

Installation Instructions

Step 1 :

- DISCONNECT FROM POWER SOURCE!!!
- Remove portafilter
- Remove backflush pipe if present (fig. 1.1)
- Remove the flush tray
- Remove water tank lid
- Remove water tank



Fig. 1.1

Step 2 : Disassemble the machine

- Unscrew the 2 screws from the top lid (fig. 2.1)



Fig. 2.1

- Remove the upper lid (disconnect the ground wires)
- Before starting to remove any wires and disconnect any plugs it is best to take notes, make pictures and number all the plugs inside. This step is optional and it is required only if you intend to undo the modifications back to the original state at a later date.

Step 3 : remove all original cables and electronics

- We need to remove all original cables and electronics. (fig.3.1)
- Keep all the ground wires (green-yellow). You will need to cut some plastic ties to get them out. You need to mount them all back to the same position. (fig.3.1)
- Also keep the short grey wire above the boiler near the buttons. (fig.3.1)

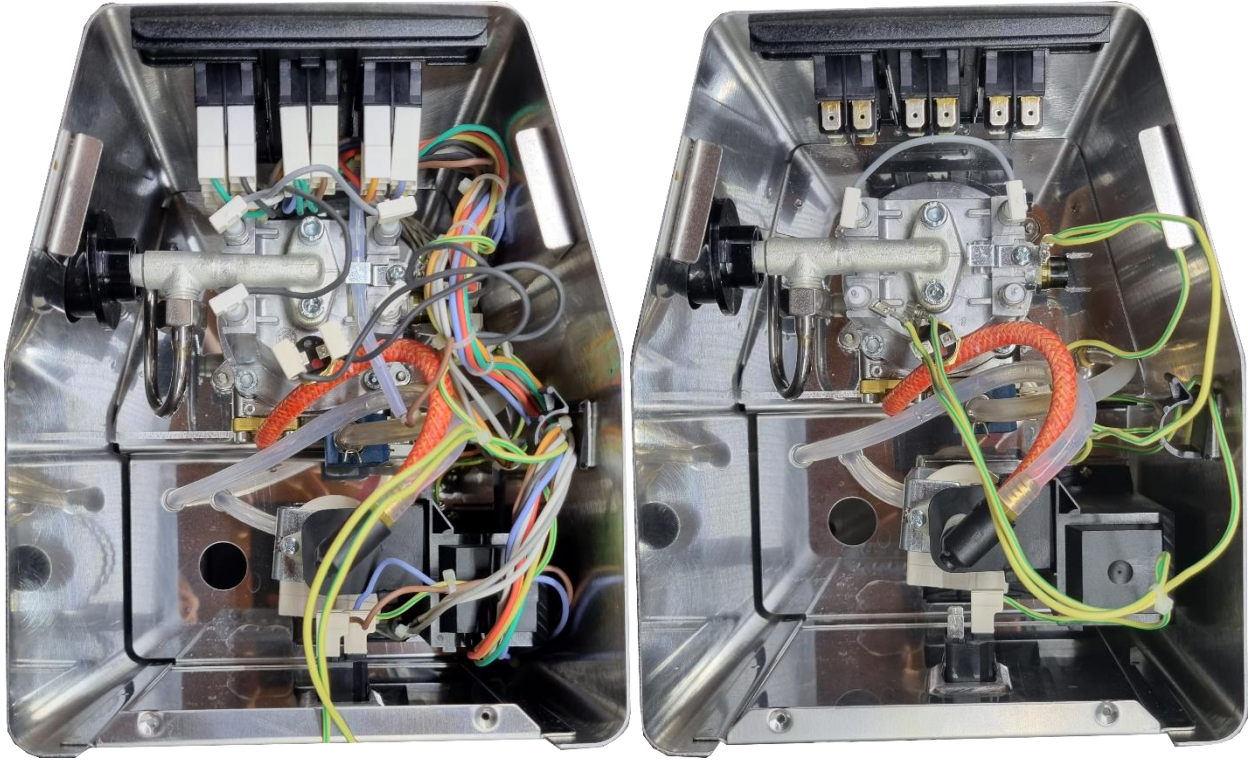


Fig. 3.1

- Uncoupling the connectors may not always be easy, act carefully, use a straight screwdriver in the lever where necessary and apply little force if needed.
- To remove the electronic board, you will have to remove the pump support. There are 2 screws at the base. (fig. 3.2)

