



Easybox^{mini}

ASSEMBLY AND DISMANTLING GUIDE

esybox^{mini}

REQUIRED TOOLS



- VARIOUS-SIZE FLAT SCREWDRIVERS
- PHILLIPS SCREWDRIVERS, MEDIUM AND LARGE SIZE
- TORX SCREWDRIVERS, SIZE T20 AND T25
- ALLEN KEY, SIZE 10
- WRENCH, SIZE 13
- MULTI-GRIP PLIERS
- RUBBER HAMMER

DISMANTLING



Unscrew and remove all the plugs with the help of a large flat screwdriver





To unscrew the motor-access plug, use the size-10 Allen key



To remove the front cover, unscrew the two screws on the sides and the two on the bottom



DISMANTLING



Remove the front cover by lifting it carefully and unplugging the display flat cable



Unscrew the four screws in picture to remove the top cover



To remove the side covers, just pull sideways and upwards



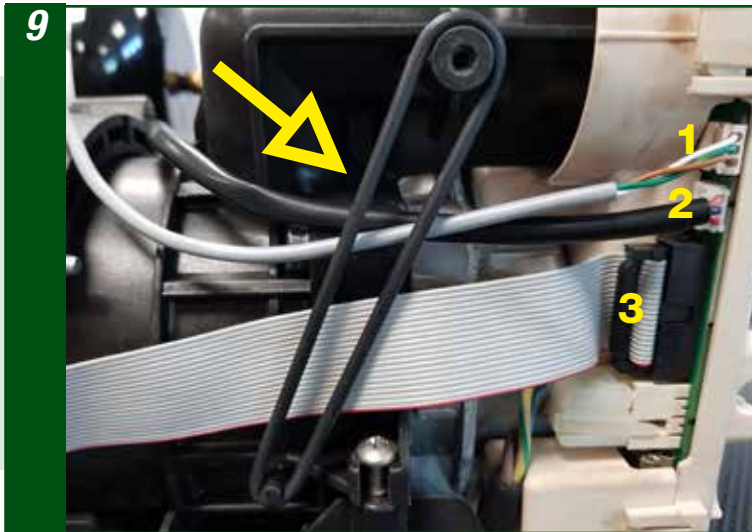
Remove the bottom cover, by undoing its screws



Finally, remove the back cover by unscrewing four screws (the two in picture and the symmetrical ones on the other side)

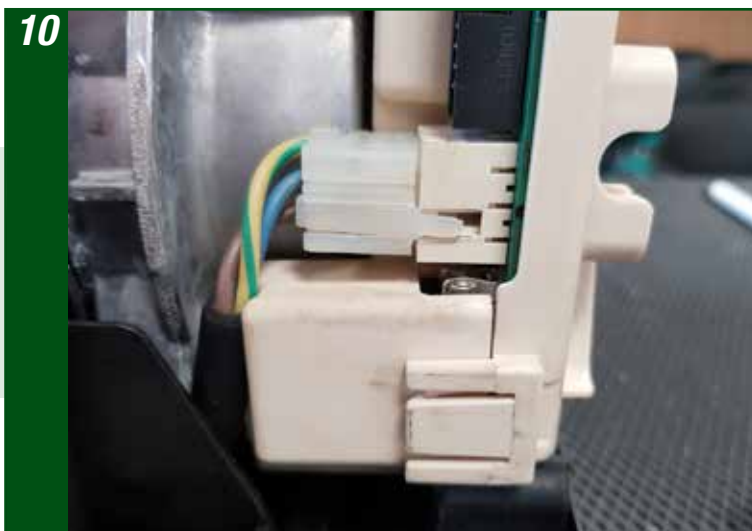


DISMANTLING



Pull off the o-ring in picture and keep it separated from the rest: due to its peculiar deformation

Unplug the connectors:
1-pressure sensor; 2-flow sensor; 3-display flat cable



Unplug the power cable connector by first lifting the plastic tooth highlighted in the picture



Remove the power cable, paying attention to the positioning (required for a correct reassembly)



11
a



Turn the connector counter-clockwise until in position

12



DISMANTLING



Unscrew the two Phillips screws and the two torx screws



Remove the connector with the help of a flat screwdriver, be careful not to damage the plastic parts; remove the main board block



