

P-242 Installing a V-10 touchscreen controller

IBC Part #	Description	Boiler Model
P-242	V-10 touchscreen controller installment kit	» All SL models » VFC Series: VFC 15-150, VFC 45-225

Danger

Installing and servicing boiler equipment, parts and accessories can be hazardous due to gas and electrical components. Only trained personnel should install or service heating equipment. When working on boiler equipment, observe precautions in the literature, on tags, and on labels attached to the unit.

For your safety, turn off electrical power supply at service panel and allow unit to cool before proceeding. Failure to do so can cause severe personal injury or death. The ability to properly perform service on this equipment requires certain expertise, mechanical skills, tools, and equipment. If you do not possess these, do not attempt to perform any service on this equipment. Failure to follow this warning could result in possible damage to this equipment, serious personal injury, or death.

Kit contents

- » 1 x Touchscreen boiler controller - 500-044
- » 1 x Control Cover - 250-591
- » 1 x Wiring Diagram Label - 080-123
- » 1 x Touchscreen manual - 120-198

Replacing a controller with the V-10 touchscreen controller requires the following:

1. Removing the old controller.
2. Installing the new touchscreen controller.
3. Wiring the touchscreen controller.
4. Programming and testing connections.

In addition to the following instructions, refer to the boiler's current *Installation and Operating Instructions* manual as well as the *V-10 Touchscreen Controller* manual.

i Note

The touchscreen controller has new features including electrical connections that differ from the 5 button controller (see the Electrical Ladder diagram on the back page).

1. Record all settings from the original boiler controller before beginning the replacement. For example, record settings in the *Installer Setup* menu, *Multi-boiler* menu, and *Load Pairing*.
2. Turn off the power to the boiler.
3. Remove the boiler's main door.
4. Remove the controller's right side electrical terminal block cover.
5. From the right side of the IBC board, unplug the orange and green terminal block connectors.
6. Remove the controller's front cover.
7. Remove the four Phillips screws securing the back plate of the IBC controller to the boiler cabinet (see figure 1).

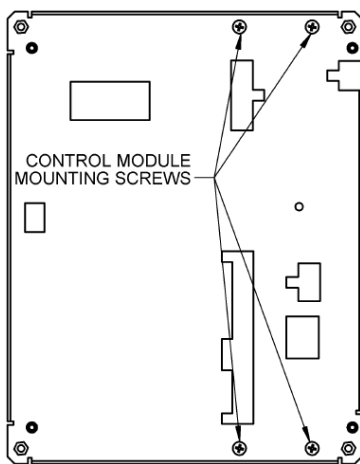


Figure 1 Removing the old controller

8. Hold the board in place as you unplug the connectors from the rear of the board.
9. Remove the controller board from the boiler.

Removing the touchscreen controller

1. Turn off the power to the boiler.
2. Remove the boiler's main door.
3. Remove the controller's right side electrical terminal block cover.
4. Unplug the P/V terminal strip and the two low voltage terminal strips. If connected, also unplug the Alarm terminal.
5. Swing out the controller to access the back side connections.
6. Unplug all the connectors from the rear of the board.
7. Lift up on the bottom-left corner of the controller and pull forward, removing the controller from the boiler.

Installing the new touchscreen controller

! Caution

Since static electricity can damage the electronic components on the boiler controller avoid touching the electronics.

If the boiler has a controller mounted on a swing-out door, you will need to swap the controller's mounting plate with the one attached to the controller being replaced.

Swapping the controller's mounting plate (if required)

1. Remove the front cover from the control board (4 Phillips screws).
2. Remove the five Phillips screws (see Figure 2). You will need to do this for both boards, starting with the old controller first.

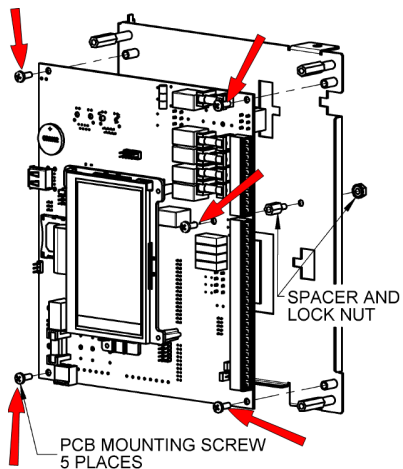


Figure 2 *Swing-out mounting plate*

3. Carefully lift the controls off the mounting plates.
4. Place the screen control onto the swing out door style control mounting plate, and reinstall the 5 screws. The screws should not be over tightened.

5. For swing-out style controllers:
 - a. Install the controller by inserting the swing-out back-plate pivot tabs into the corresponding holes in the controller's connections box, upper tab first.
 - b. Plug the four connectors into the back of the board.
6. For older IBC boiler models:
 - a. Remove the front cover from the new controller.
 - b. Support the board as you plug the four connectors into the back of the board.
 - c. Screw the back-plate of the controller to the cabinet of the boiler using the four Phillips screws previously removed with the old controller.
 - d. Replace the new front cover of the controller.

Wiring the touchscreen controller

If replacing a touchscreen controller board, the field wiring terminal strips can plug into the new control board without moving the wires over to the new terminal strips.

When moving the wires from the old green and orange terminal strips to the new terminal strip, either move the wires over one at a time or label all the wires as you disconnect them from the old terminal strip so that they are not mixed up during transition to the new touchscreen controller.

1. Using a flat blade screw driver, move the line and neutral wires from the green terminal block to the corresponding position on the upper terminal block for the new controller.
2. Move the wires from the orange terminal block to the corresponding positions on the low voltage terminal block on the new controller.

Note

The new controller requires the Therm. 1, 2, 3 or 4 connections to be wired slightly differently from the way in which the old controller was wired. See the Electrical Ladder wiring diagram on the back page.

3. Check that the high voltage terminals are **not** wired into the low voltage wiring block.
4. Replace the electrical cover on the right side of the controller.
5. Restore power to the boiler and replace the boiler's main door.

The new controller takes 90 seconds to come on line.

6. If you are replacing a 5 button controller, place the new Electrical Ladder Diagram sticker on the inside of the boiler's main door.

Programming and testing connections

Note

To avoid damaging the controller's touchscreen, use a stylus or clean finger.

After powering up a boiler with a brand new touchscreen controller, you will need to select the correct boiler model number from the list provided on the screen. You will find the model number on the boilers Rating Plate.

1. From the list, carefully choose the correct model number. and then press the "Save" button in the bottom left corner of the screen.

Warning

Important: Do not tap the "Start" button to run the "Self Test". This is for IBC staff use only.

If you select the "Start" button the control will attempt to perform the test and FAIL. Then you will be returned to the previous screen where you must choose the correct boiler model number and press "Save".

2. Program the controller with the settings that you recorded from the previous controller. Alternatively, you can use the "Express Setup" function to set up the boiler.
3. Check that the boiler has registered the thermostat connections correctly along with the correct load types and settings.
4. Check that all pumps operate as with the previous controller.
5. On the **Diagnostics** screen, check the temperature sensor and pressure sensor readings.

V-10 Touchscreen controller - Electrical wiring diagram

