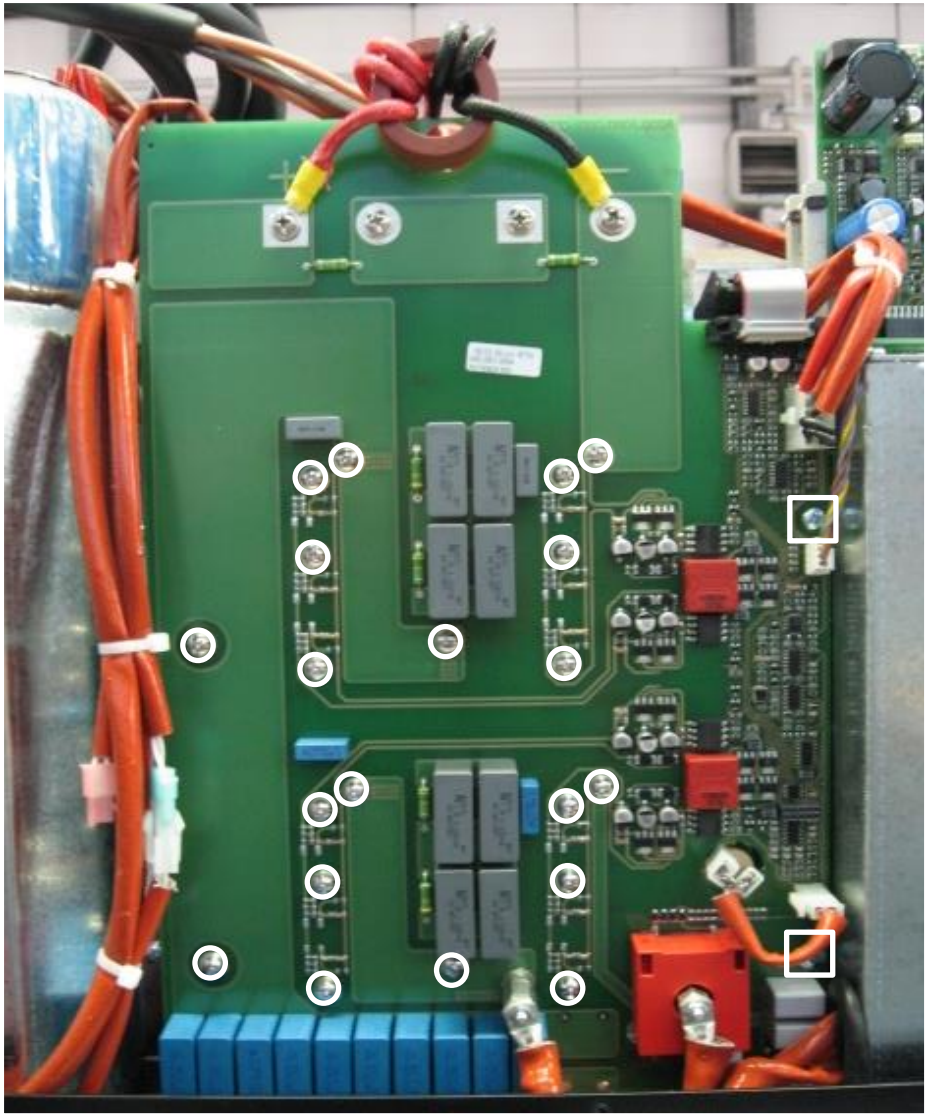
STEP 5: securing the module to the heat sink.

Install the modules with the screws and washers M4h12 plane, starting from the center hole.



STEP 6.1: repositioning of the power board.

Orientate the 4 screws that secure the capacitors, PERFORM THE OPERATION BY HAND to make sure that the screw is marked right and do not ruin the thread of the capacitor, the capacitor block is aluminum.