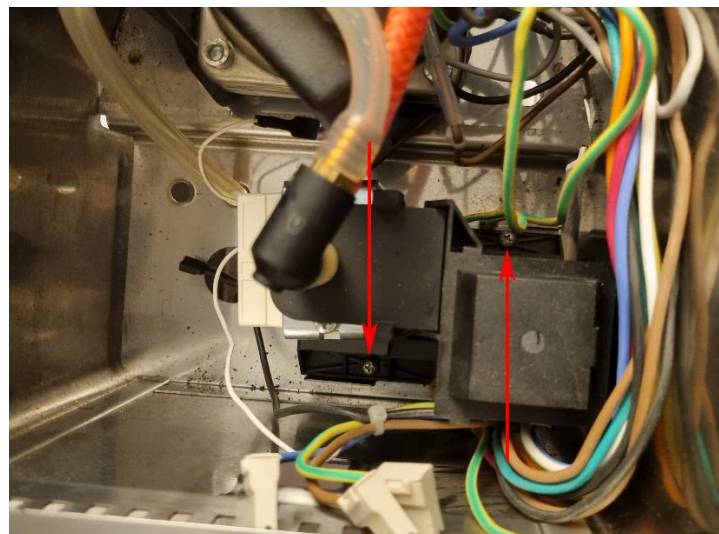


Fig. 3.2

- Remove the plastic stopper, remove the electronic board. (fig. 3.3)

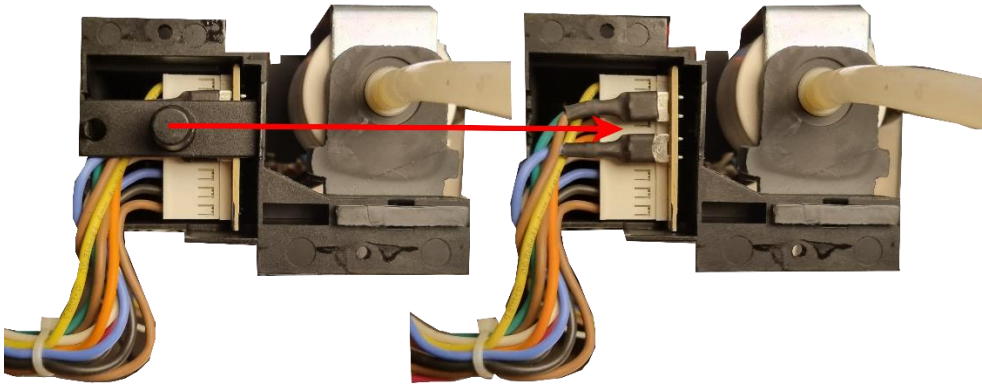


Fig. 3.3

- Refit the plastic stopper then screw the pump support back in place.
- Ensure that the grounding wires are left in their original place, otherwise connect them according to initial state. See Fig. 3.1.

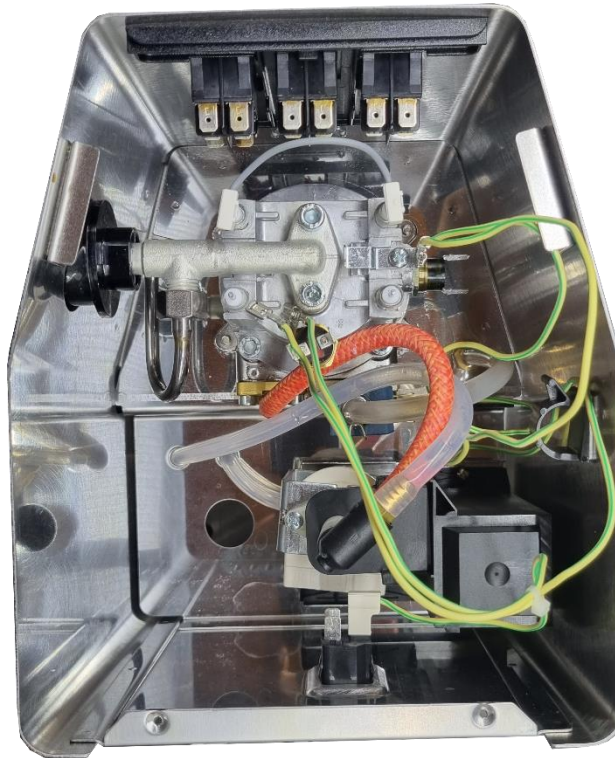


Fig. 3.4 – Step 3 final

Step 4 : Mount the electronics housing



Fig. 4.1

- You will mount the case on the back of the machine on top of the main power plug hole. (fig. 4.1.)
- Take out the power supply plug, you will need to put little force from inside by squeezing left and right side of the plug.
- Clean the exterior of the espresso machine around the power plug with acetone or alcohol.
- Get the main case from the package
- Remove all 4 screws and put aside the top lid
- Prepare to glue the case on the back on top of the hole. Aligning the power plug hole as best as you can
- Once you aligned the case and visualised the position take down the adhesive tape protections from the case and press firmly the case in place.
- Mount the removed power module in the new mounting hole on the mounted case (fig. 4.1).

STEP 5 : Mounting the display.

- Remove the 4 screws and open the display case (fig. 5.1) then detach the display by removing the 2 screws.

