

# Control Board Replacement Procedure

Models: Bosch BOVB 18 Heat Pumps



# BOSCH



**WARNING:**

- ▶ Improper servicing could result in dangerous operation, injury or property damage. The operations described below must be performed by qualified personnel.

**NOTICE:**

- ▶ Do not directly touch the components on the main board to avoid static electricity damage.

## Board Replacement Procedure (For BOVB-36HDN1-M18M)

1. Turn off power to both the indoor and outdoor unit and wait AT LEAST 3 minutes before removing the outdoor unit's control board access panel.



**WARNING: ELECTRICAL HAZARD 380 VOLTS DC**

- ▶ Wait 3 minutes after disconnecting power, then verify DC voltage is less than 43 VDC at inverter test points P-N. Components may store a dangerous electrical potential of 380 Volts DC. Failure to follow these instructions could result in personal injury or death.

**NOTICE:**

- ▶ Take a picture before removing any screws or wiring to use as reference when installing the new board.
- ▶ Use a screw driver instead of an electric screw driver/drill or damage to the control board may occur.
- ▶ **There is no need to disconnect the field supplied thermostat wires; directly remove the thermostat wire plug on the control board.**

2. Remove wires and plugs from control board.
3. Remove compressor wire plugs, ground wire plugs, and power wire screws (refer to Figure 1: items highlighted in purple, green, and blue).
4. Remove the 8 screws on the board (refer to Figure 1: items circled in yellow).

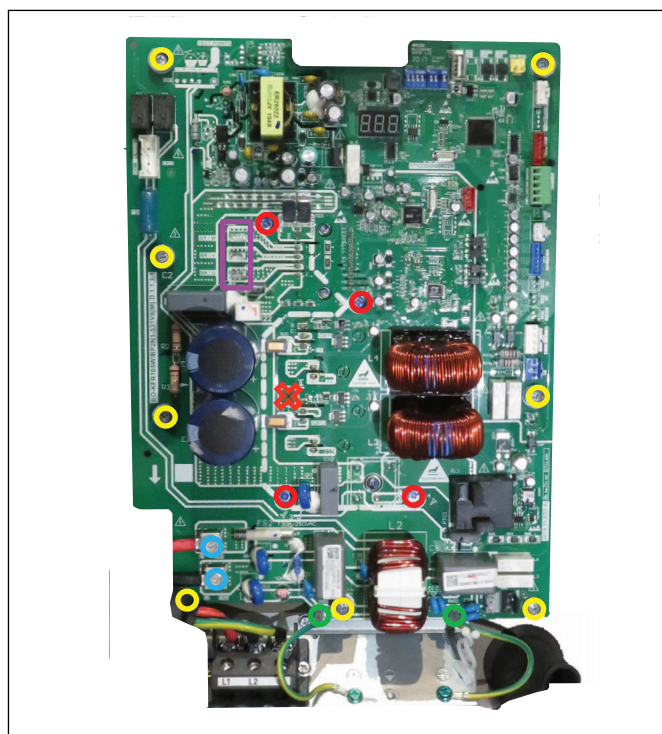


Figure 1

| Screw/Plug Type    |        |     |      |       |
|--------------------|--------|-----|------|-------|
| Color for Location | Yellow | Red | Blue | Green |

Table 1

5. Remove the 4 screws on the board (refer to Figure 1: items circled in red).

**NOTICE:**

- ▶ There are 4 different types of screws; they should not be mixed. Different screw types are installed in different locations. Refer to color coding in Figure 1 and Table 1 for appropriate screw type and location.

6. Insert a small flathead screwdriver in the vertical slot at the location marked with "X" in Figure 2. Twist the screwdriver to remove the circle piece from the board.