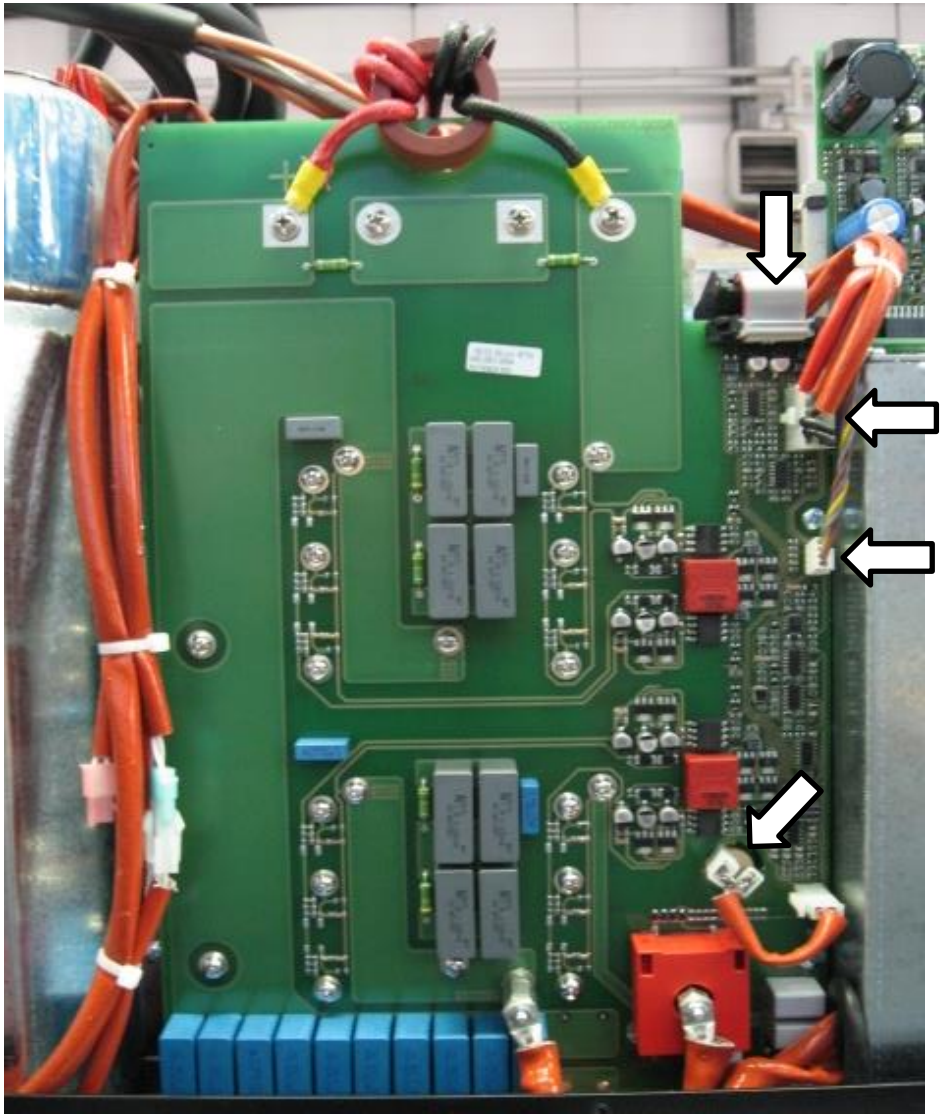
STEP 6.2: repositioning of the power board.

M4h6 orientate the 2 screws on the spacers on the right (look for the square).

Conduct M4h9 20 screws with the screwdriver to perform the centering of the card (look for the circle).

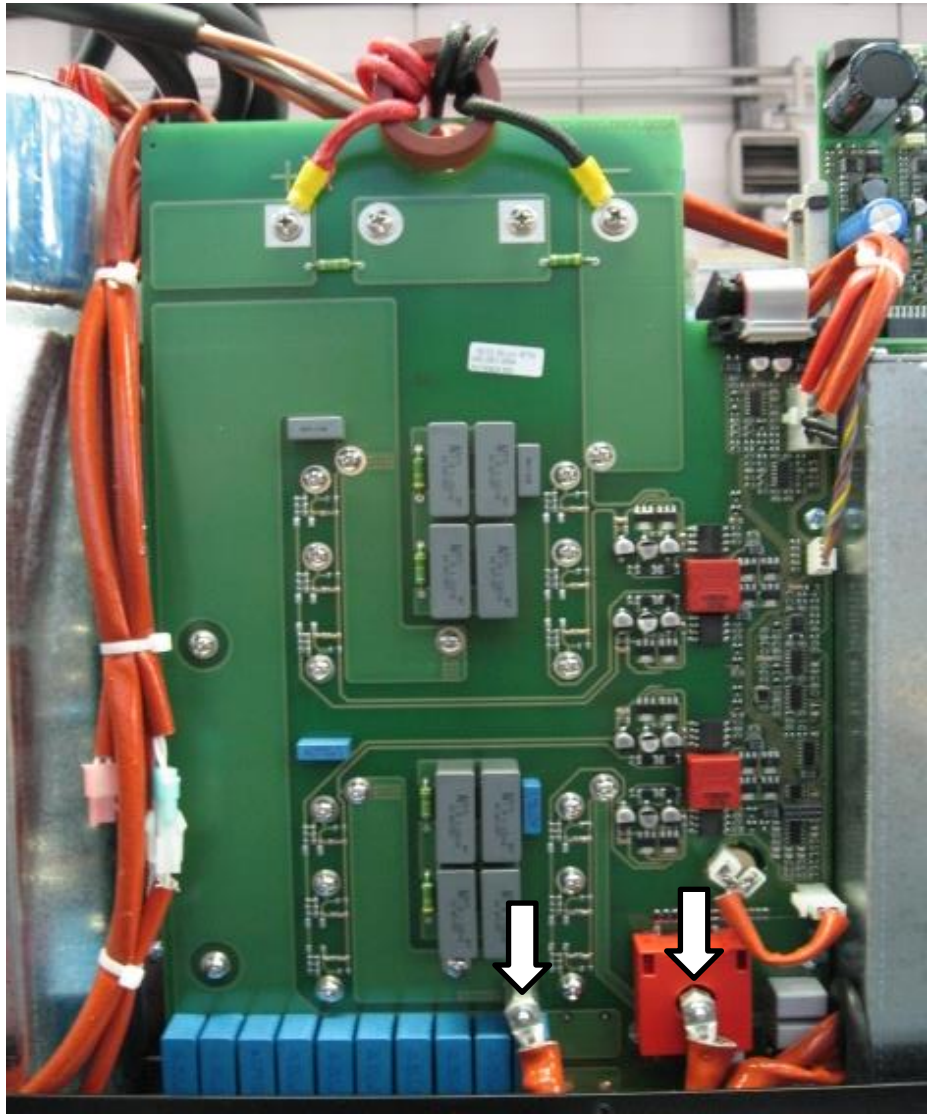
Secure with torque screwdriver all 22 screws previously marked (count HAND HAND THAT CAN BE FITTED TO BE SURE OF ALL mount) and 4 of the capacitors.

