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Unitor Welding Inverter UWW 301 TP Multi Process MIG-MAG-MMA-TIG



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: Step for Replacing Diode Isotope.
- Section 3: Step for Replacing TP Board (Three Phase Supply Protection Board).



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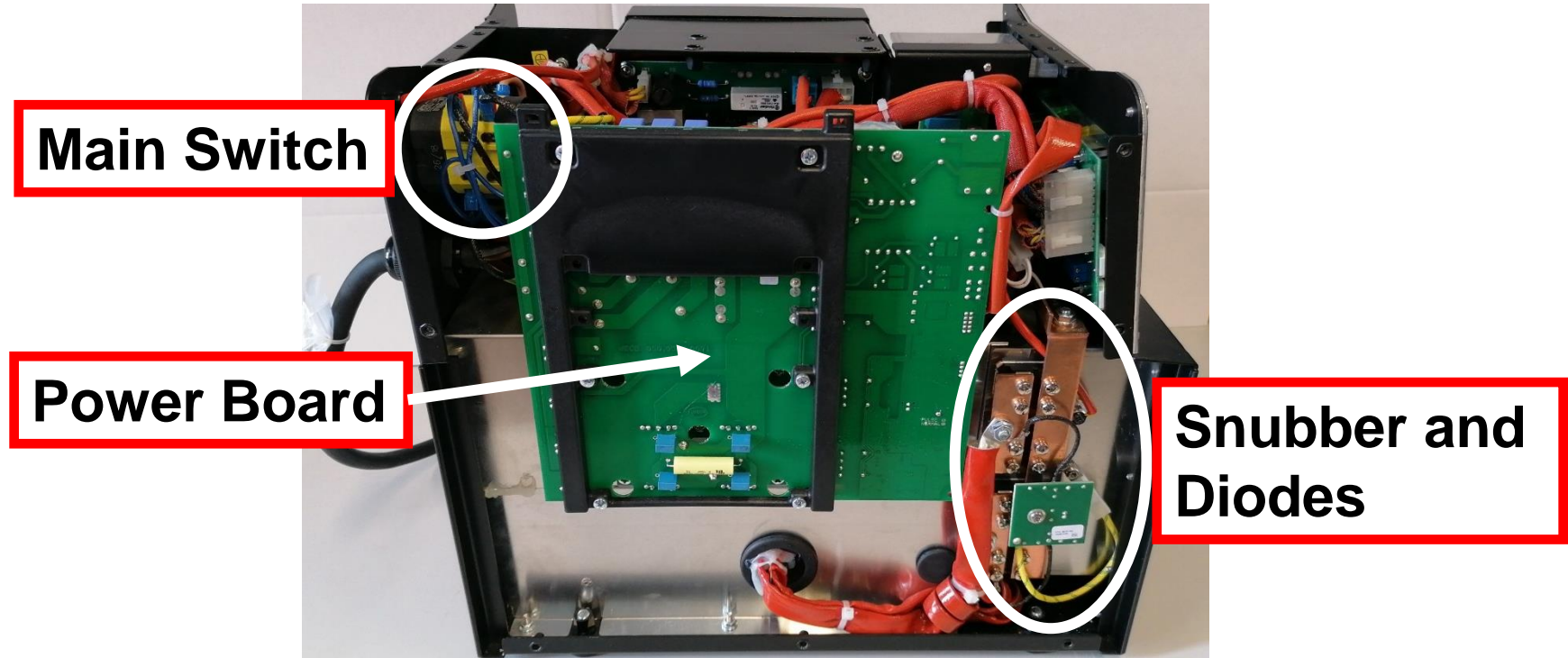
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Section 1: Steps for Replacing Power Board.



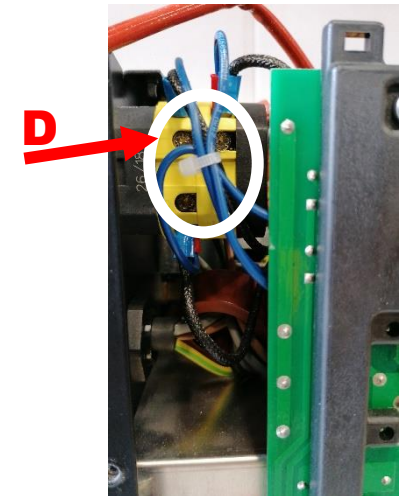
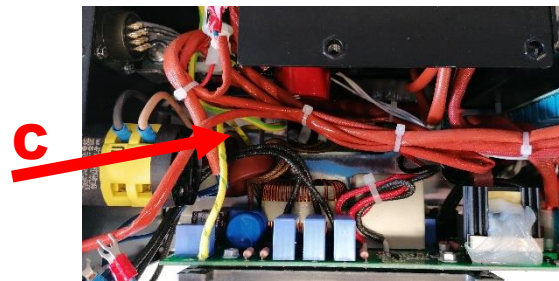
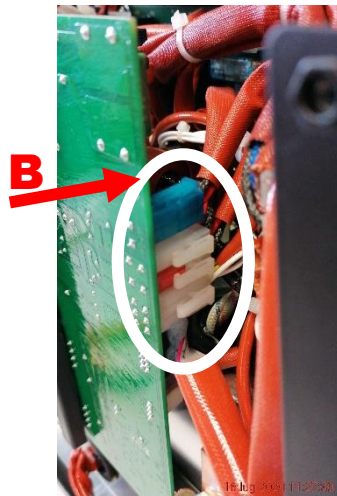
- **Step 1: Remove the cover (15 + 4, Philips screws).**