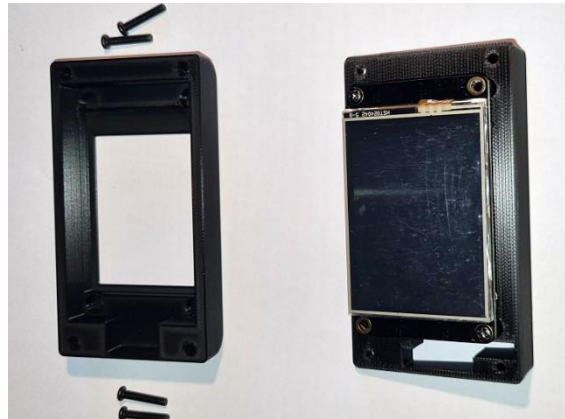


Fig. 5.1

- Remove the 3 red plastics of the LEDs from the inside to the outside. (fig. 5.2)



Fig. 5.2

- Clean the space between the buttons and the logo with acetone or alcohol.
- Take the bag with the display cable then insert one of the ends of the cable through the led hole in the middle. The hole is tight, you will have to place the wires to one side so that they are not twisted, then use a little force to push the plug through the hole, being very careful not to damage the wires. The plug will pass to the other side eventually. Afterwards, carefully check the plug and the wires and push the wires all the way into the plug. (fig. 5.3)



Fig. 5.3

- remove the adhesive tape protection and attach the display base on the front like in Fig 5.4



Picture 5.4

- install the display, route the cable and plug it in the display slot (fig. 5.5), mount the front display case and put back the 4 screws.



Fig. 5.5

- pass the cable through the interior of the coffee machine on one side (left or right) do not let the cable on top of the boiler, then exit with it to the main board case.
- Connect the cable to the main board (fig. 5.6)

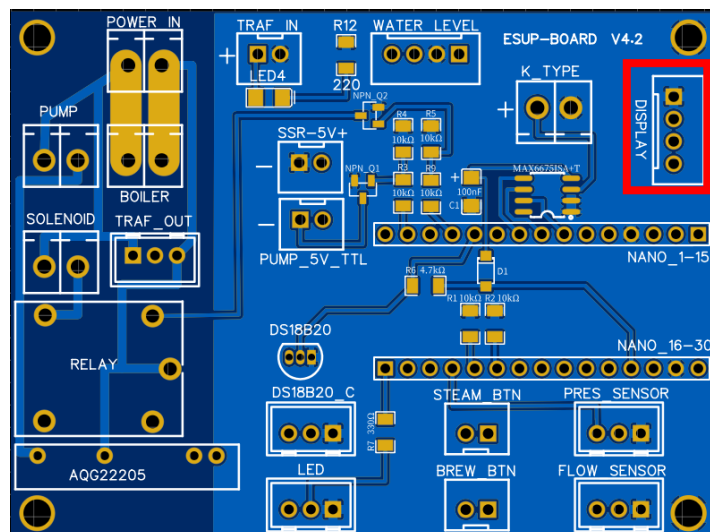


Fig. 5.6

Step 6 : Install Flow Meter sensor

- Take out the flow meter sensor from the package and prepare it for installation.
- You will glue the flow sensor in the left-down corner to the bottom. Clean the spot with acetone or alcohol then take out the adhesive tape protection and glue it on the floor like in (fig. 6.1)
- You need to split the bottom hose between the pump and the water tank .
- Take the hose and place it on top of the sensor along the sensor pipes. Mark the spot where you will cut the hose like in (fig. 6.2). Don't mark it to short. The hose has to be inserted all the way. Mark 0.5cm longer to be safe.
- Cut the hose with a scissors and insert the hose all the way into the sensor upper pipe (fig. 6.3).
- Take the provided new hose from the package and install it to the second bottom pipe on the sensor. Push it well all the way. Route the hose around the big hole and insert it in the small right hole. Take the upper hose and insert it in the second small left hole if you previous took it out (fig. 6.3)
- Pay attention to insert the hose in the flow sensor all the way and to position the hoses in such a way that they do not bend and obstructs the flow of water.



Fig. 6.1



Fig. 6.2



Fig. 6.3

- Take the sensor cable, connect it to the sensor then pass it through the hole to the main board and plug it to FLOW_SENSOR port (fig.6.4).

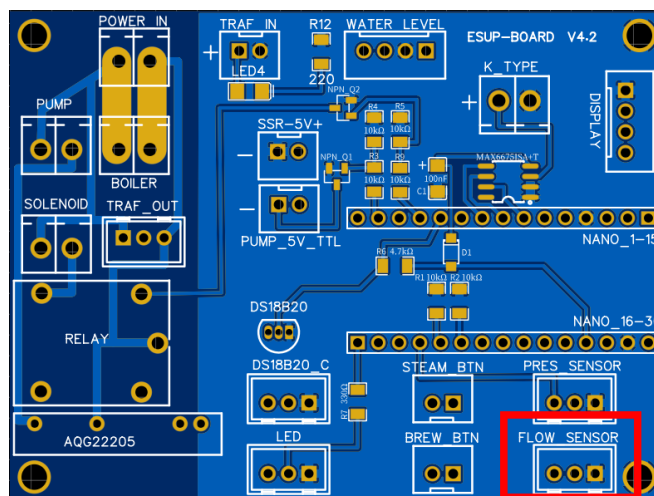


Fig. 6.4

Step 7 : Installing the Solid State Relay.