We recommend a revision of the screws by hand to be sure of the correct fasteners.



Step 6.3: repositioning of the power board.

Connect the wiring connectors flat, thermal and hall sensor. Insert the sockets to the thermal protector 60 °.



Step 6.4: repositioning of the power board.

Secure the braids of the transformer (MUST REMAIN twisted / twisted) to the spacing of the card (You BRASS NICKEL) with the 2 nuts smooth M4.

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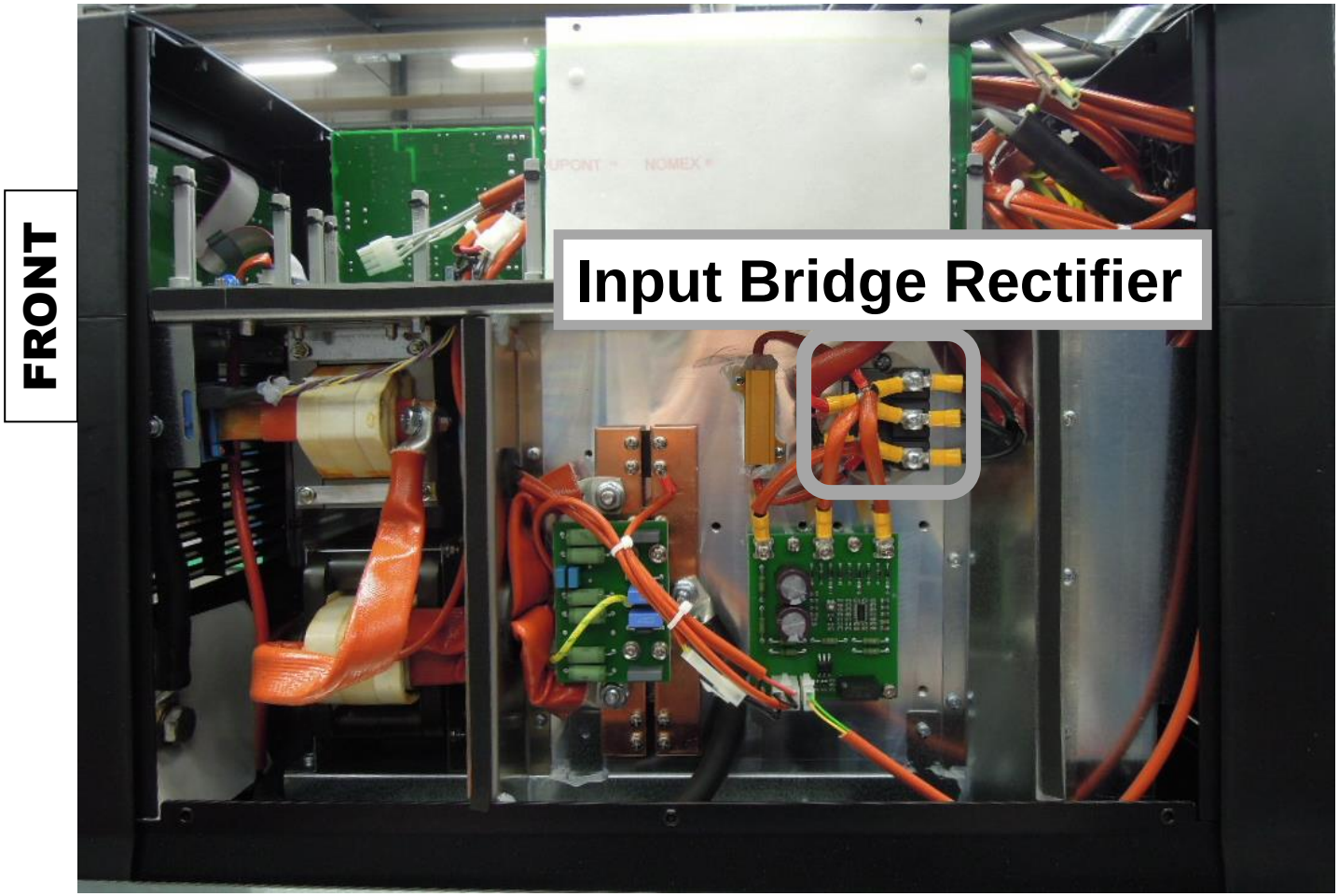
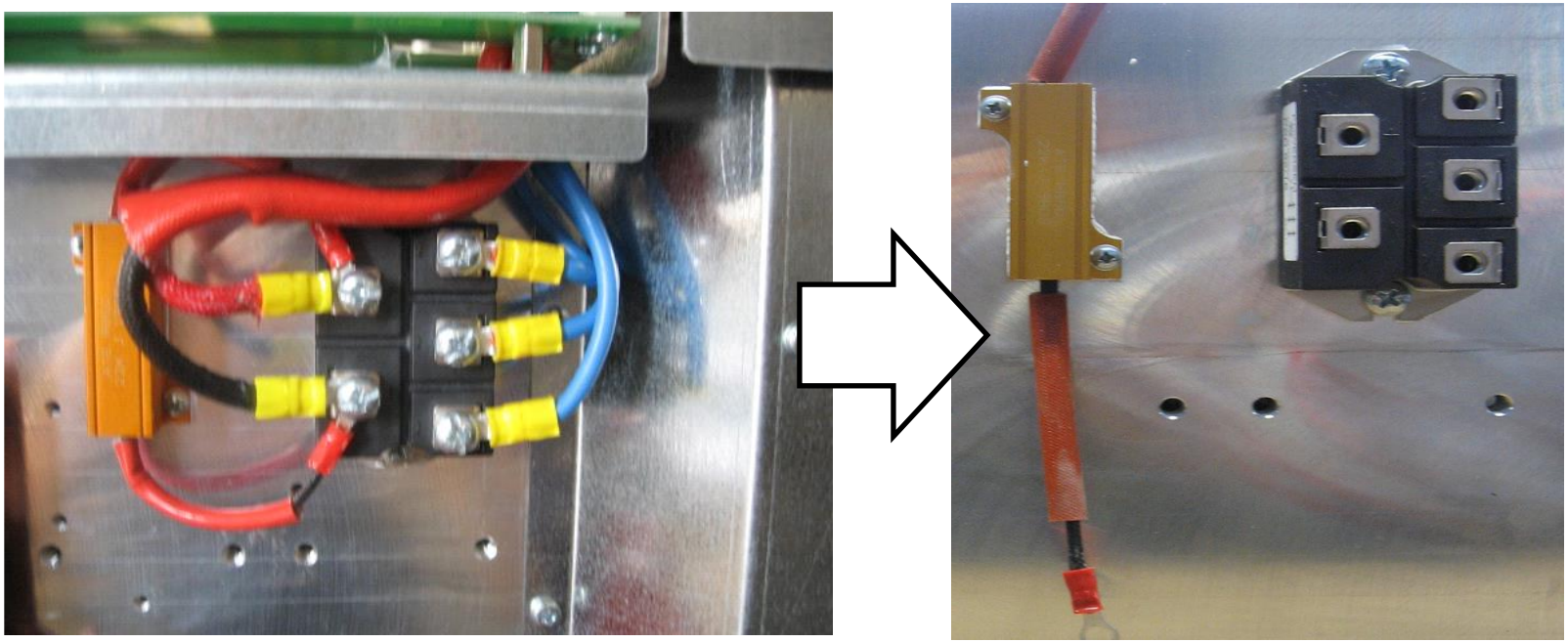
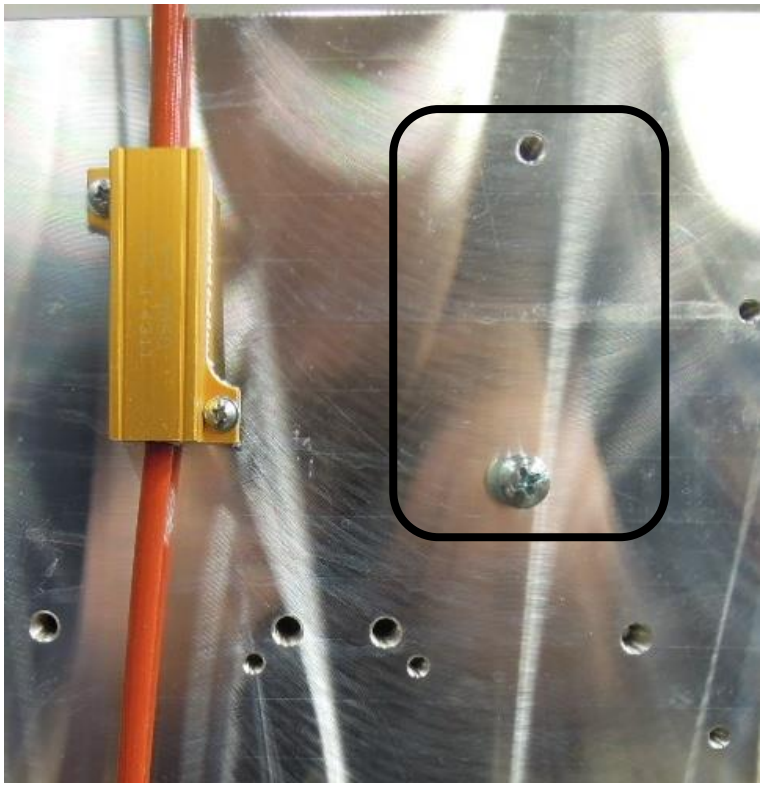
Step 7.1: Change the Input Bridge Rectifier.



