

System Circulator Wiring Kit

80/120/155 Series 1 & 2 boilers

P/N 640-000-132

Instructions for Wiring an Additional Circulator

The boiler control module already has a connection point for the boiler circulator. This kit will provide a solution for operating an additional circulator – the system circulator (not to exceed 3 amps). Use in conjunction with the boiler manual.

STOP! Read before proceeding

Hazard definitions

The following defined terms are used throughout this manual to bring attention to the presence of hazards of various risk levels or to important information concerning the life of the product.

▲ DANGER Indicates presence of hazards that will cause severe personal injury, death or substantial property damage.

▲ WARNING Indicates presence of hazards that can cause severe personal injury, death or substantial property damage.

▲ CAUTION Indicates presence of hazards that will or can cause minor personal injury or property damage.

NOTICE Indicates special instructions on installation, operation or maintenance that are important but not related to personal injury or property damage.

▲ WARNING **These instructions must only be used by a qualified installer/service technician.** Read all instructions completely before beginning the installation. Failure to follow all instructions can cause severe personal injury, death or substantial property damage.

▲ WARNING The boiler contains ceramic fiber and fiberglass materials. Use care when handling these materials per instructions in the Boiler Manual, available on-line. Failure to comply could result in severe personal injury.

▲ WARNING You must read and have the appropriate Boiler Manuals with you to proceed with these instructions.

Follow all instructions in the appropriate Boiler Manuals to access and service components.

The Boiler Manuals are available on-line.

80/120/155 Series 1 & 2 Boilers

P/N 640-000-132 PCB Relay & Circulator Wiring kit contents:

Description	Qty.
Wiring Kit LC32 AUX	1
Instructions PCB Relay & Circulator Wiring	1

Tools required:

Flat blade screw driver
Phillips screw driver
Paper/pen
Boiler manual

NOTICE
Series Identification Read the boiler rating label to determine the model size and series number. The rating label is located on the left side of the boiler (outside).

To the installer:

You must refer to the appropriate Boiler Manual to follow these instructions. **DO NOT** proceed with the replacement procedure without having a Boiler Manual. These instructions must only be used by a qualified installer/service technician. Read these instructions completely before beginning the installation. Failure to follow all instructions can cause severe personal injury, death, or substantial property damage.

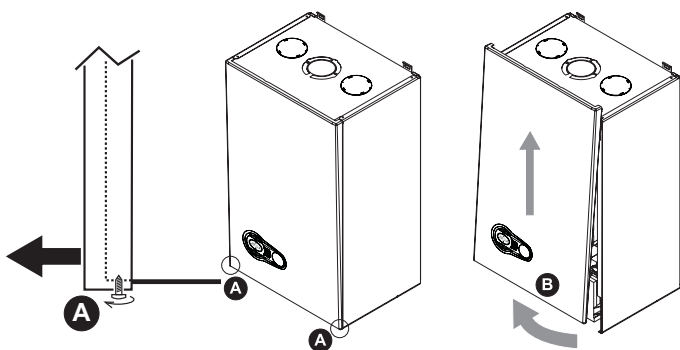
Replacement instructions

- ⚠ WARNING** Disconnect electricity to boiler. Failure to do so can cause severe injury, death, or substantial property damage
- ⚠ WARNING** **ELECTRICAL SHOCK HAZARD - TURN OFF ALL POWER TO BOILER WHEN SERVICING.** Failure to do so can cause severe injury, death, or substantial property damage.
- ⚠ WARNING** Wait until heat exchanger/boiler is cooled down before proceeding. Failure to do so can cause severe injury.
- ⚠ WARNING** The boiler contains ceramic fiber and fiberglass materials. Use care when handling these materials per instructions in the Boiler Manual, available on-line. Failure to comply could result in severe personal injury.
- NOTICE** Figure 2 show the interior of a 155C boiler. Use figures as a reference, location of components may be slightly different than shown.

Front panel removal

1. Turn off (unplug) power to the boiler.
2. Remove two (2) Phillips head screws on the bottom flange of front panel, lift out and then up to remove the front panel.