- Take out the relay and the SSR Cables from the package box.
- Connect the cables outside the case, then glue the SSR inside. Cable connections are better to be made before the mounting process because the access after will be harder.
- Connect the SSR -5V+ cable to the relay to 3-32VDC ports , brown to positive (SSR+) and white to negative (SSR-), then connect the remaining SSR 240V connectors to AC side (fig. 7.1)

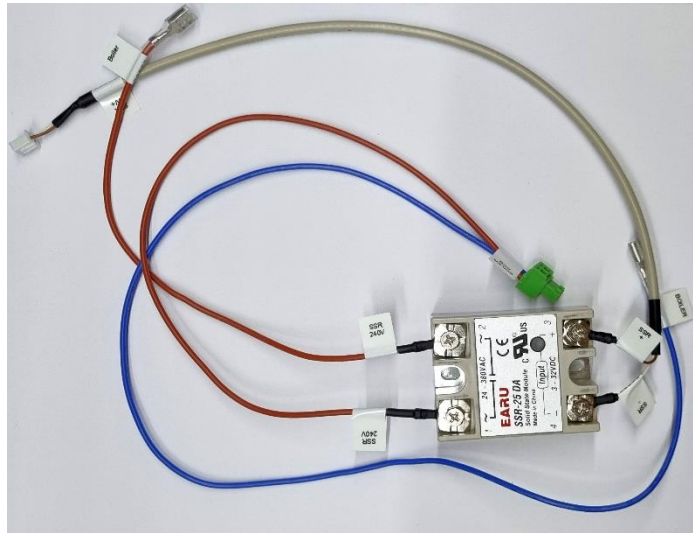


Fig. 7.1

- Prepare to glue the relay inside. Mounting position will be to the back left side at 3cm high from the inside floor and 5cm from the back, looking from the behind the machine. (fig. 7.2)

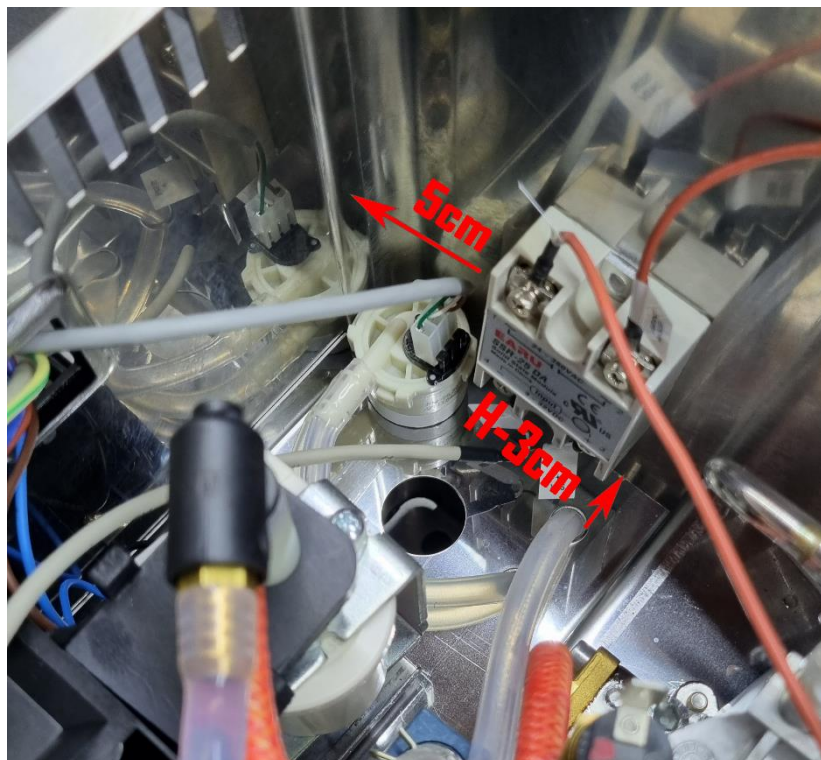


Fig. 7.2

- Once the position has been tested clean the spot, remove the adhesive tape protection and put the relay in place with the SSR -5v+ plugs down and press firmly.
- Connect the “SSR -5V+” and “Boiler PCB” to the main board (fig. 7.3).