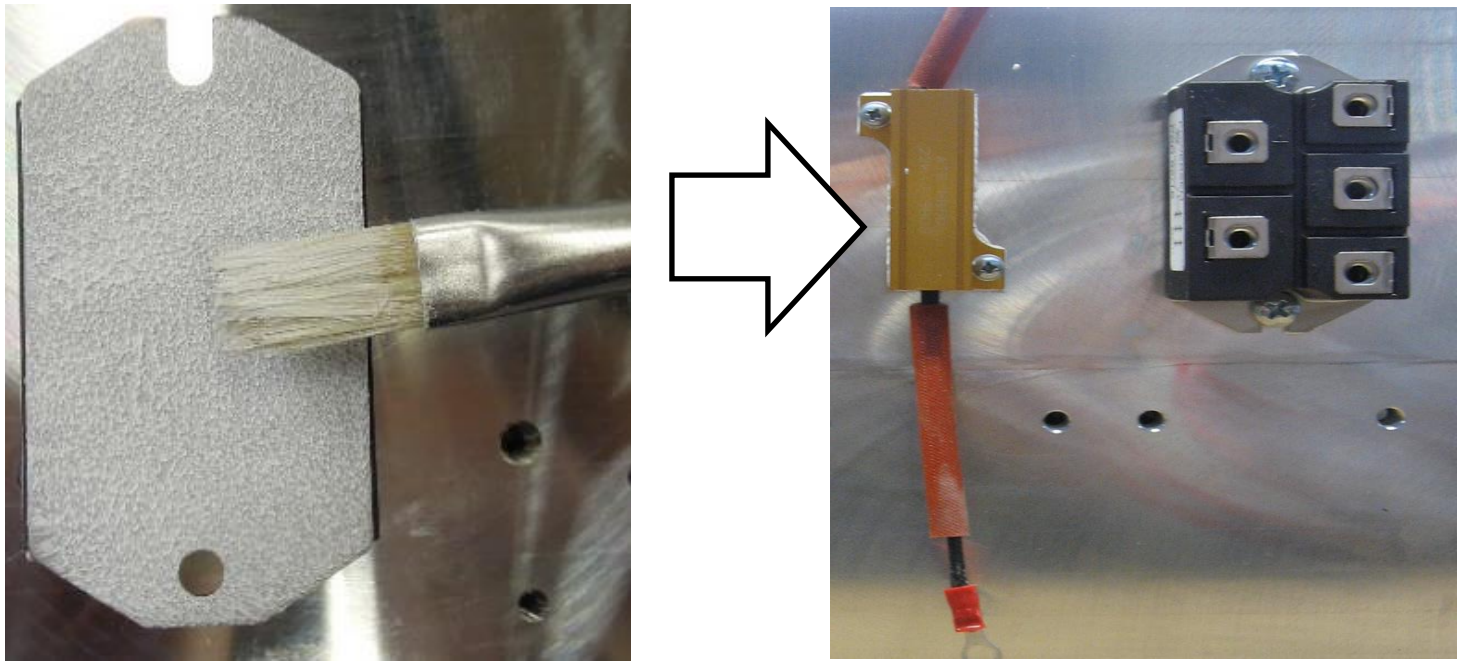
Step 7.2: Disconnect the Input Bridge Rectifier Wires.