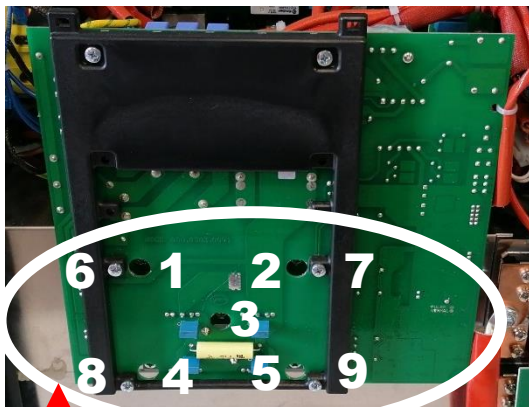
- **Step 2.1: REMOVE POWER BOARD**

- (A) Remove the plastic string from flat connector.
- (B) Disconnect the connectors on left side of power board.
- (C) Disconnect the yellow-green wiring.
- (D) Disconnect wirings from main switch.

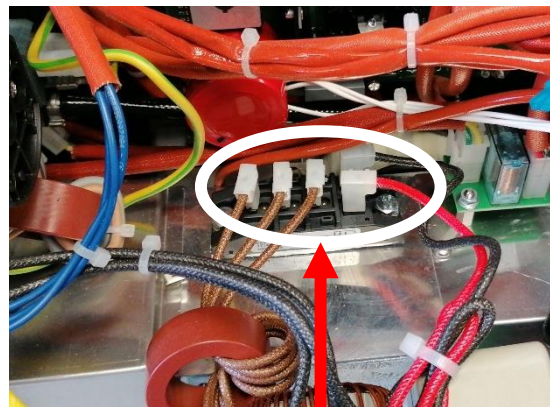




- **Step 2.2: REMOVE POWER BOARD**
- **(A) Remove screws from the power board.**
- **(B) Disconnect the wirings from bridge rectifier and disconnect black wirings from Capacitor PCB (050.xxxx.0119) and disconnect the wiring from Power Board.**