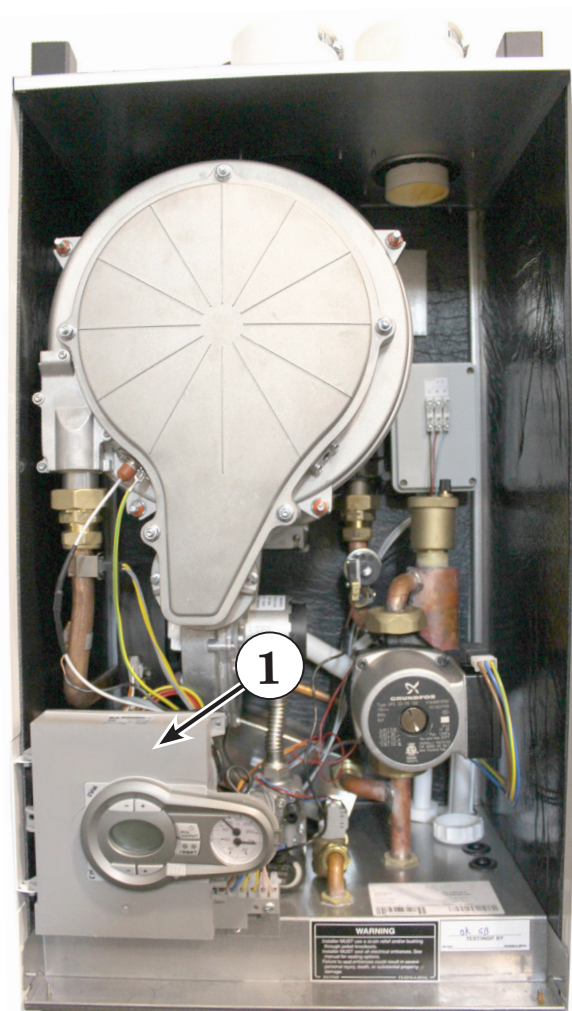
Figure 1 Removing front panel



LEGEND

- 1. Control module
- 2. Gas Valve

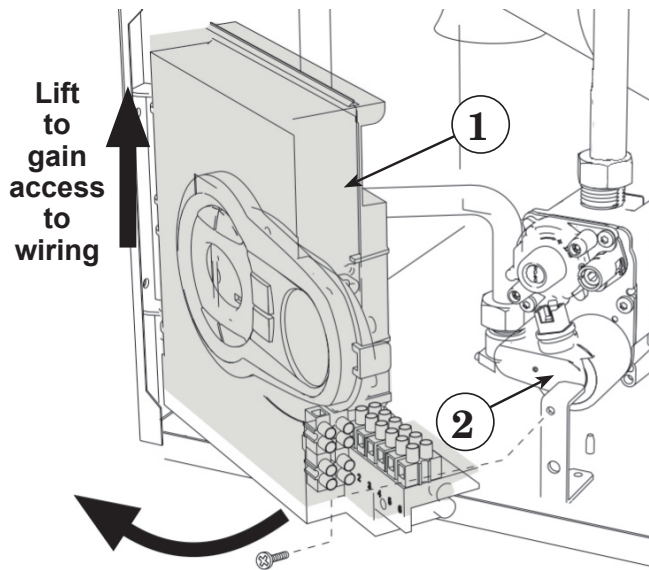
Figure 2 Boiler front panel removed



Instructions for Wiring the System Circulator

3. Remove the one (1) Phillips head screw holding the control module in place, see Figure 3.

Figure 3 Moving control module to access wiring



⚠ WARNING Wait until heat exchanger/boiler is cooled down before proceeding. Failure to do so can cause severe injury.

Label wires before removing

⚠ CAUTION Label all wire harness(es) prior to removing controls. Wiring errors can cause improper and dangerous operation.

It will be easier to add additional wiring if control module and pressure temperature gauge are free of the enclosure. See Figure 5.

Removing ignition electrode wire

1. Disconnect the ignition wire from the control module. The ignition wire pulls out of the top left back of the control module, see Figure 4. Remove the ignition wire by pulling out the connector, not the wire.

Figure 4 Removing ignition electrode wire from back of control module.