Check the connector's condition and if necessary replace the o-ring



Unscrew the screw in picture



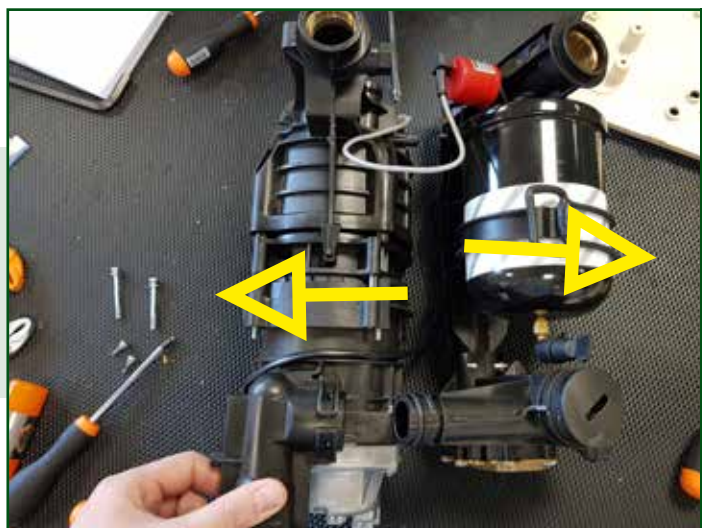
16

Pull out the klammer in picture



17

Separate the two main blocks by pulling them apart



18

DISMANTLING



Check the condition of the fittings



Remove (pull and lift) the rubber protection which keeps the expansion vessel in place



Pull out the klammer



Remove the expansion vessel just by pulling it out of its fitting



22

To access the non-return valve, unscrew the plug (keep it separate from the other plugs, since they have a different thread)



23

Remove the non-return valve by pulling it out with the help of the multi-grip pliers



24

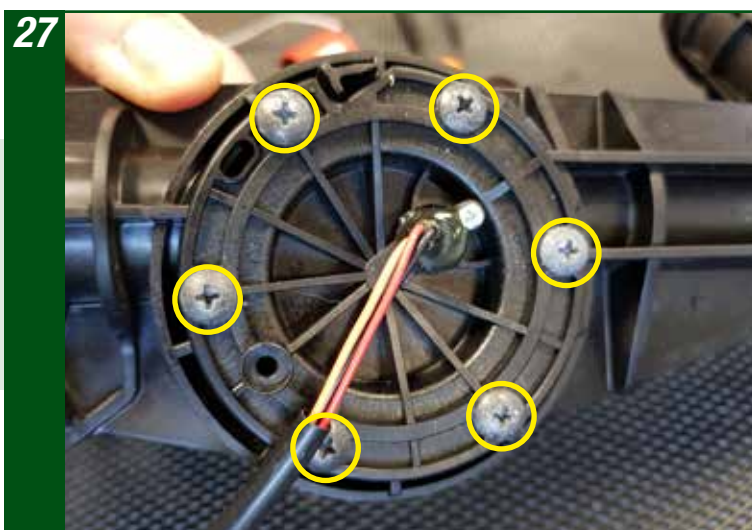
DISMANTLING



Check its conditions and, if required, replace the o-ring



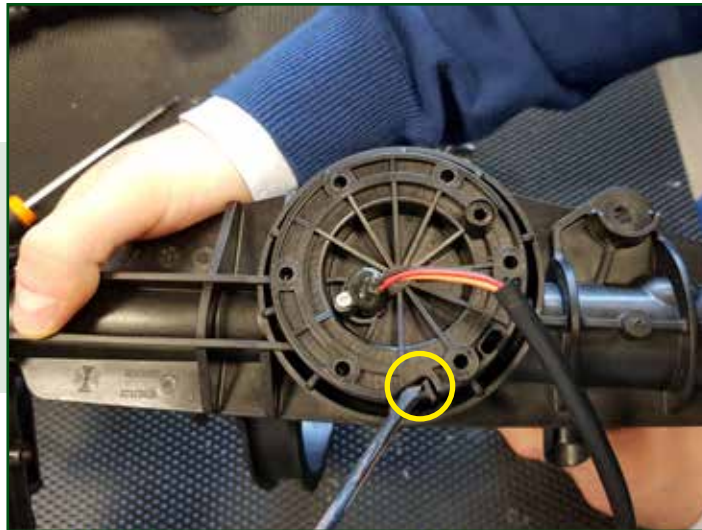
Remove the pressure sensor by unscrewing it (counterclockwise); if required, replace the o-ring