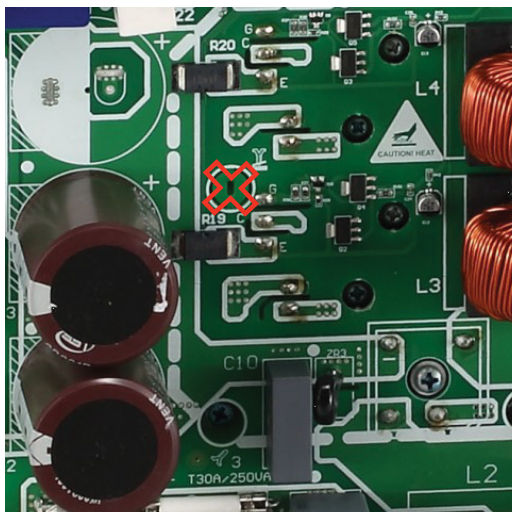


Figure 2

7. Insert screw supplied with the kit into the hole created in step 6 to help separate the control board from the heat sink attached to the unit. Refer to Figure 3, for field supplied screw.



Figure 3

- i** There is a small heat sink that always comes attached to the back of the new board.

8. Apply the thermal paste on the heat sink of the new control board (refer to Figure 4).

**NOTICE:**

- The full surface area of the replacement board's heat sink must be COMPLETELY covered with thermal paste. Failure to follow these instructions will cause poor heat dissipation and will lead to control board failure.

**Thermal Paste**

apply here



Figure 4



Two tubes of thermal paste are included with each board replacement.


9. Install the new board on the unit.
10. Fasten all screws (Refer to Figure 1 and Table 1 for screw type and location).
11. Reconnect the wires according to the wiring diagram (referencing the picture that was taken prior to removal of old board). (Note: CN11, CN25 do not have any wire connections.)
12. Check SW4/SW5/J2 dip switch positions. Refer to IOM or the picture you took.
13. Double check all wire connections and screw positions before powering on.

**NOTICE:**

- **SW4-1 and SW4-2 dipswitches should always be set to the "OFF" position.**

Board Replacement Procedure (For BOVB-60HDN1-M18M)

1. Turn off power to both indoor and outdoor unit and wait AT LEAST 3 minutes before removing the outdoor unit's control board access panel.



**WARNING: ELECTRICAL HAZARD 380 VOLTS DC**

► Wait 3 minutes after disconnecting power, then verify DC voltage is less than 43 VDC at inverter test points P-N. Components may store a dangerous electrical potential of 380 Volts DC. Failure to follow these instructions could result in personal injury or death.

**NOTICE:**

► Take a picture before removing any screws or wiring to use as reference when installing the new board.

► Use a screw driver instead of an electric screw driver/drill or damage to the control board may occur.

► **There is no need to disconnect the field supplied thermostat wires; directly remove the thermostat wire plug on the control board.**

2. Remove wires and plugs from control board.
3. Remove compressor wire plugs, ground wire plugs, and power wire screws (refer to Figure 4: items highlighted in purple, green, and blue).
4. Remove the 10 screws on the board (refer to Figure 5: items circled in yellow).
5. Remove the 6 screws on the board (refer to Figure 5: items circled in red).

**NOTICE:**

► There are 4 different types of screws; they should not be mixed. Different screw types are installed in different locations. Refer to color coding in Figure 5 and Table 2 for appropriate screw type and location.

6. Insert a small flathead screwdriver in the vertical slot at the location marked with "X" in Figure 6. Twist the screwdriver to remove the circle piece from the board.