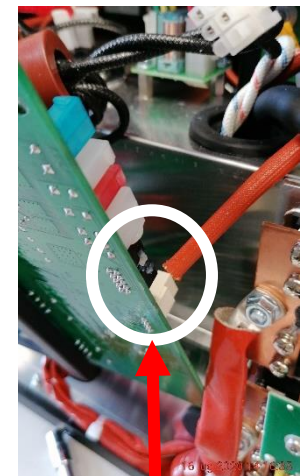
A



B



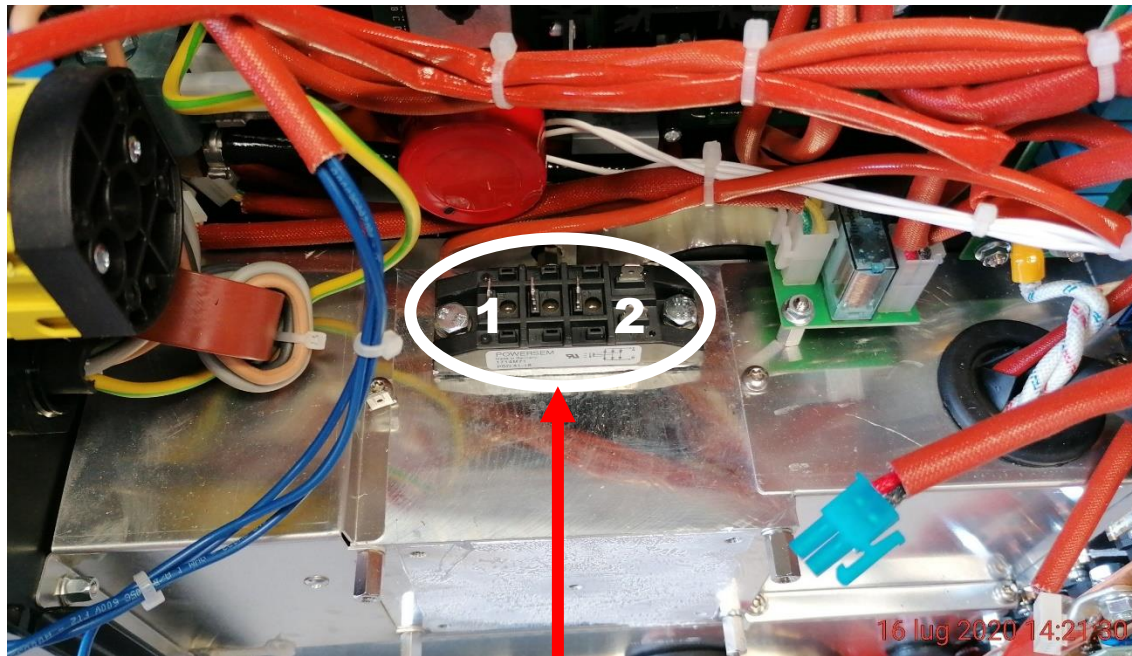
B



B



- **Step 3: Disconnect the Input Bridge Rectifier Wires:**
 - **(A) Remove screws from the bridge rectifier**

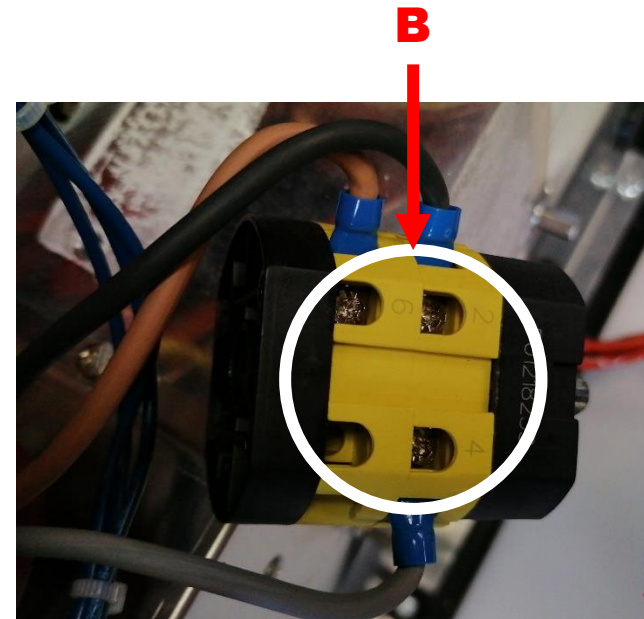
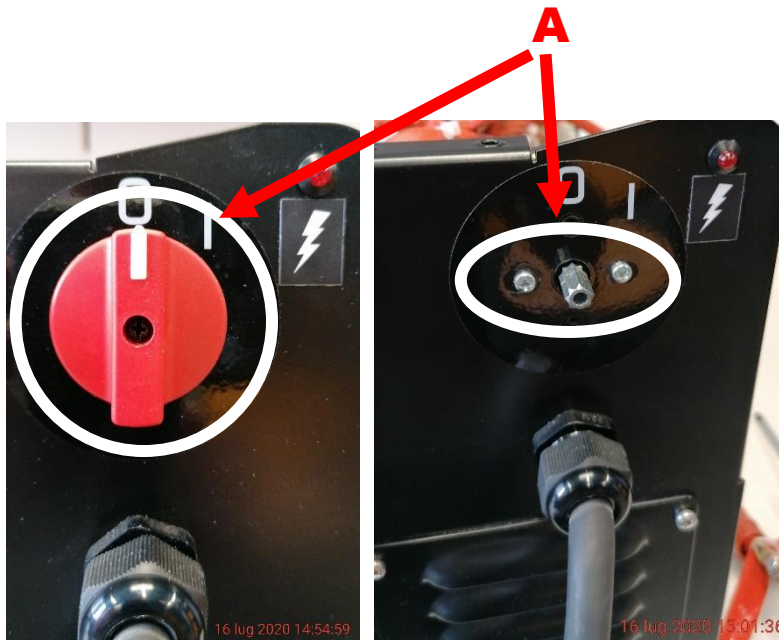