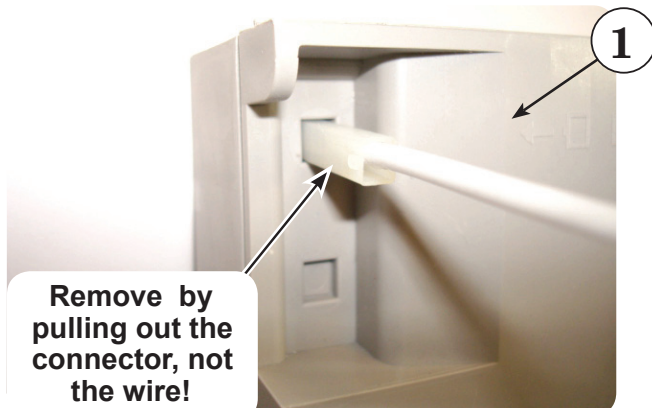
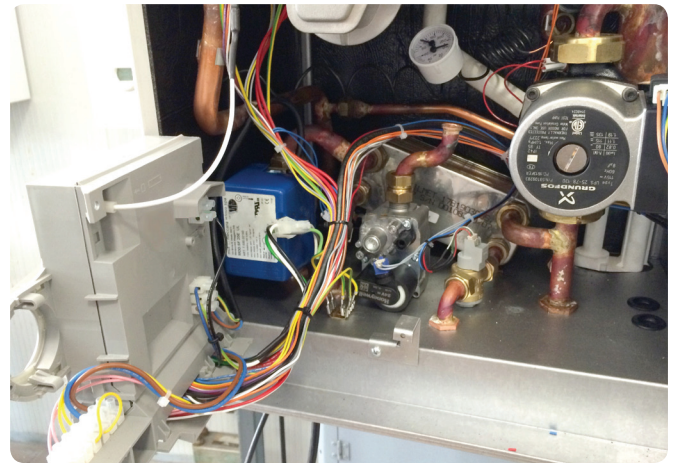


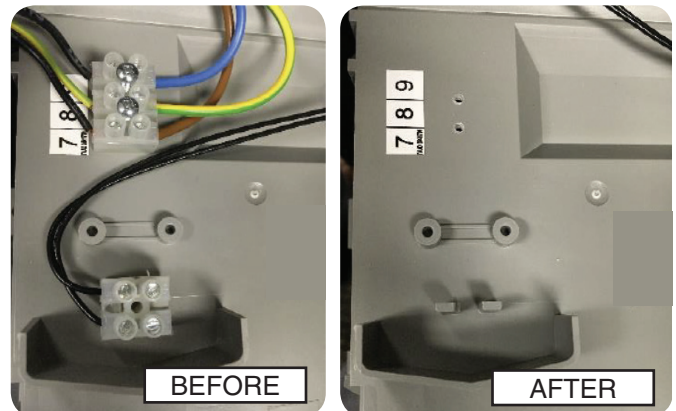
Figure 5 Control in position to be removed.



Installation of Circulator Wiring Kit

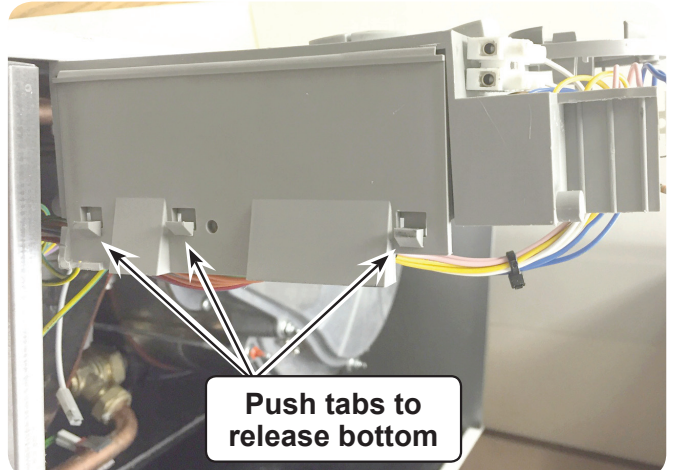
1. Control module can be moved so that there is easy access to open the control housing.
2. Remove terminal blocks from back of module. See Figure 6. The block with 2 black wires will no longer be used. Secure this terminal block to adjacent wires to keep it out of the way.