Figure 5


| Screw/Plug Type    |   |  |  |  |
|--------------------|---|---|---|---|
| Color for Location |  |  |  |  |

Table 2

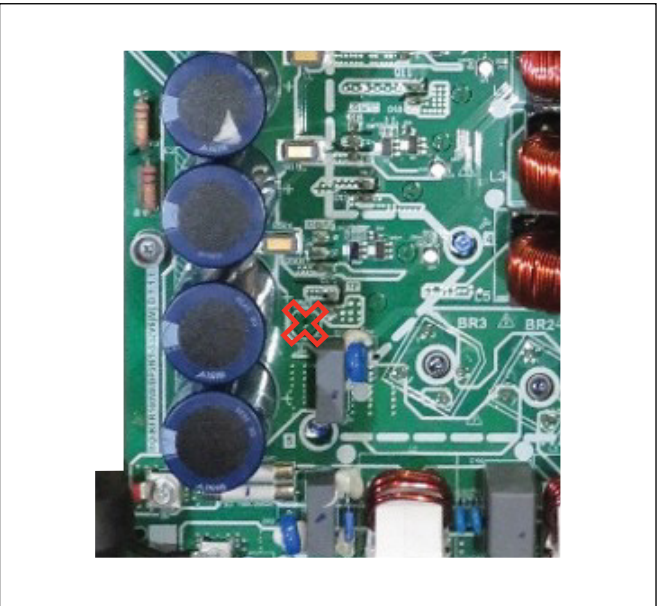


Figure 6

7. Insert screw supplied with the kit into the hole created in step 6 to help separate the control board from the heat sink attached to the unit. Refer to Figure 7, for field supplied screw.

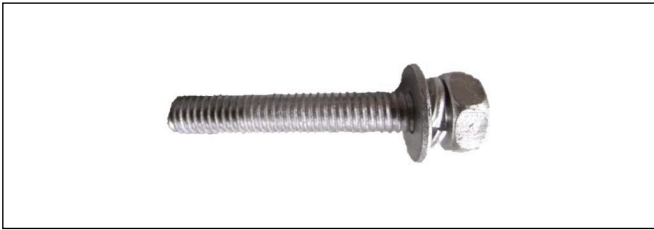


Figure 7

**i** There is a small heat sink that always comes attached to the back of the new board.

8. Apply the thermal paste on the heat sink of the new control board (refer to Figure 8).

**NOTICE:**

- The full surface area of replacement board's heat sink must be COMPLETELY covered with thermal paste. Failure to follow these instructions will cause poor heat dissipation and will lead to control board failure.

9. Install the new board on the unit.
10. Fasten all screws (Refer to Figure 5 and Table 2 for screw type and location).
11. Reconnect the wires according to the wiring diagram (referencing the picture that was taken prior to removal of old board). (Note: CN11, CN25 do not have any wire connections.)
12. Check SW4/SW5/J2 dip switch positions. Refer to IOM or the picture you took.
13. Double check all wire connections and screw positions before powering on.

**NOTICE:**

- The SW4-1 and SW4-2 dipswitches should always be set to the "OFF" position.

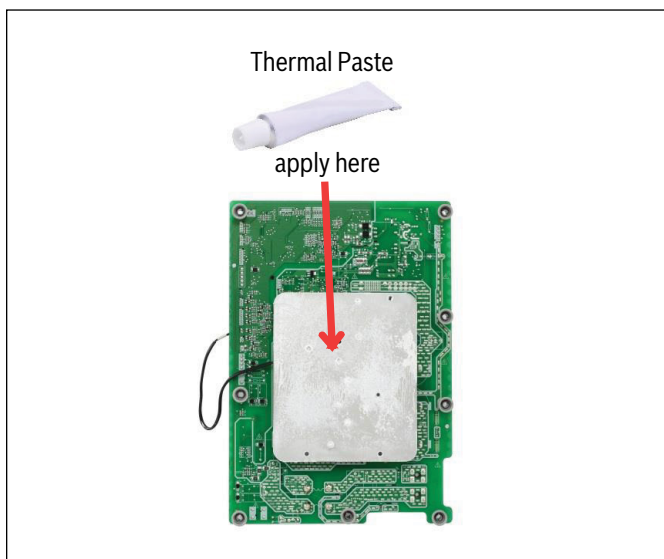


Figure 8

**i** Two tubes of thermal paste are included with each board replacement.



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