A



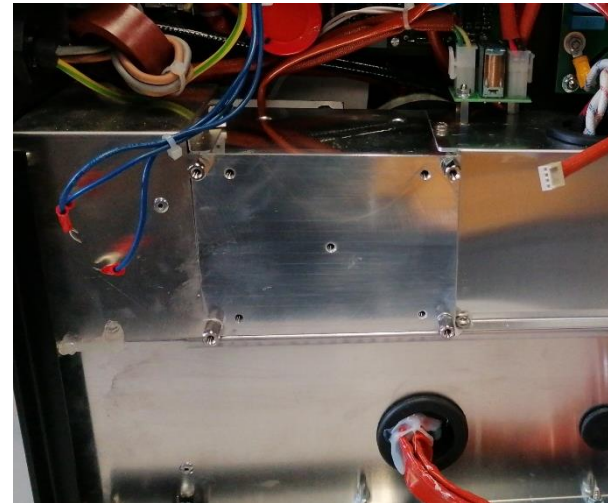
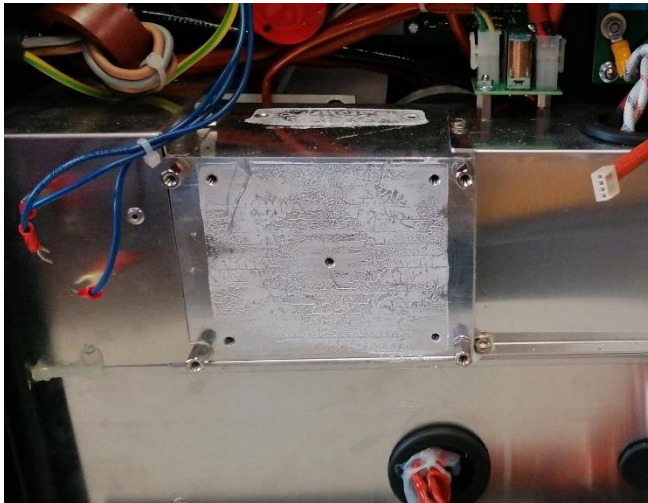
- **Step 4: Replace the Main Switch:**
 - (A) Remove the screws from the main switch
 - (B) Disconnect the wirings from the main switch and replace it.

Connect the wirings of the power cable in the same position (2-4-6).





- **Step 5: Clean the heatsink with alcohol.**



- **Now, you are ready for connecting the new Power Board.**

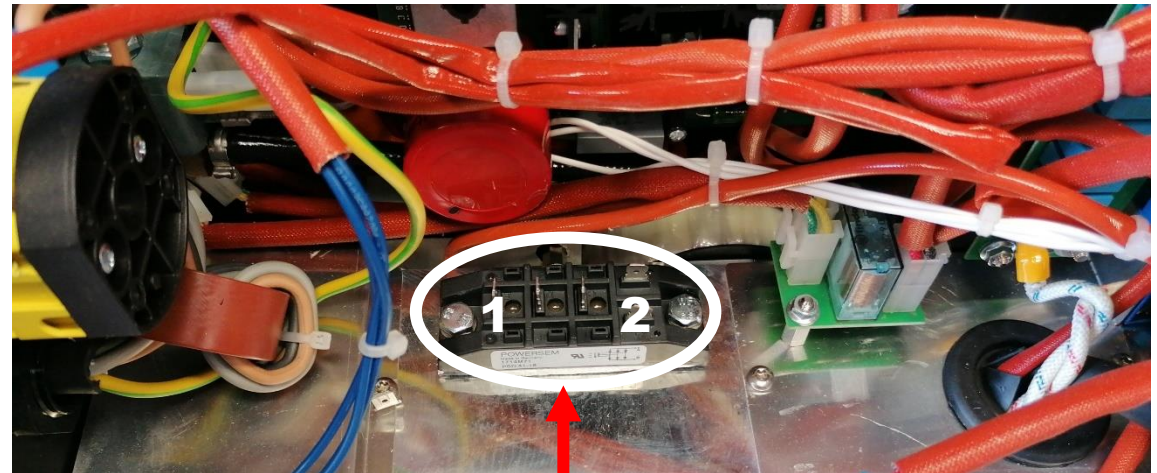


- **Step 6: Replace the Input Bridge Rectifier.**

Put the thermal grease on the Bridge Rectifier and fix it on the heatsink

(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).