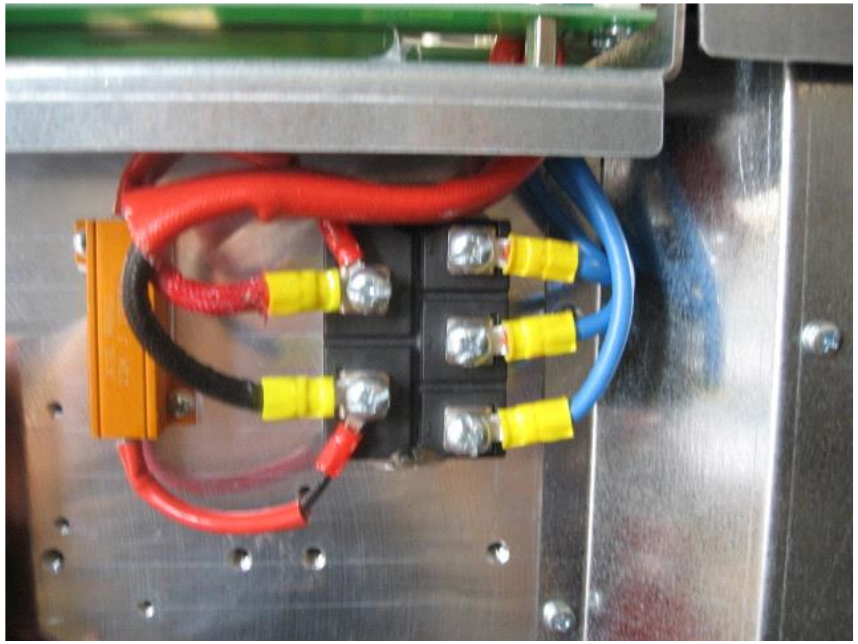
Step 7.3: Remove the Input Bridge Rectifier Wires and clean the part with alcohol.



Step 7.4: Put the thermal grease on the Input Bridge Rectifier and fix it on the heat sink.



Step 7.5: Connect the Input Bridge Rectifier Wires with the screws.



If the repair is finished, jump to step 12th.

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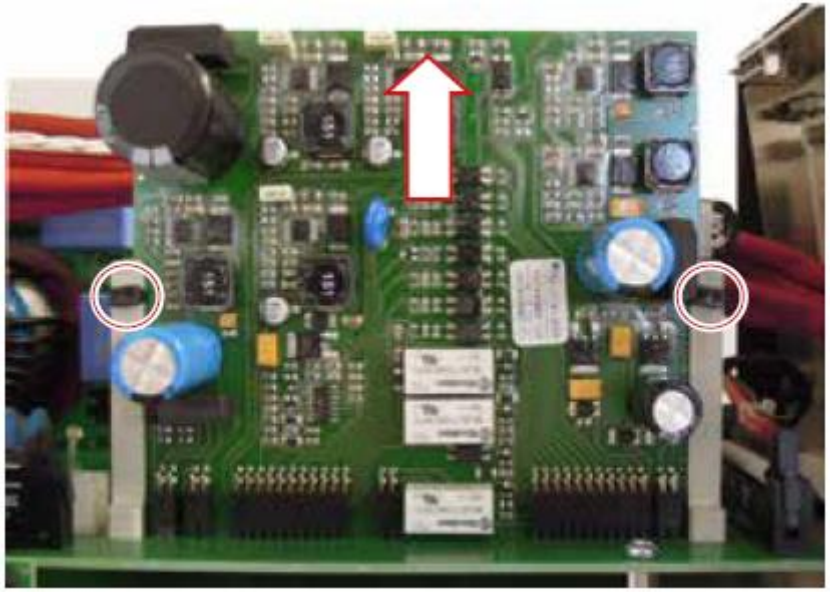
Section 2: Step for Replacing Supplies Board.