Figure 6 Terminal Blocks removed from back of module.



3. Release three (3) tabs on control module enclosure bottom. Then release one tab on each side to open control module. See Figure 7 and 8.

Figure 7 Bottom View of Control Module – 3 tabs

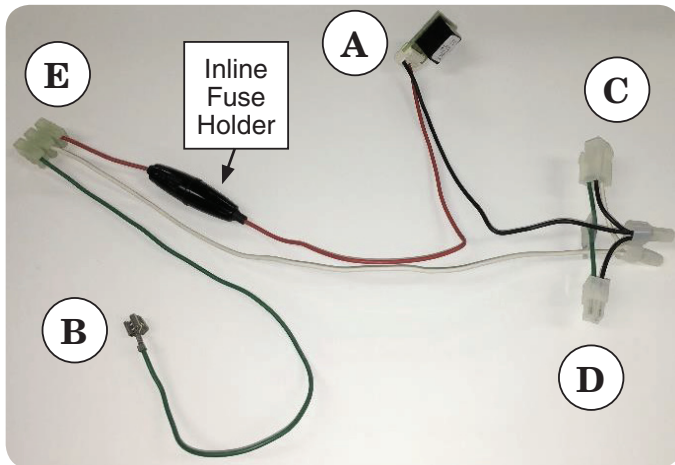


Instructions for Wiring the System Circulator

Figure 8 Control module open



Figure 9 Wiring Kit

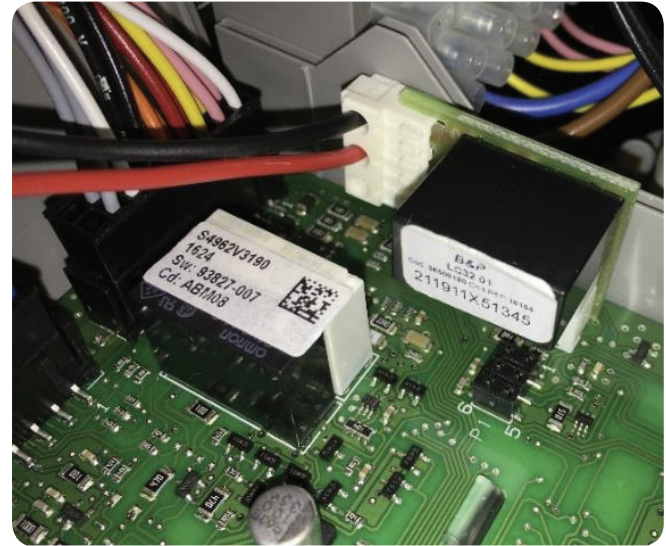


CONNECTIONS (A – E)

- A — Relay header to control module PCB
- B — Ground to inside bottom panel
- C — To Boiler Power Supply Wire
- D — To power wire into control module
- E — Terminal Strip to Pump: Hot / Neutral / Ground

4. Plug the wiring kit (Connection A) into the control. See Figures 8 and 10.

Figure 10 Kit wiring plugged into control module



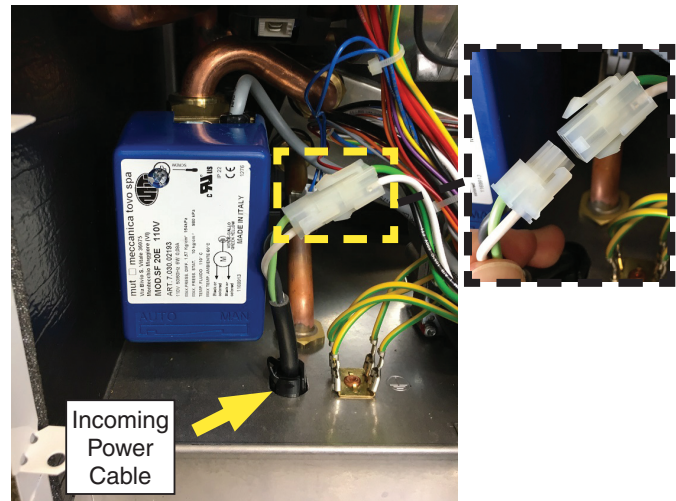
5. Close the control module housing, with wiring kit routed from the opening at bottom side. See Figure 11.