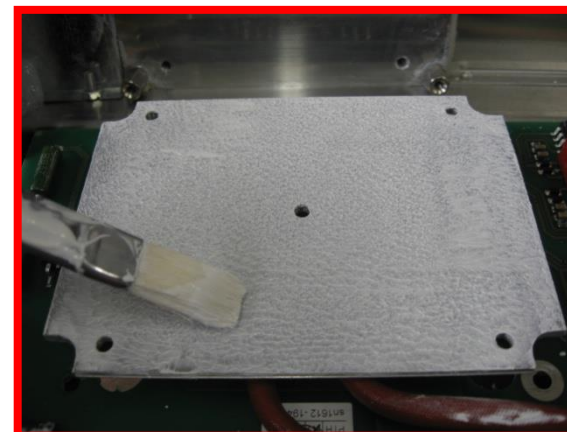
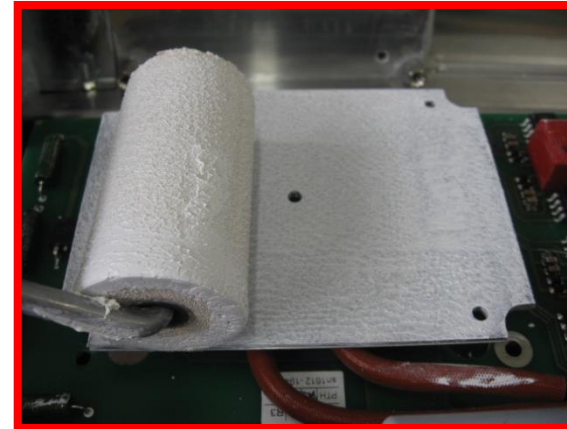
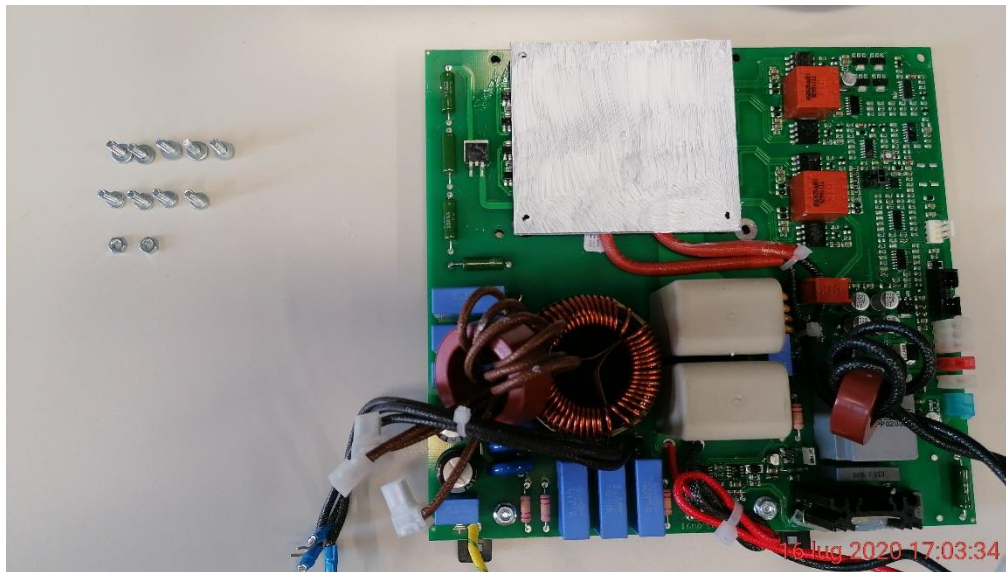
- (A) Fix screws from the bridge rectifier





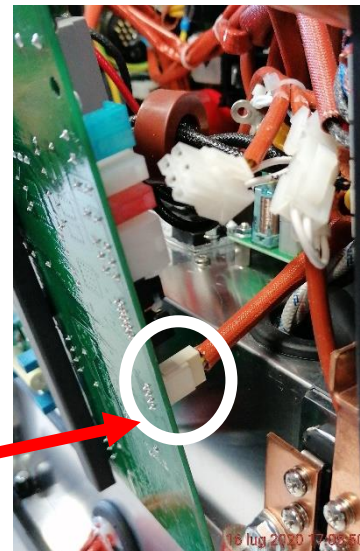
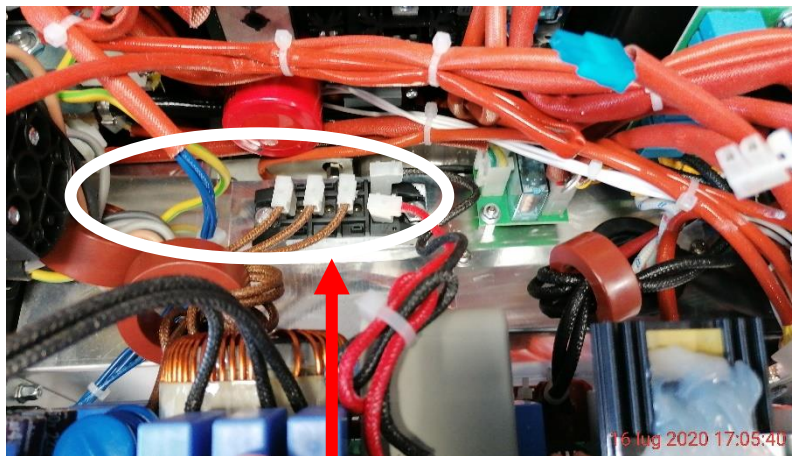
- **Step 7: Put the thermal grease on the Power Module**

(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).



- **Step 8: With the Power Board in this position, connect the wirings on the bridge rectifier, connect the HALL wirings to power board and connect the black wirings to the Capacitor PCB (050.xxxx.0119).**

