

Models: C1050ES, C950ES

Replacing Control Unit

Greentherm



BOSCH

Technical Service Instruction

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1 Key to symbols and safety instructions

1.1 Key to symbols

Warnings



Warnings in this document are identified by a warning triangle printed against a grey background.

Keywords at the start of a warning indicate the type and seriousness of the ensuing risk if measures to prevent the risk are not taken.

The following keywords are defined and can be used in this document:

- **NOTICE** indicates a situation that could result in damage to property or equipment.
- **CAUTION** indicates a situation that could result in minor to medium injury.
- **WARNING** indicates a situation that could result in severe injury or death.
- **DANGER** indicates a situation that will result in severe injury or death.

Important information



This symbol indicates important information where there is no risk to people or property.

Additional symbols

Symbol	Explanation
▶	Step in an action sequence
→	Cross-reference to another part of the document
•	List entry
–	List entry (second level)

Table 1

5 Removing control unit

- ▶ Remove three Phillips screws on front of control unit (Fig. 4, pos. 1).

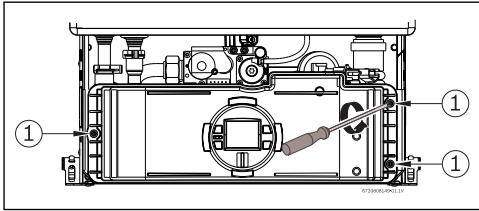


Fig. 4 Control unit front

- ▶ Turn control unit to expose the rear (Fig. 5, pos. 2).
- ▶ Locate and remove 6 Phillips head screws on back of control unit (Fig. 5, pos. 3).

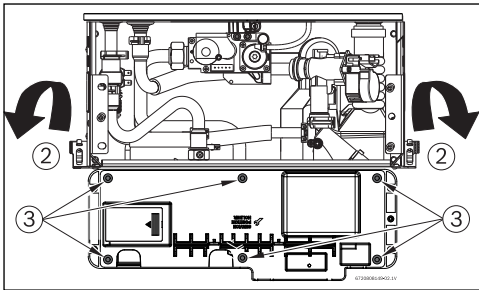


Fig. 5 Control unit rear

- ▶ Remove rear cover from control unit to expose circuit board electrical connections. Slide wire restraints out of rear cover (Fig. 6, pos. 1).
- ▶ Remove five electrical strip connectors by pulling them away from board (Fig. 6, pos. 2, 3 and 4).
- ▶ Remove two large ignition wires by pulling them outwards (Fig. 6, pos. 5).
- ▶ Remove yellow/green striped ground wire spade connection by depressing tab on connector and pulling it gently off the board (Fig. 6, pos. 6).
- ▶ Loosen two small flat head screws on terminal block for power cord. Pull black and white wires free from terminal block and control unit (Fig. 6, pos. 7).

- ▶ Remove Phillips head screw and remove green ground wire connection for power cord (Fig. 6, pos. 8).

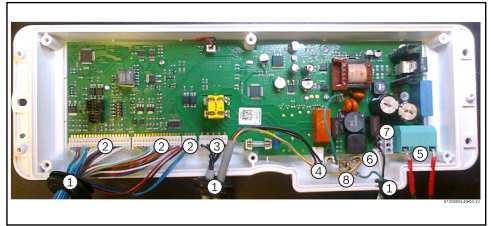


Fig. 6 Printed Circuit Board (PCB)

- ▶ Remove control unit from the water heater.











6 Replacing control unit

- ▶ Reverse the steps shown in section 5 to install new control unit.
- ▶ Take care to align the strip connectors properly. Do not force.
- ▶ If model is C950 NG the installation is complete.
- ▶ If C950 LP, C1050 LP or C1050 NG proceed to section 7.


7 Appliance configuration

- ▶ Based on your model and gas type, program configuration should be done as follows:

LP Appliances Only: C1050ES and C1050ES gas type configuration

1. Press ON/OFF button  into ON.
2. Press and hold simultaneously buttons  or  and  for 3 seconds, until display reads P2.
3. Use the  or  button on the control board to cycle through different programs modes available, until display shows P7.
4. Press  to enter P7 adjustment. Display should read 'NG'.
5. Use the  or  buttons on the control board to select "LP".
6. Once in the selected gas type of your choice, press and hold the  button for 5 seconds until display flashes.

C 1050 ES appliance power

- ▶ Jumpers must be installed to complete power selection but must be removed after completion.
1. Press ON/OFF button  into ON.
 2. The key symbol must appear on the display (Fig. 7). This mode allows appliance power selection.

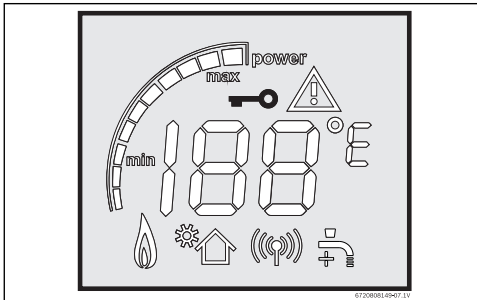




















Fig. 7 Key symbol

3. Press and hold simultaneously buttons  or  and  for 3 seconds, until display reads P2.
4. Use the  or  button on the control board to cycle through different programs modes available, until display shows AP.
5. Press  to enter AP adjustment. The current setting will appear on the display.
6. Use the  or  button on the control board to select 199.
7. Hold the  button for 5 seconds until display flashes to record power selection.

8. Press ON/OFF button to turn OFF the appliance.
9. Remove the jumpers from the PCB.

8 To confirm settings

1. Press ON/OFF button  into ON.
2. Press and hold simultaneously buttons  or  and  for 3 seconds, until display reads P2.
3. Use the  or  button on the control board to cycle through different programs modes available, until display shows P4.
4. Press  to enter P4 adjustment. The current setting will appear on the display.
5. Use the  or  button on the control board to cycle through different programs modes available, until display shows 2P, check if appliance power is 199.
6. Press ON/OFF button to turn OFF the appliance and back ON again to return heater to normal function.

Notes

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