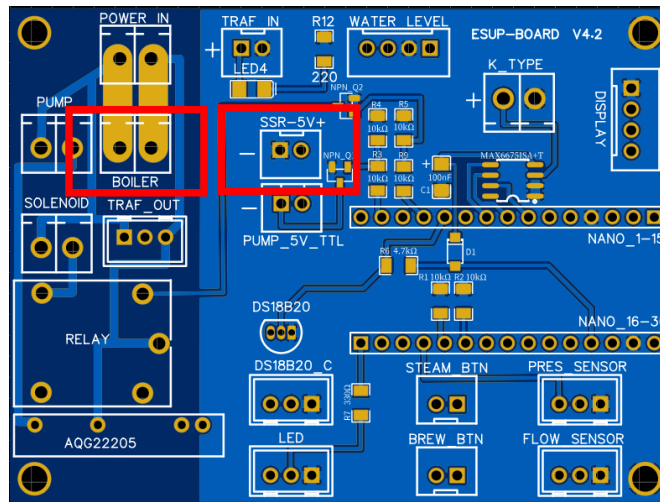


Fig. 7.3

- Connect the brown and blue wire boiler plugs. The plugs are not round like the original plugs but will fit OK. Make sure the plugs are well inserted and not lose you can tighten the connector with pliers for a firm contact if needed. (fig.7.4)

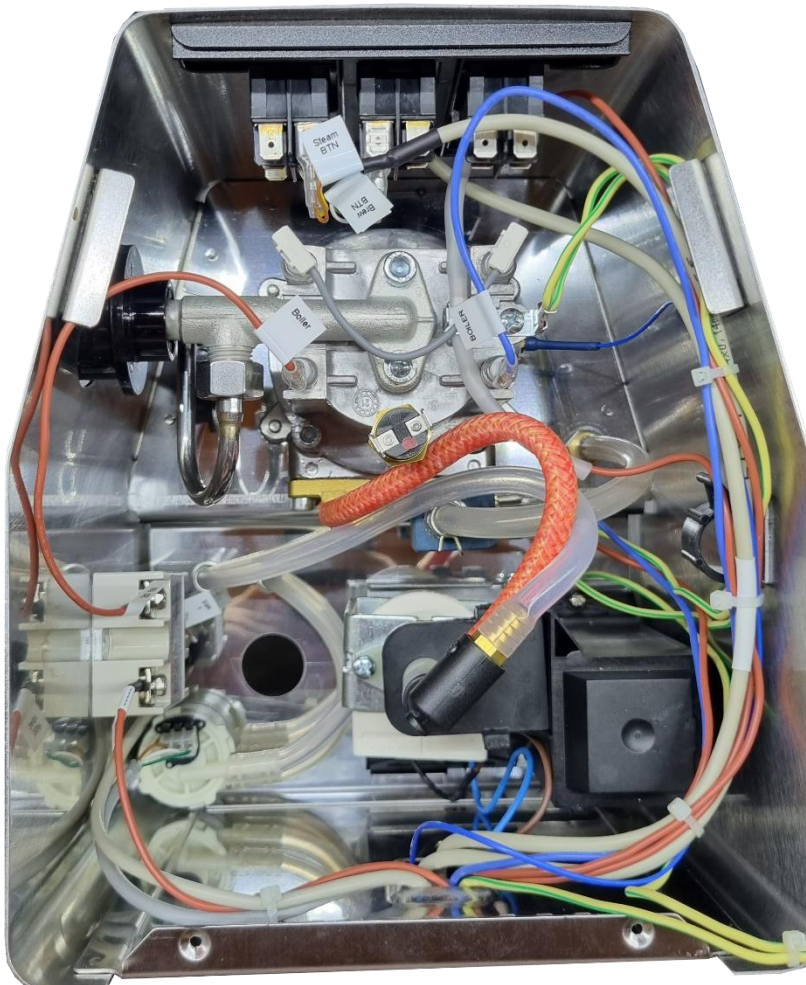


Fig. 7.4

Step 8 : Buttons Connections

- Take the BUTTONS CABLEs from the package and make connection between buttons panel and the main board like in fig.8.1.