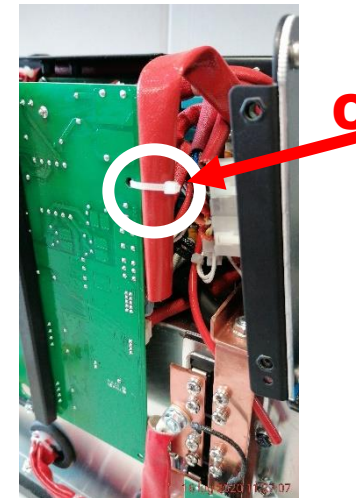
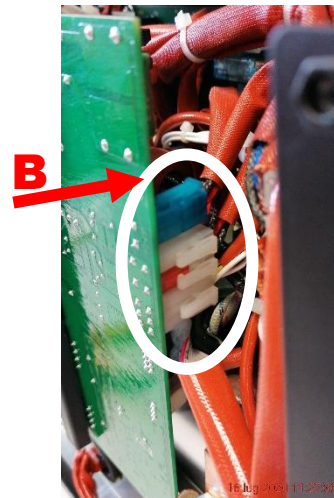
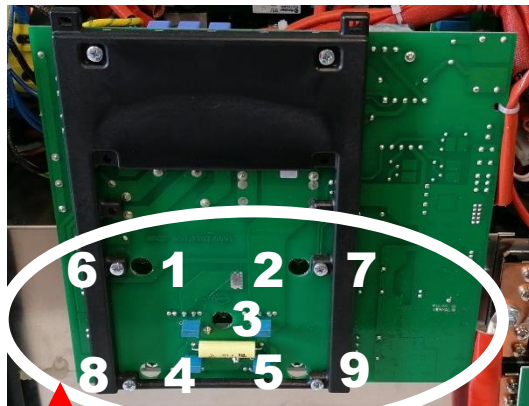
(A)



A

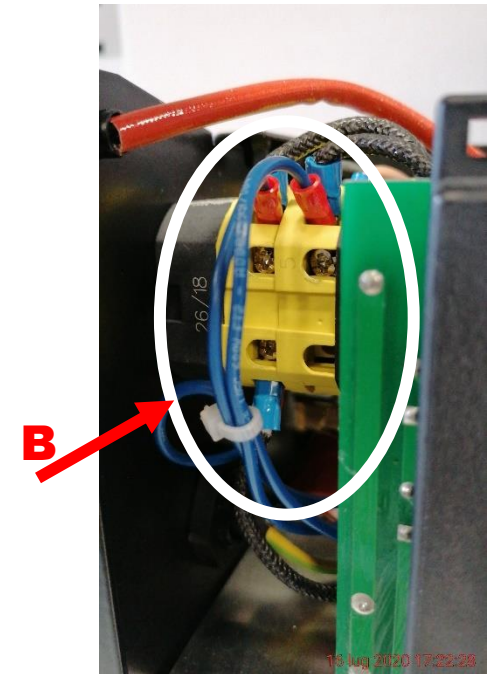
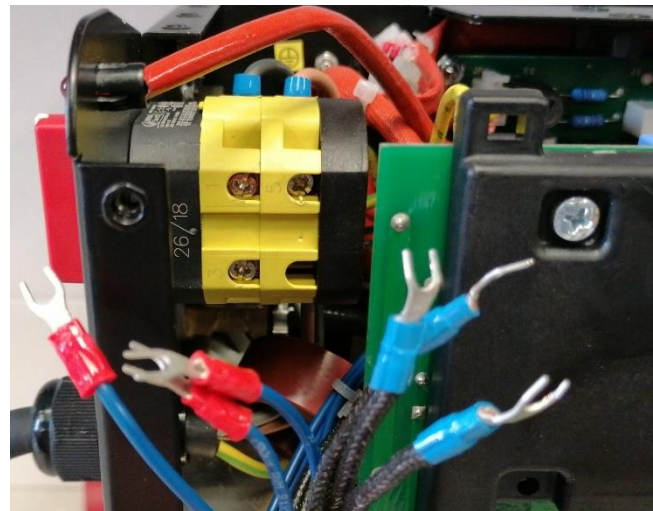
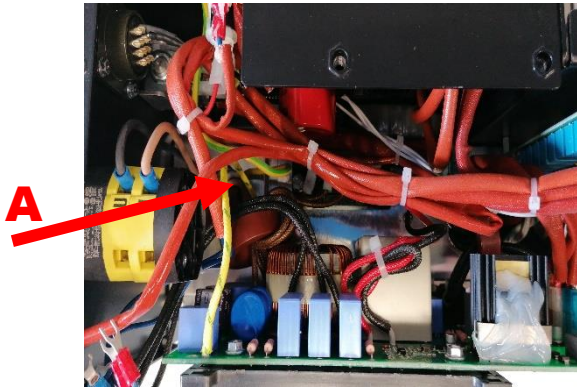
A

- **Step 9.1: Fix the power board.**
 - (A) secure screws from the power board.
 - (B) Fix the connectors on left size of power board; fix with silicone the flat connectors on the power board.
 - (C) Fix the plastic string from flat connector.



- **Step 9.2: Fix the power board.**

- (A) Secure the yellow-green wiring.
- (B) Fix wirings from main switch.



If the repair is finished, jump to step 14th.