Figure 11 Wiring (Red/Black) in exiting from PCB



6. Locate and disconnect the wire connector between the control module and the external 120VAC power supply cable

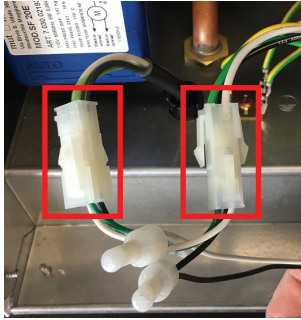
Figure 12 Disconnect Boiler Power Supply Cable



Instructions for Wiring the System Circulator

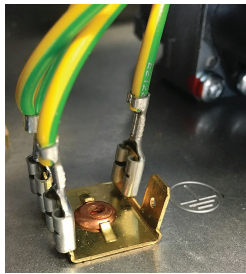
7. Connect the wiring kit (Connection C) to incoming 120VAC power cable and (Connection D) to the control module, as shown in Figure 13.

Figure 13 Connect Wiring Kit to Power Supply



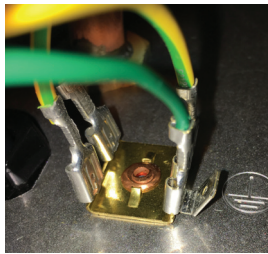
8. Locate the ground junction plate on inner bottom panel of boiler. Disconnect the ground wire from front / right terminal, as shown in Figure 14.

Figure 14 Locate Ground Junction Plate



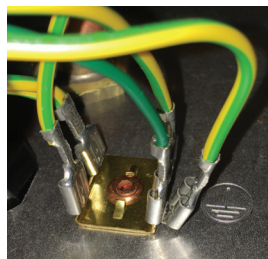
9. Connect the wiring kit (Connection B) to the front/right terminal of ground junction plate, as shown in Figure 15.

Figure 15 Connect Wiring Kit to Ground Junction



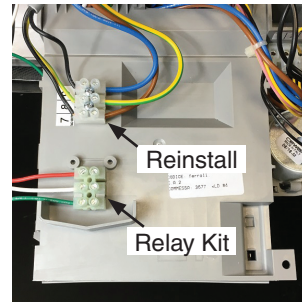
10. Connect the ground wire that was disconnected in step 9 to the terminal coupling of the wiring kit. See Figure 16.

Figure 16 Reconnect All Ground Wires



11. Secure the terminal block (Connection E) of the wiring kit on the back of control module as shown in Figure 17. Reinstall the terminal which was removed in Step 2.

Figure 17 Terminal block attached to back of control module



12. Connect the system pump to the open side of terminal block shown in Figure 17. Green (ground), Red (hot), White (Neutral). See Field Installation wiring diagram Figure 18.
13. Reinstall control module on cabin tabs and rotate back into place. See Figures 3 & 5.
14. Re-connect the ignition cable to the control module. Figure 4 shows the location from which this was removed.
15. Reinstall screw (Figure 3) to hold control module securely in place.
16. Reinstall jacket door and secure with two (2) screws at bottom.
17. Restore electrical power.
18. The circulator must be configured as the system pump in the boiler control. Set **Parameter b13 from 7 to 4**, in order to complete the set up. See Boiler Manual to access Parameter settings.

Replacing Fuse, if Necessary

1. The wiring kit includes an in-line fuse. The fuse is rated to 3.15 A. (Weil-McLain part number 640-000-122)
2. Read all safety warnings in this instruction manual prior to opening boiler to access and replace the fuse.