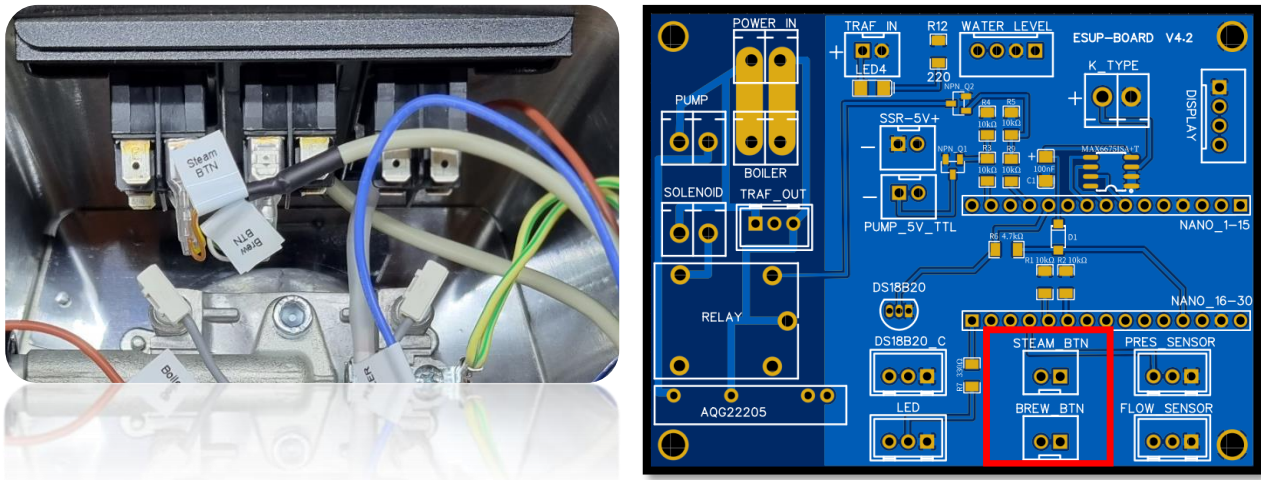


Fig. 8.1

Step 9 : Install K-Type temperature sensor

- Remove the right-side thermostat from the boiler using a 17mm wrench.
- Take the type-k temperature sensor from the package and make connection between the main board (fig. 9.1) and the temperature sensor hole left empty after the removal of the original sensor.

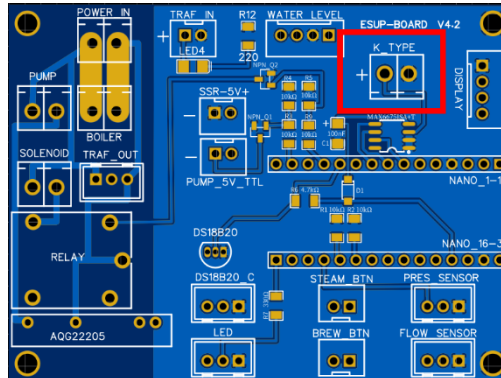


Fig.9.1

- Use the provided 3D printed tool for help with the M4 plug of the sensor (fig. 9.2). First screw the M4 sensor plug then pose the cable to main board case and plug it in.

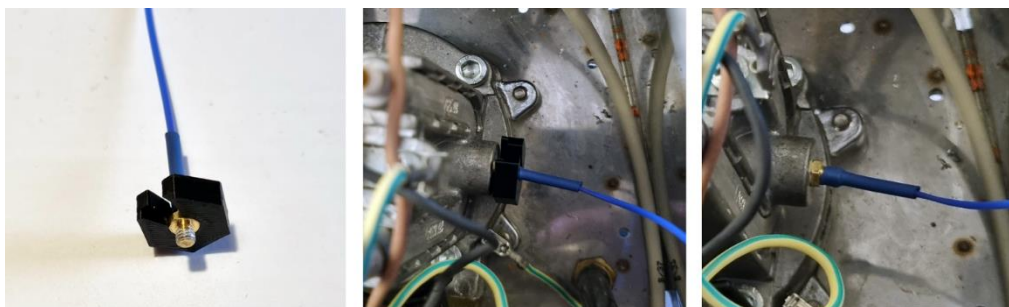


Fig. 9.2

Step 10 : Install the Power cables

- Take the POWER IN cable from the package. Connect the green plug to the POWER IN main board (fig. 10.1). Press firmly until you hear a click. Check twice, the connection need to be firmly otherwise damage may occur.

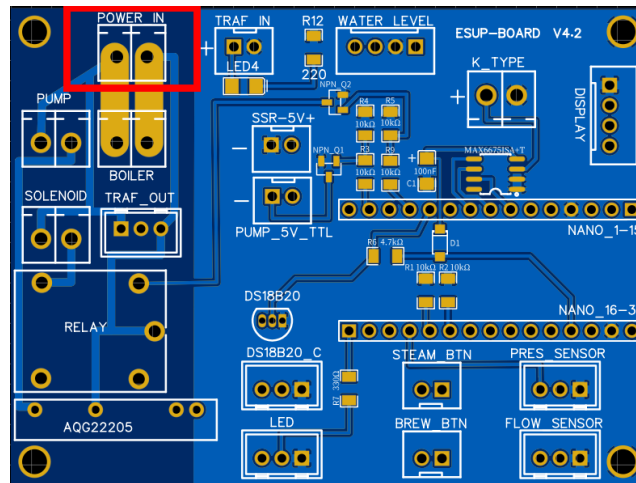


Fig.10.1

- Plug the POWER IN NULL wire into the original power module NULL IN.
- The other wire from the green plug need to go inside all the way to the front passing with the overheat protection over the boiler. Insert the temperature protection under the clamp (fig.10.2). Then return the wire and connect the POWER IN LINE to the original power module LINE IN