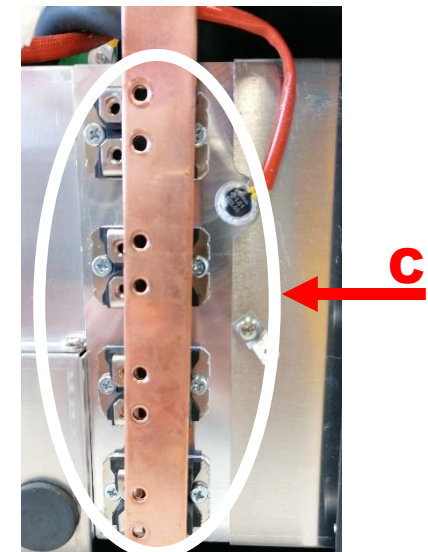
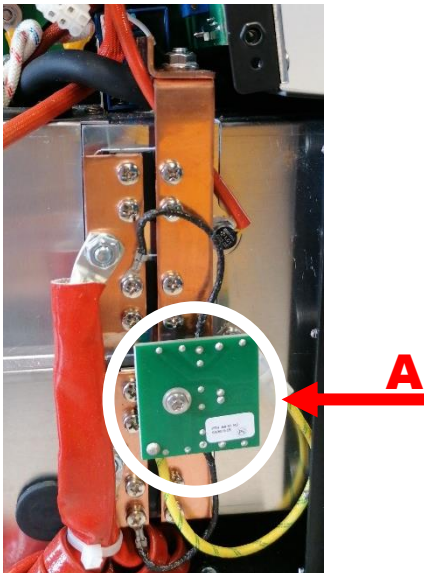
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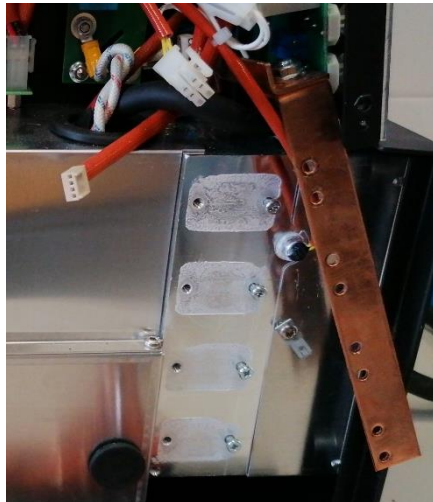
Section 2: Step for Replacing Diode Isotope.

- **Step 10: Remove the DIODES**
 - **(A) Remove snubber board (050.xxxx.0044)**
 - **(B) Remove the screws from copper bar.**
 - **(C) Remove the screws from the Diodes.**





- **Step 11: Clean the heatsink with alcohol.**

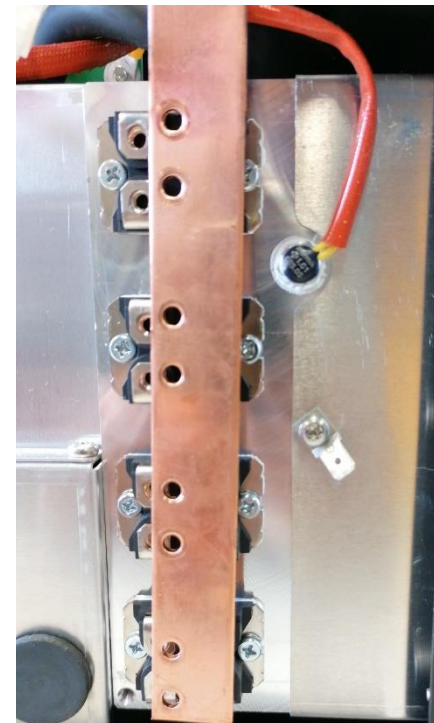
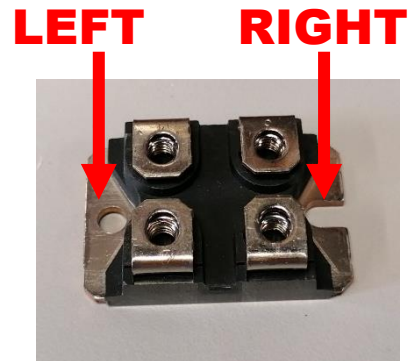
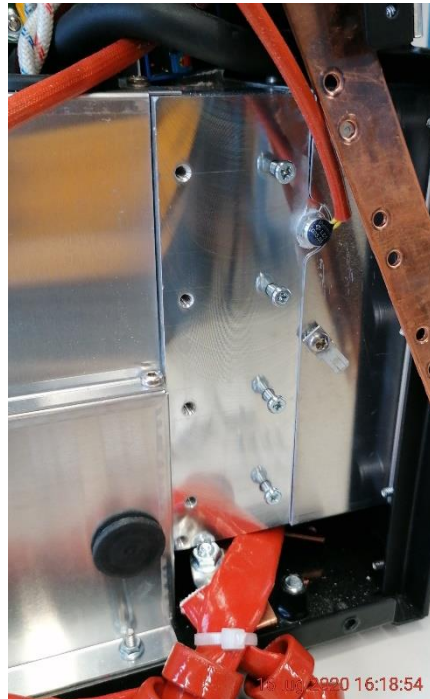