Step 8: Replace the supplies board.

Release the slide guide stops, remove the connectors and lift the board.
Install the new one and close the slide guide stops.



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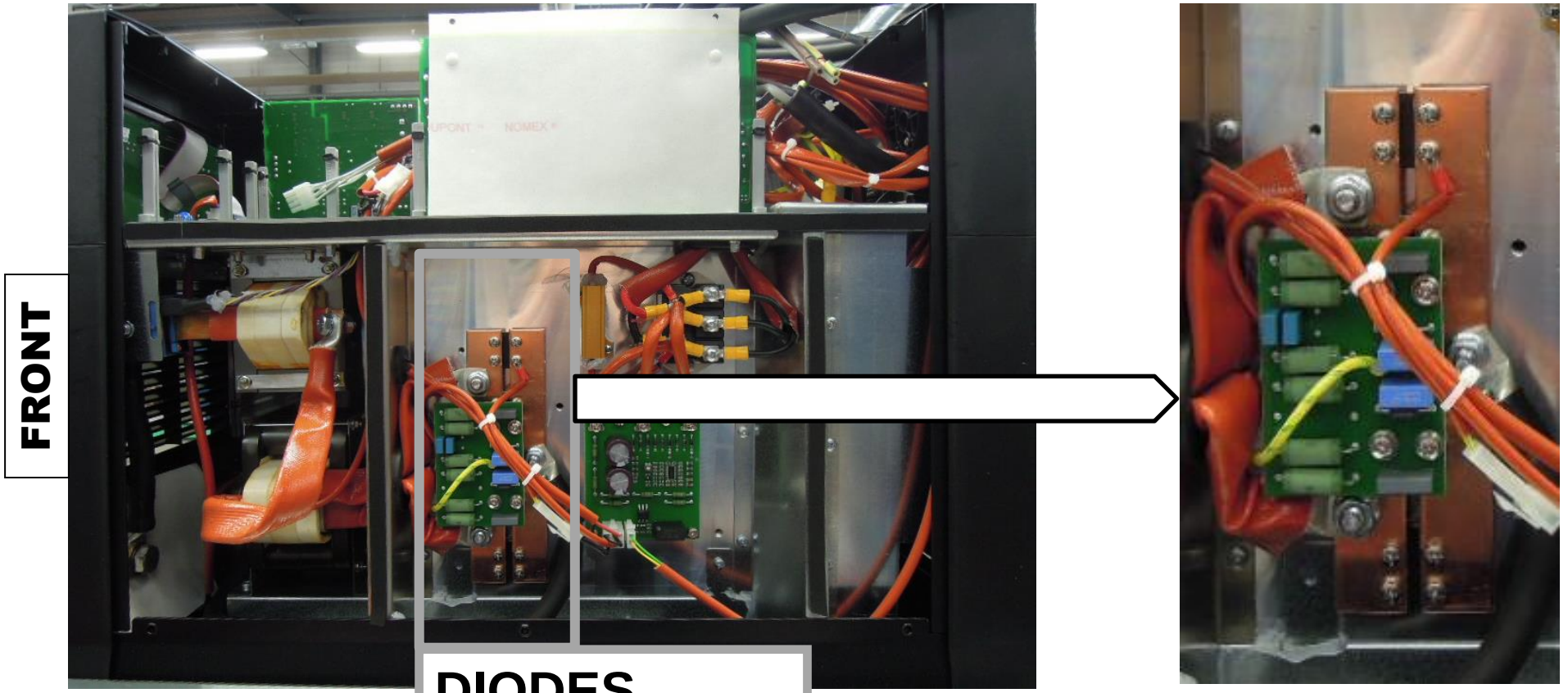
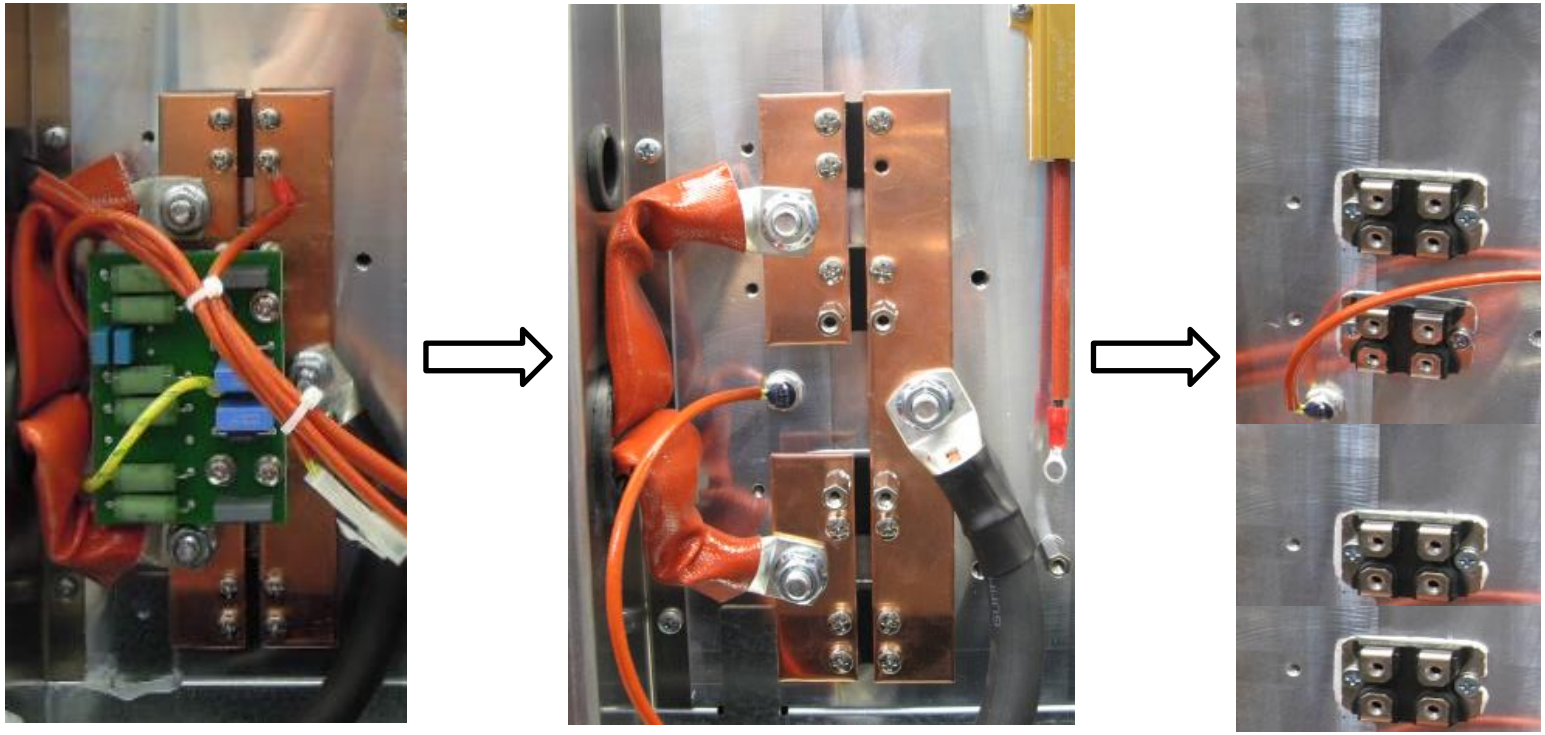
Section 3: Step for Replacing Diode Isotope.