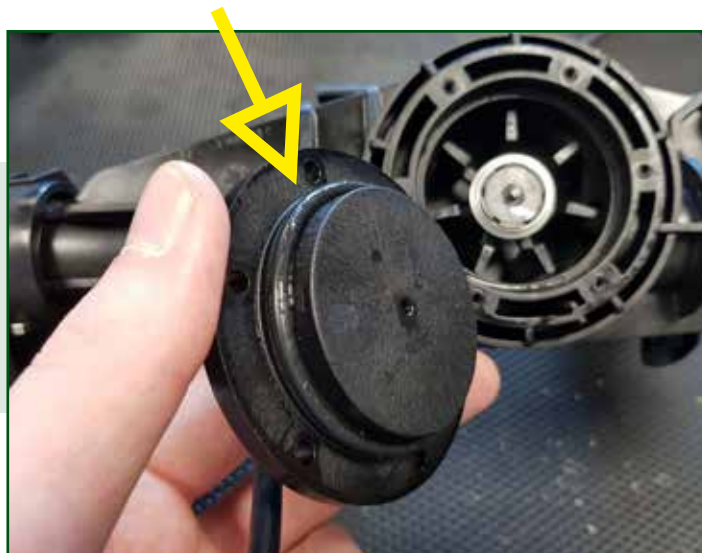
Unscrew the flow sensor's six screws



Take it off by pulling from the highlighted position with a flat screwdriver



Check/replace the o-ring
Remove the flowmeter



Unscrew the four torx



DISMANTLING



Remove the pump body (you will need the hammer and/or a flat screwdriver)



Unscrew the three torx screws to uncover the stages

NOTE: these three screws are torx screws in E.sybox Mini 3, while they are Phillips screws in any previous E.sybox Mini model



To undo the top nut, keep the shaft still with a flat screwdriver from the bottom, and unscrew the nut with the wrench (or vice versa)



33
a



33
b

Use 1 or 2 flat screwdrivers to lift the stages and remove them one by one. Lift from the diffusers edges and not from the impellers. Be careful not to damage the plastic.



34

DISMANTLING





Pull out the washer



35

Extract the mechanical seal and pull it out



36



36
a

DISMANTLING



Unscrew the 4 screws at the corners (see picture) and remove the two plastic bands



Extract the seal disc



Check the shaft for corrosion or other problems, check the seal disc o-ring



Use the T20 torx screwdriver to remove the four screws, then, with the help of flat screwdrivers, separate the motor body from the motor casing



Check the casing, the o-rings and the low part of the shaft



DISMANTLING



ASSEMBLING

NOTE: For an easier assembly, lubricate all the o-rings and gaskets.

Reinstall the motor cover by fastening its four torx screws



Insert the seal disc



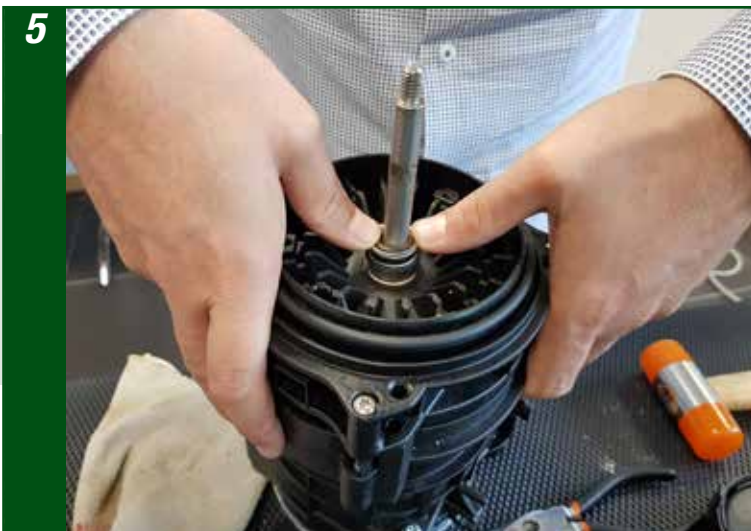
Put back the plastic bands as shown in picture