- **Step 12.1: Fix the diodes**

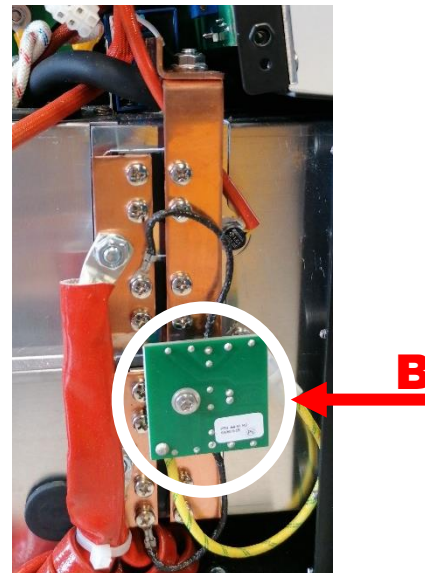
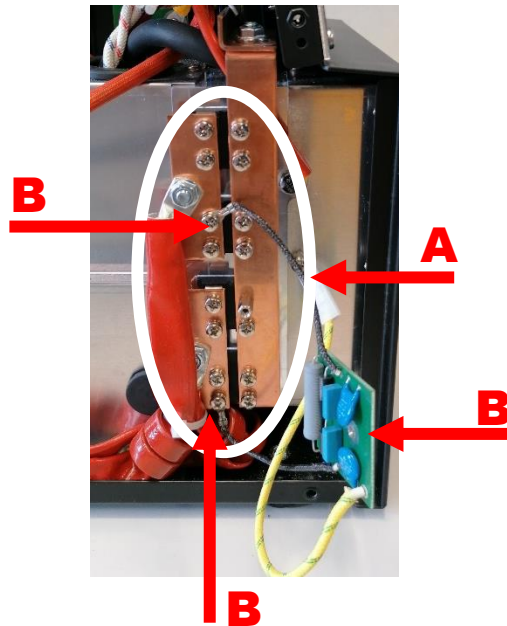
Put the thermal grease on the DIODES and fix it on the heatsink

(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).





- **Step 12.2: Fix the diodes**
 - **(A) Fix copper bar.**
 - **(B) Fix the snubber board (050.xxxx.0044).**



If the repair is finished, jump to step 14th.



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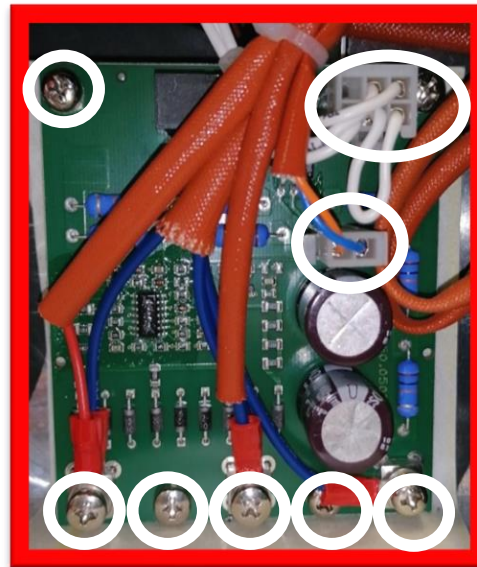
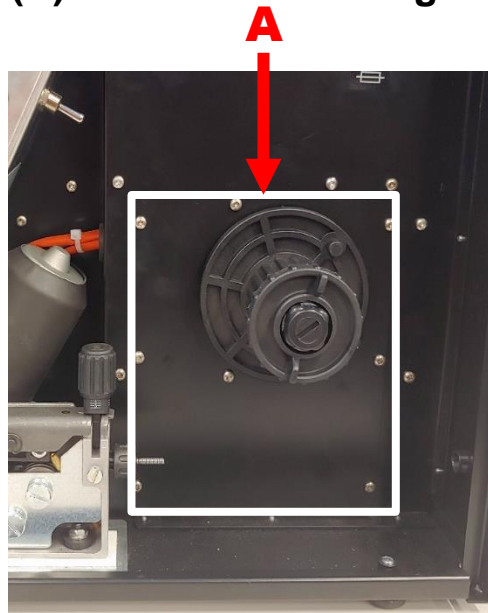
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Section 3: Step for Replacing TP Board (Three Phase Supply Protection Board).



- **Step 13: Replace the three phase supply protection board, 050.xxxx.0057**
 - (A) Remove the screws inside the white square.
 - (B) Disconnect the Wirings and remove all screws.
 - Replace the PCB.
 - (A) Secure the screws inside the white square.
 - (B) Connect the wirings on the PCB.



B

If the repair is finished, jump to step 14th.



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- **Step 14: Test the machine!**
Weld an electrode with 70 A and 160 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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