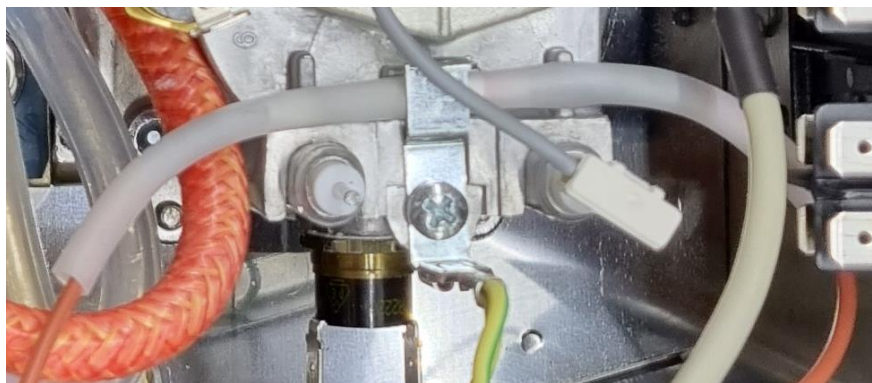


Fig.10.2

- Make sure that the ground wire is connected to the original power module, else connect it.

Step 11 : Install the Pump Cables

- Take PUMP cable and connect it from the main board to the pump (fig.11.1)

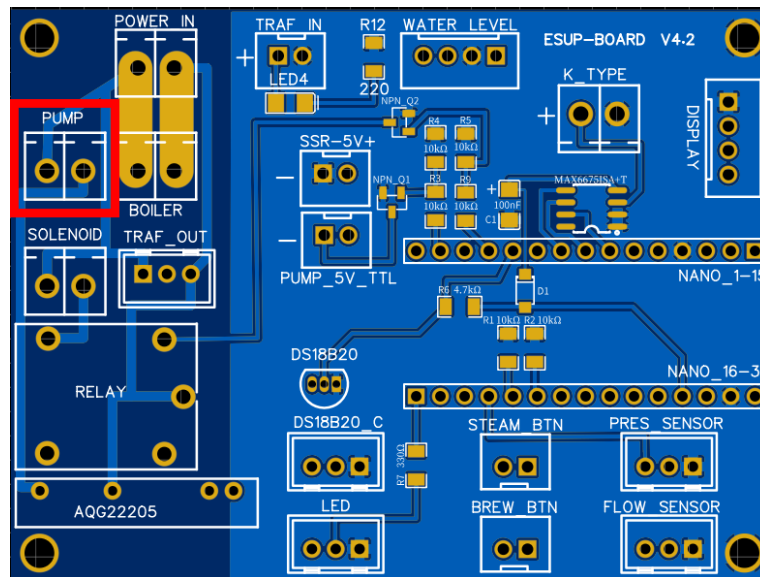


Fig.11.1

- Connect the 2 plugs on pump side and insert the overheat protection in the designated place on the pump. (fig. 11.2)

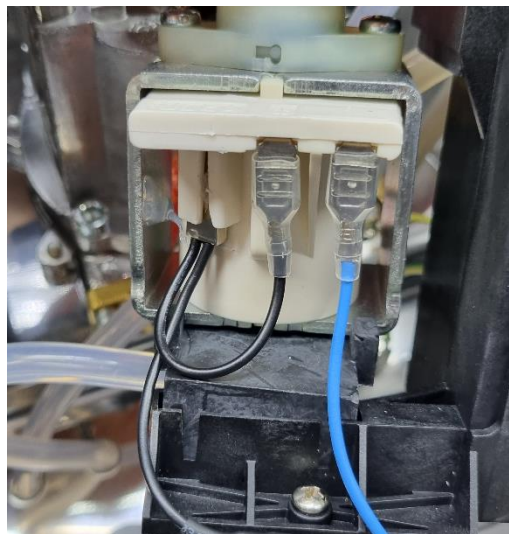


Fig. 11.2

Step 12 : Install the Solenoid Cables

- Take Solenoid cable and connect it from the main board to the Solenoid (fig.12.1)