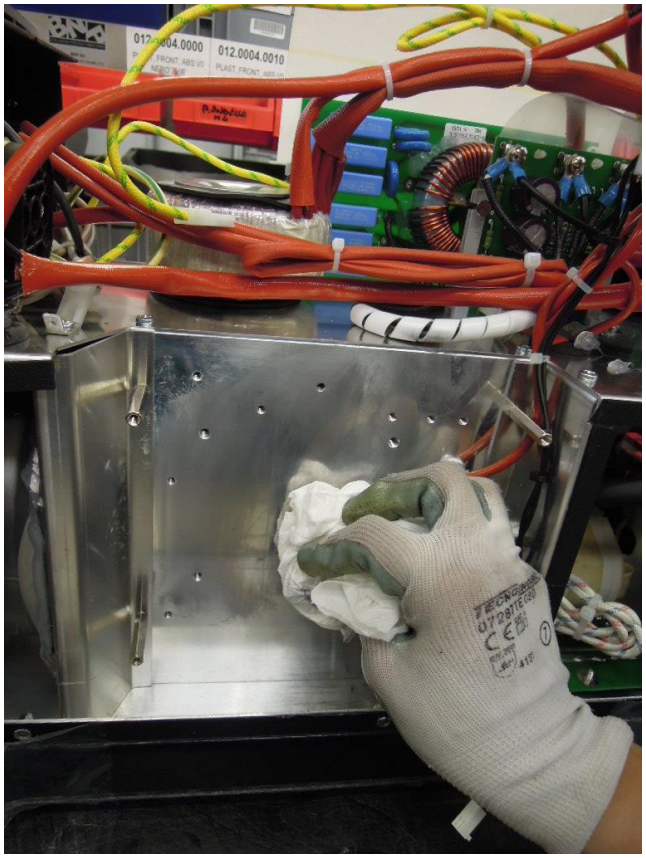
- **Step 9.1: Remove the snubber board and the screws on the copper bars.**