ASSEMBLING



Insert and fasten the four corner screws



Insert the mechanical seal in the shaft and push it well until it looks like in the next picture

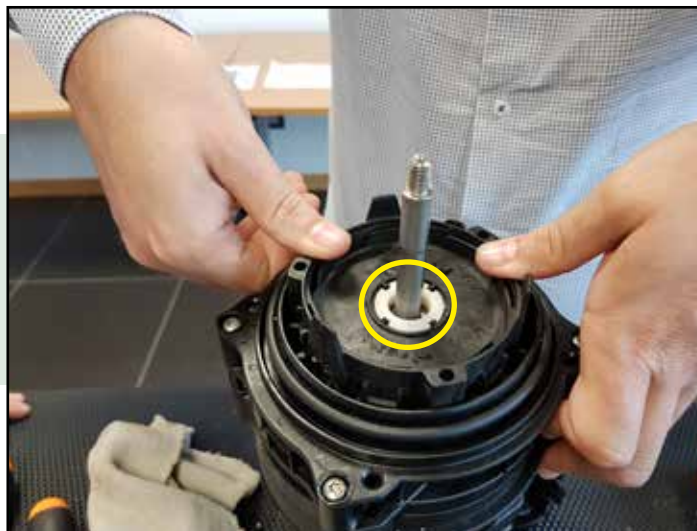




Insert the washer



Insert the first stage in the position shown in picture, making the highlighted parts match



Insert the impeller
Repeat for all the stages (3 total stages for E.sybox Mini 3, 2 stages for all the previous E.sybox Mini models)



ASSEMBLING

9



Put back the nut and its washer

10



Fasten the nut with the wrench, keeping the shaft blocked with a screwdriver at the same time

11



Put back the cover of the last stage



Check the o-ring, replace if necessary



12

Screw the three torx screws (Phillips screws if the model is older than Mini 3)



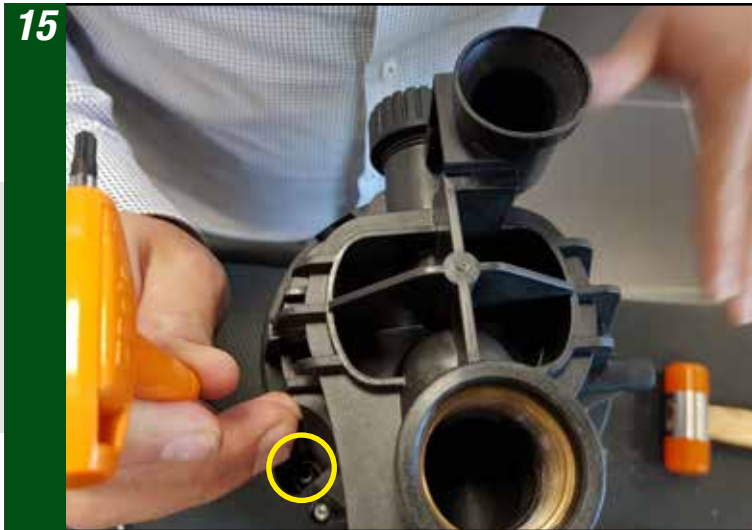
13

Put back the pump body so that the highlighted parts are on the same side, and push down well



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ASSEMBLING



Tighten the four torx screws of the pump body



For a tight and balanced fastening, screw the four screws a little at a time and following the order shown in picture

NOTE: Optimal torque range: 2.7 – 3.1 Nm



Tighten till the parts shown in picture touch



Insert the non-return valve and screw the plug (remember it is different from the external plugs)