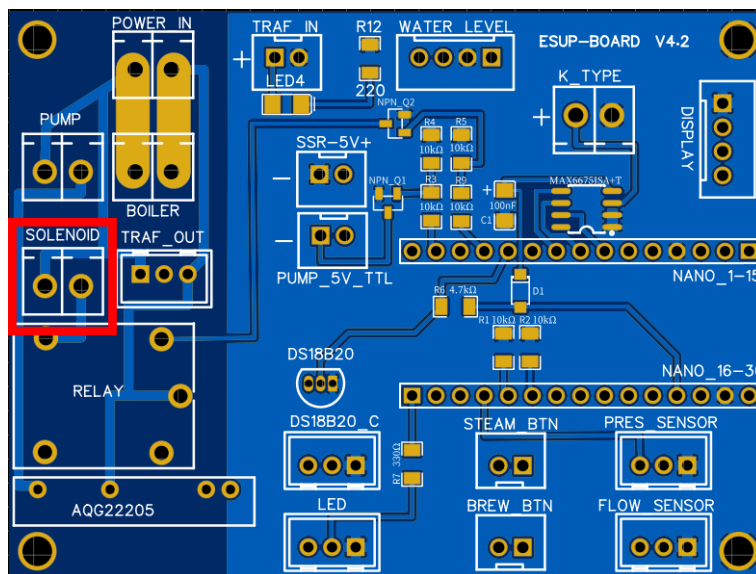


Fig.12.1

- Connect the 2 plugs to the Solenoid slots. (fig. 12.2)

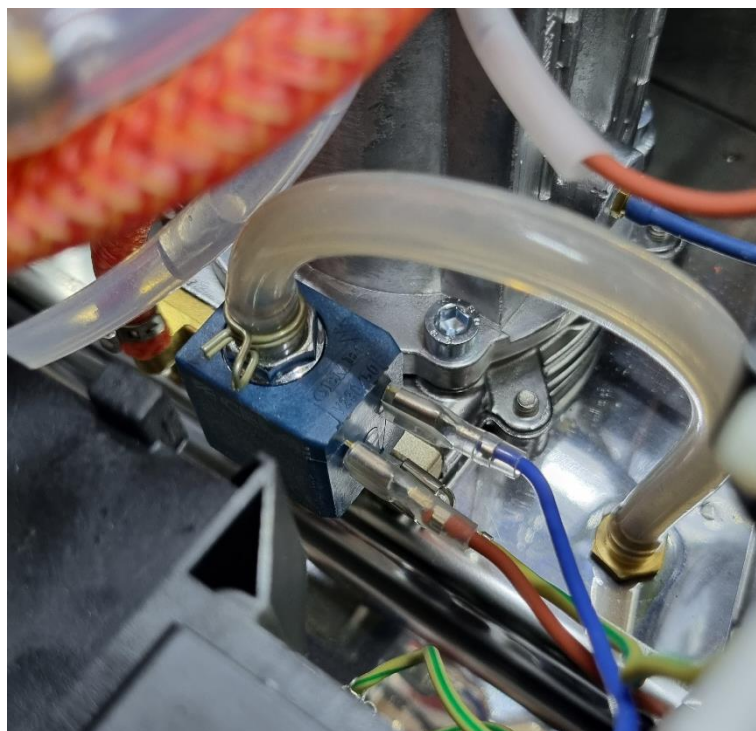
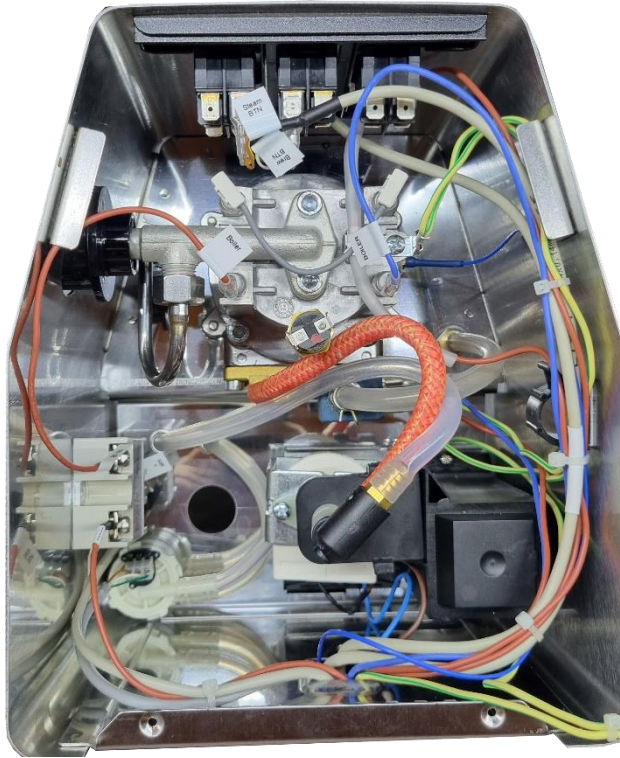


Fig. 12.2

Step 13 : The last check out.



- arrange the cables, position them on one side or the other, tie them with plastic ties, check all the plugs to be well connected, not lose and make sure they are insulated and not touching the case.
- Connect the ground wires back to the original position described in step 1.
- Connect the 2 ground wires to the top lid.
- Mount the top lid back and thread the 2 screws.

Warning!!! The coffee machine operates under high voltage and that can harm you. Check the connections twice and do not power up the machine without the top cover.

We cannot be held responsible by any harm you may experience because of bad installation or manipulation.

ENJOY!!!