- **Step 9.2: Remove the snubber board and the screws on the copper bars.**

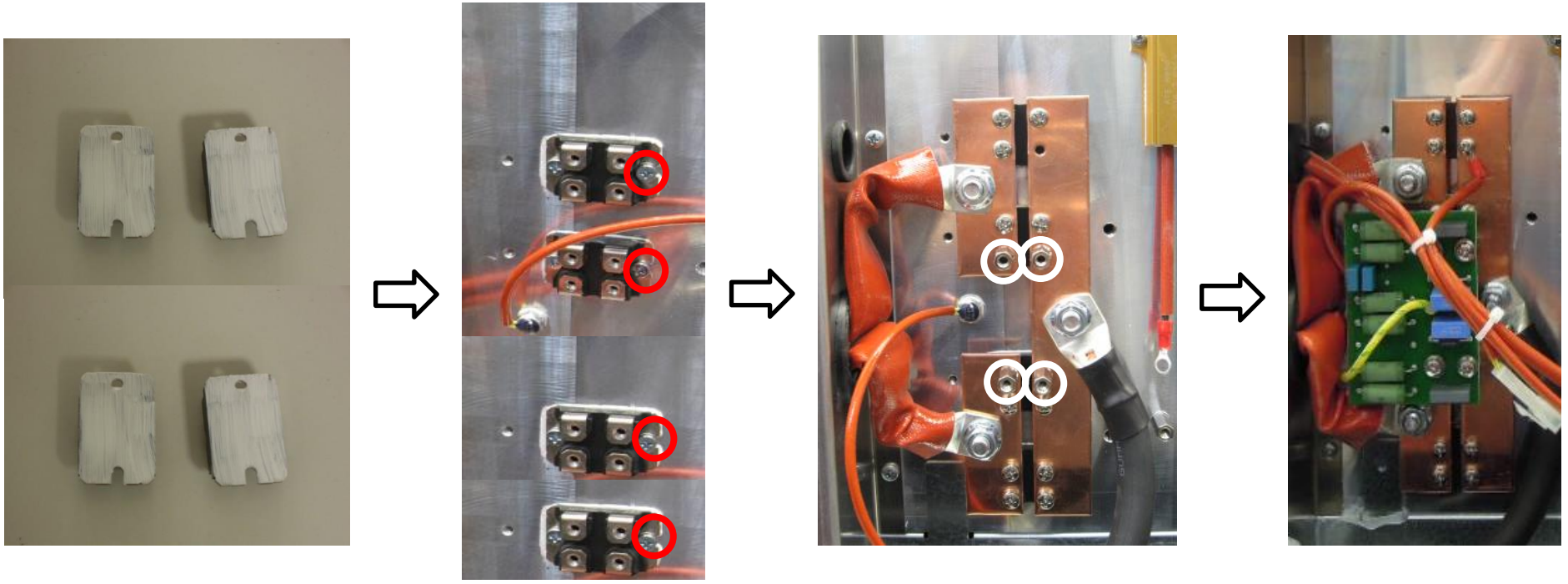


- **Step 10: Clean the heat sink with alcohol.**



- **Step 11: Put the thermal grease on the DIODES ISOTOPE**
  (the grease must be fluid neat like a cream and a thiny film; we suggest to use a sponge roller for painting or a paintbrush; it possible to add a very little quantity of diesel fuel to soften up the grease).

Connect the copper bars and Snubber board.



If the repair is finished, jump to step 12th.

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Section 4: Step for Replacing TP Board (Three Phase Supply Protection Board).

- **Step 12: Replace the three phase supply protection board, 050.xxxx.0057**

- **Disconnect the Wirings and remove all screws.**
- **Replace the PCB.**
- **Connect the wirings on the PCB.**

If the repair is finished, jump to step 12th.

Step 13: Test the machine!

Weld an electrode with 70 A and 250 A current.

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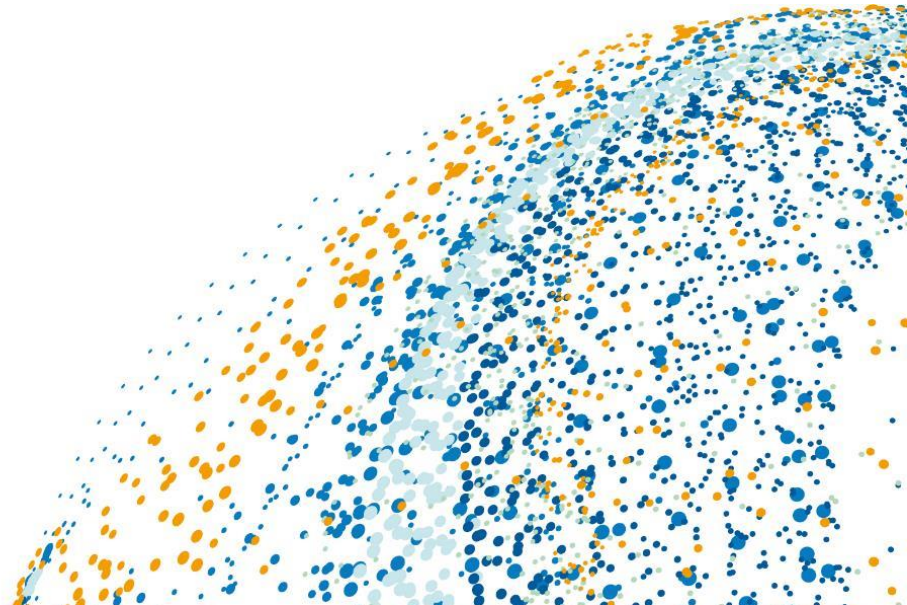
Attention

Please use these Unitor products exclusively for the purpose indicated by WSS and only if the operator fully understands current practices and procedures. If any further information or assistance is required please contact your local WSS specialist.



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