18



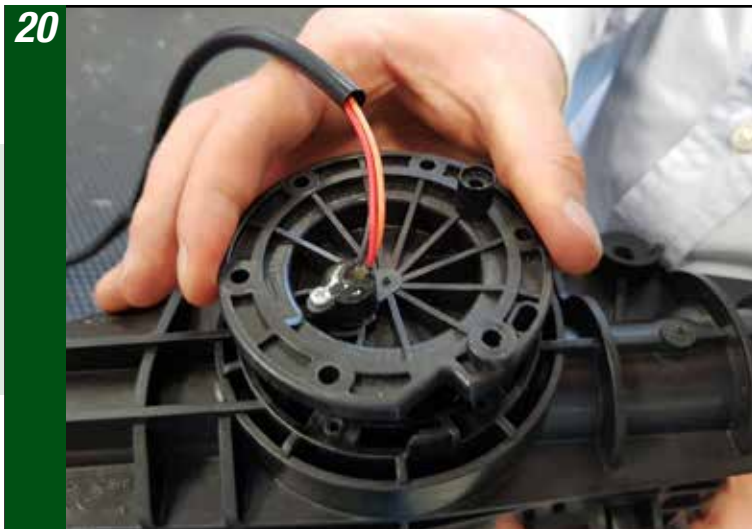
18
a

Insert the flowmeter

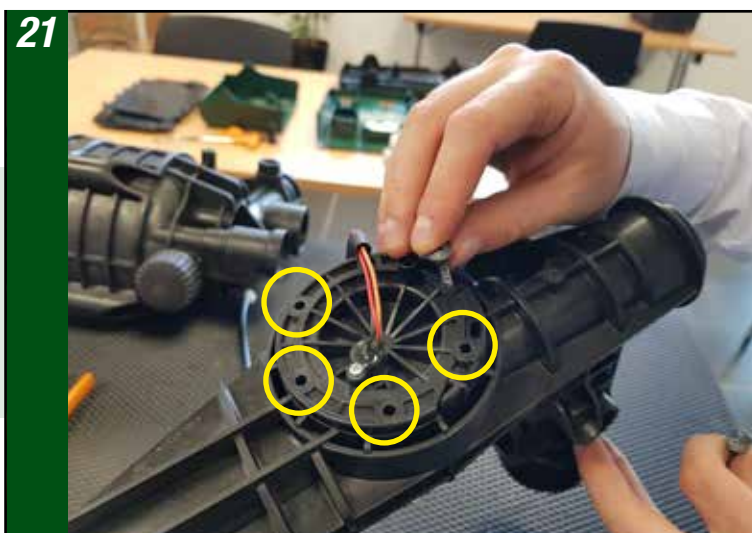


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ASSEMBLING



Put back the flow sensor in the right position



Screw its six screws



Screw the pressure sensor (clockwise)



Insert the pressure vessel through its own fitting



23

Place the vessel rubber protection



24

By using the pliers, secure the klammer back to its position



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ASSEMBLING

26



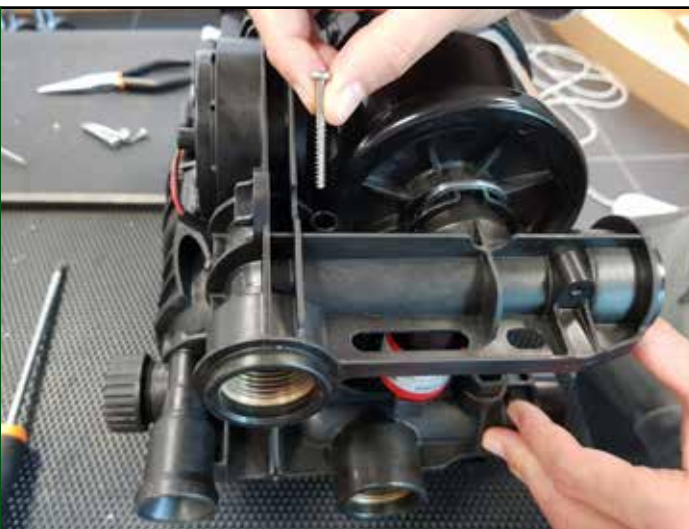
Gently hammer to insert the klammer completely

27



Reconnect the sensors block with the pump

28



Secure it with the screw shown in picture



Put back the klammer



29

Put back the pump's upper gasket
(replace if necessary)