Perform Boiler Manual start-up

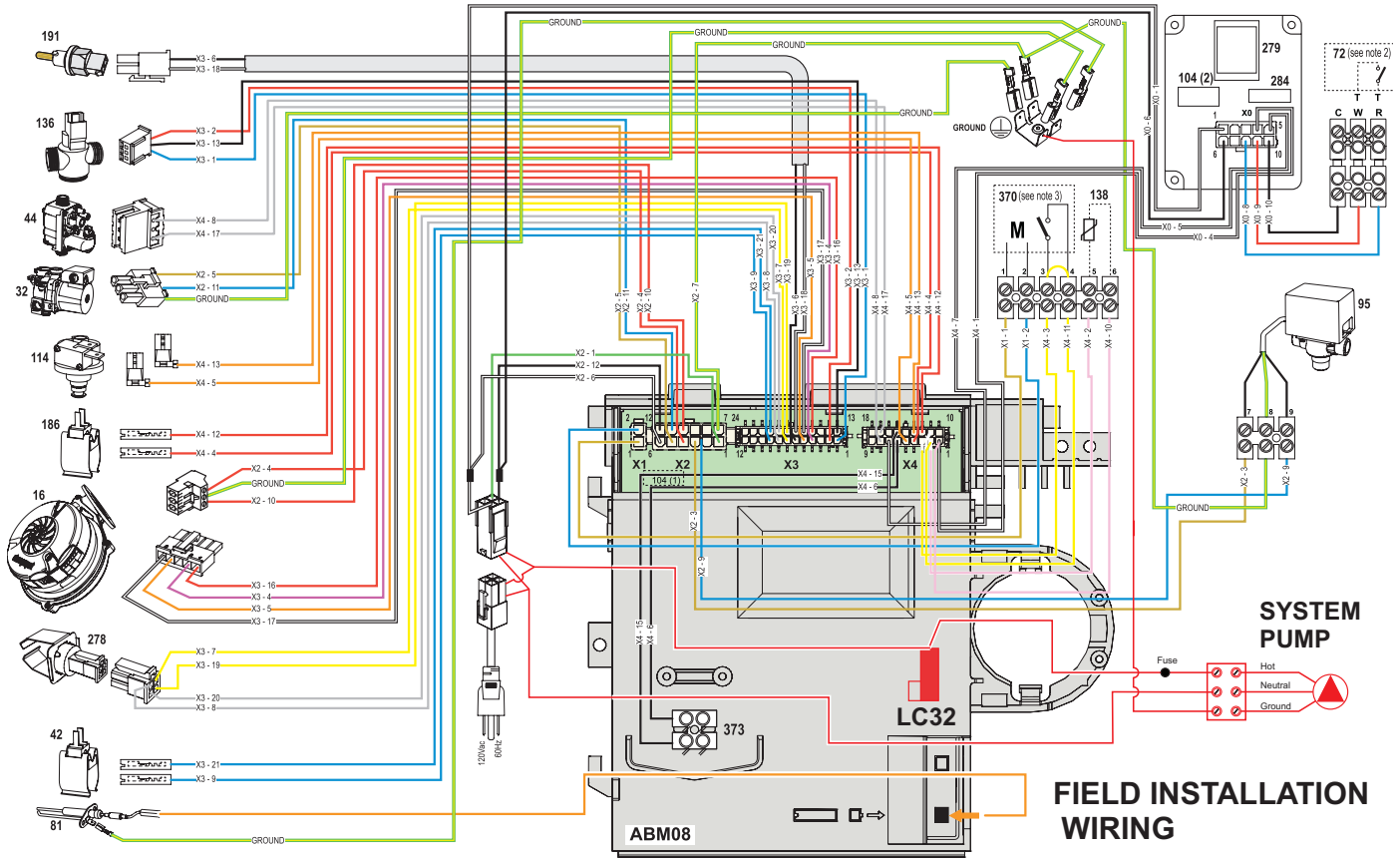
WARNING Removing and reinstalling components can change boiler behavior. After any maintenance procedure, you must prove the boiler is operating correctly. To do so, follow all instructions in Boiler Manual and Operating Instructions to start-up the boiler after installing the new wiring. Because the boiler has been changed, **you must verify correct operation as described in the Boiler Manual.** Failure to comply could result in severe personal injury, death, or substantial property damage.

Reinstall boiler jacket front door

WARNING Reinstall boiler jacket front door after servicing. The boiler front door must be securely fastened to the boiler frame to prevent boiler from drawing air from inside the boiler room. This is particularly important if the boiler is located in the same room as other appliances. Failure to keep the door securely fastened could result in severe personal injury or death.

Instructions for Wiring the System Circulator

Figure 18 Field Installation wiring diagram for the Kit



cod. 35411640 FS-E128-BDOC