

P-242C V-10 Touchscreen Controller Installation - VFC, SL, EX, VX, CX



Warning

This replacement kit shall be installed by a qualified service agent in accordance with these instructions and all applicable codes and requirements of the authority having jurisdiction. If the information in these instructions is not followed exactly a fire, an explosion or production of carbon monoxide may result causing property damage, personal injury or loss of life.

The qualified service agency is responsible for the proper installation of this kit. The installation is not proper and complete until the operation is checked as specified in these instructions.



Caution

Static electricity can damage the electronic components on the boiler controller. Avoid touching the electronics.



Note For Units Utilizing the 5-button Controller

All SL 20-115 and those SL-20-115 G2, SL 80-399 and VFC-series boilers built before 2014 use a 5-button controller. Replacing a 5-button controller requires a new chassis. If you require:

- » the fixed backplate and front cover *as well* as the board, please also order [P-279](#) instead of P-242C
- » *only* the fixed backplate and front cover, please order [P-280](#).



Note

If this installation concerns a CX model, the CBI board will need to be reutilized from the CX boiler. If this CBI board is not reusable, please order [P-1616](#).

P-242C Kit Contents

Control Board - VFC, SL, EX, CX, VX			
	Part #	Description	Quantity
	500-251	V15 PCB Controller Assembly	1
	150-457	Washer #6, Retaining, Nylon	4
	150-014	Screw, Panhead, Phillips,ZN, 6-32 x 3/8	10
	251-234	Controller Connector Retainer	1
	080-234	Boiler Rating Label	1

Installation Notes

Replacing a controller with the V-10 touchscreen controller involves the following steps:

- » Removing the old controller.
- » Installing the new touchscreen controller.
- » Wiring the touchscreen controller.
- » Programming and testing connections.

When to Install the P-242C V-10 Touchscreen Controller Kit

Install the P-242C kit when you need to replace a failed or damaged V-10 Touchscreen Controller



Note

A ladder or step may be required to have a clear vertical view of the work area.

Do not attempt to remove the assemblies without a clear view, as damage to the connectors, screws or refractory may occur.

Replacement of the V-10 Touchscreen Controller



IMPORTANT

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*.

Preparing the Boiler for Servicing

1. Remove call(s) for heat.
2. Remove power to the boiler at a wall switch or a breaker.
3. Shut off gas supply to the boiler.
 - » Do not drain the boiler unless freezing conditions are expected during this procedure.
4. Allow the boiler to cool down.
5. Remove the front panel and set aside.

Removing a Touchscreen Controller

1. Remove the controller's right side electrical terminal block cover.



Note

Do not remove wires from any terminal strips.

2. Unplug the P/V terminal strip and the two low voltage terminal strips by firmly pulling to the right.
 - » If connected, also unplug the Alarm terminal located at the bottom of board, under controller cover.
3. If applicable, swing out the controller to access the back side connections.
4. Remove any retaining brackets that may be securing the connectors to the rear of the board.
 - » If applicable, remove the screws in the top right and bottom right of a fixed back mounting plate that are securing the plate to the cabinet.
5. Unplug all the connectors from the rear of the board.
6. Lift up on the bottom-left corner of the controller and pull forward to remove from the boiler.

Installation and Start-Up Procedure



Note

If the boiler has a controller mounted on a swing-out door, follow the procedure for [Swapping the Controller on page 4](#). Otherwise proceed to [Installing Replacement Touchscreen Controller on page 5](#)

Swapping the Controller

1. Remove the four screws that secure the control board to the front cover.
2. Remove the five screws off the original board (*Figure 1*).
 - » **FOR CX CONTROLLERS ONLY:**
 - » Remove the two screws (2) from the back of the control board before removing the back plate and the CBI connector (1) from the original board.
 - » Remove the screw (3) and retaining bracket (4) that secures the other connector to the back of the CX board (see *Figure 2*).
 - » Retain the bracket and screws for installment on replacement board.
 - » Remove the CBI control board from the original CX controller and install on the replacement controller.

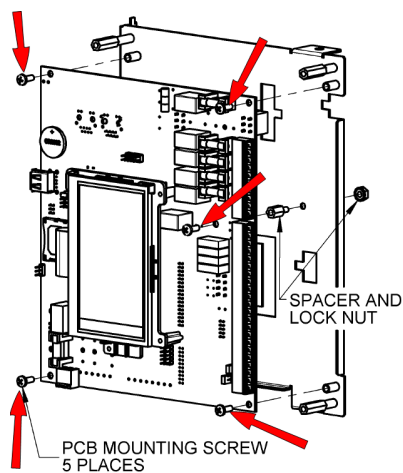


Figure 1

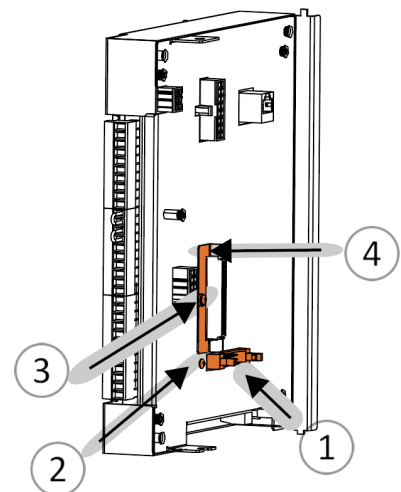


Figure 2

3. Carefully lift the old controller off the mounting plate.
4. Proceed to [Installing Replacement Touchscreen Controller on page 5](#)

Installing Replacement Touchscreen Controller

1. Install the replacement controller as directed in the table below:


For swing-out style controllers:	<ul style="list-style-type: none"> a. Place the replacement control onto the mounting plate, and reinstall the 5 screws. Avoid over-tightening the screws. b. Plug the connectors into the back of the board.
For CX Controllers:	<ul style="list-style-type: none"> a. Ensure that the CBI control board is secured to the replacement control module. b. Place the replacement touchscreen control module onto the swing-out door style control mounting plate, and reinstall the 5 screws. Avoid over-tightening the screws. c. Install retained connector bracket and screw; do not over-tighten the screw. d. Install the retained two screws that secure the CBI control board to the back chassis.
For older IBC boiler models with fixed controllers:	<ul style="list-style-type: none"> a. Place the replacement control on to the fixed back mounting plate and reinstall the 5 screws. Avoid over-tightening 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 screws previously removed with the old controller. d. Replace the front cover of the controller.

Table 1: Installing Replacement V10 Touchscreen Controller


Wiring the Replacement Touchscreen Controller (Touchscreen Original)

The field wiring terminal strips can plug into the replacement control board without moving the wires over to the new terminal strips.

Programming and Testing the Touchscreen Controller

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

1. Turn on the gas and power to the boiler.
2. On the touchscreen, select the correct model number from the list, referring to the boiler's rating plate.

 **Note**
This selection is permanent and cannot be changed in the field.

3. Select the "Save" button in the bottom left corner of the screen.
4. Program the controller using the values saved from the original controller, or use the "Express Setup" function to set up the boiler.

5. Ensure that the boiler has registered the thermostat connections correctly along with the correct load types and settings.
6. Check that all pumps operate as with the previous controller.
7. On the **Home** screen, check the temperature sensor and pressure sensor readings.