30

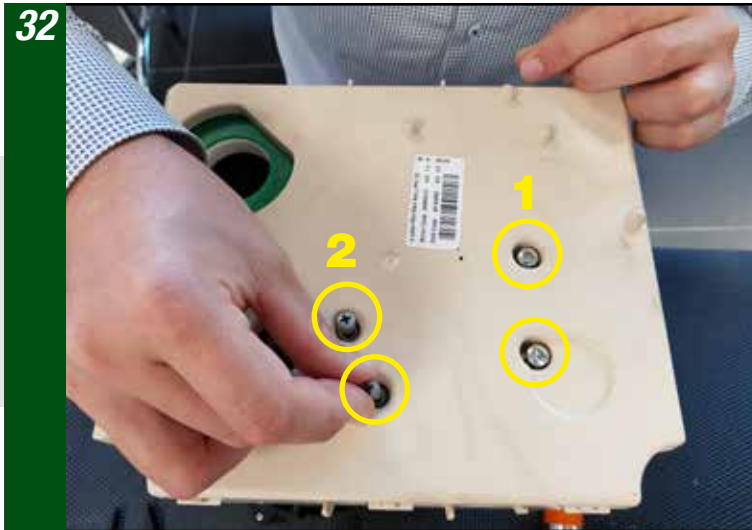
Position the main board correctly,
help yourself with the screws and
the pump body gasket

Apply a new layer of thermal paste
on the heatsink before reinstalling
the main board



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ASSEMBLING



Screw the two torx (1) and the two Phillips (2) screws



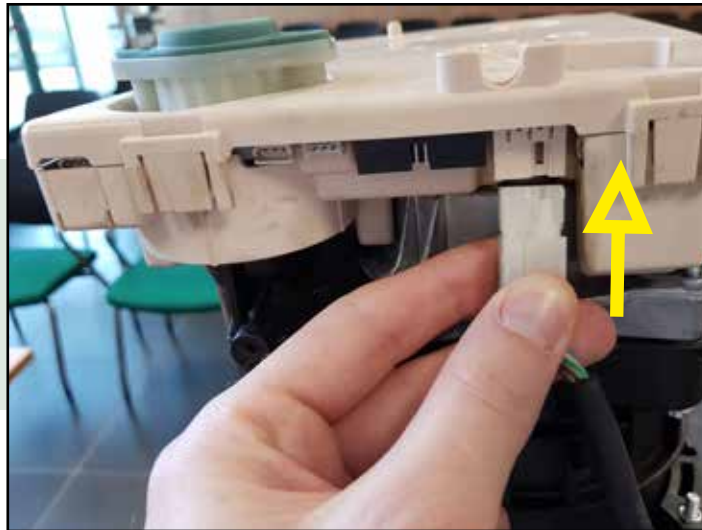
Place the connector in the position shown in picture and push down until it clicks



Turn 90 degrees clockwise



Insert the power cable connector

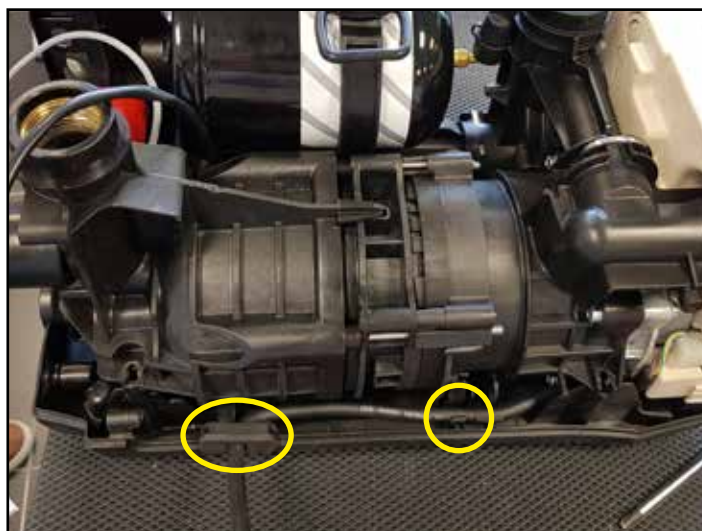


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Reposition the power cable correctly as shown in pictures

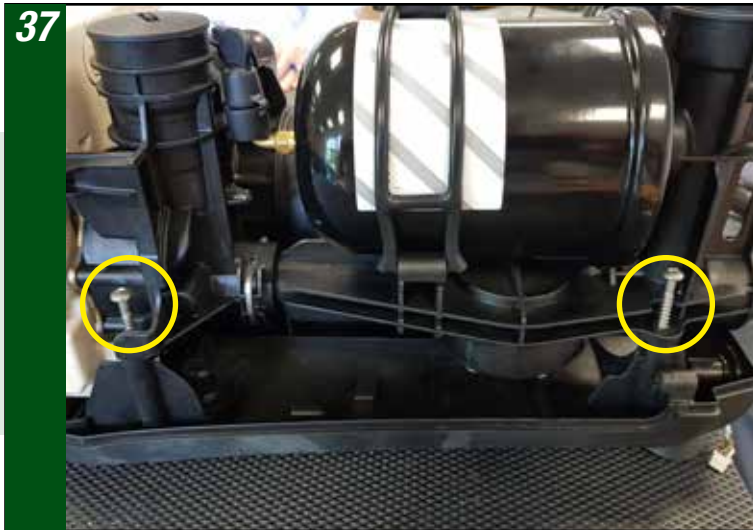


36

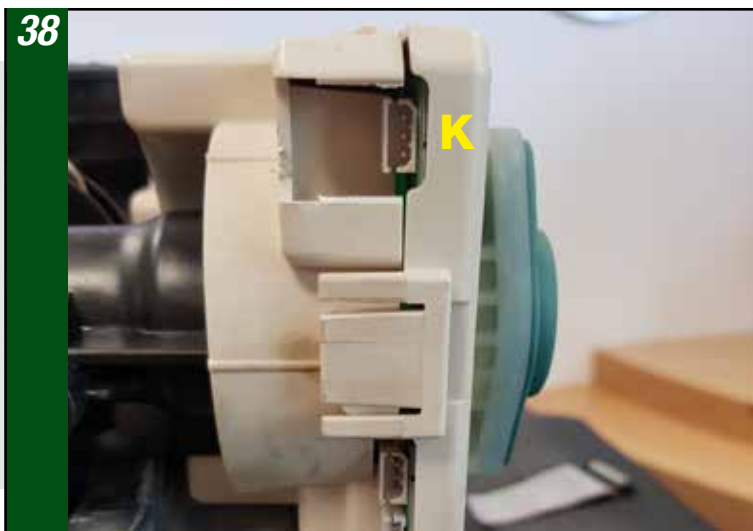


36
a

ASSEMBLING



Place the whole inside block on the back cover and secure it with its four screws (the two in picture and the corresponding ones on the other side)



Check the connections for dirt, oxide, etc before reconnecting all the components

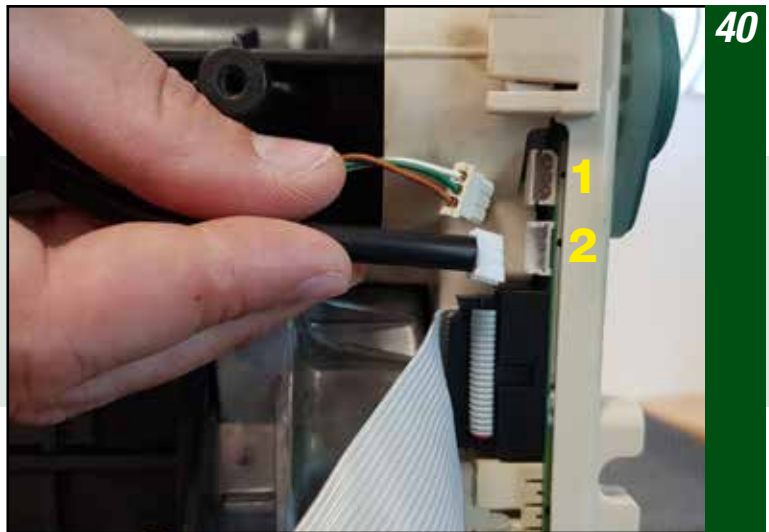
If present (KIWA version of E.sy-box Mini), reconnect the KIWA pressure sensor (K)



Plug in the display flat cable



Plug in the connectors of the pressure (1) and flow (2) sensors



Put back the specific o-ring (do not use other o-rings of the pump) and make sure it is positioned correctly, keeping all the cables inside



Put back the bottom cover, aligning it carefully to the main block



ASSEMBLING



Screw the four screws of the bottom cover



Insert the side covers, first pushing downwards and then sideways. Pay attention to the power cable position



Place the top cover



Screw all the plugs



46

Plug in the display flat cable to the display board connector, on the lower side of front cover



47

Put back the front cover



48

ASSEMBLING



Screw the two side screws (arrows) and bottom screws (circles) to secure the front cover



Screw all the plugs





Screw the motor-access plug by using the Allen key



51



51
a