

ECR97 WIRE HARNESS KIT

INSTRUCTIONS

ECR97 - 075/100 Kit #550002198

WARNING

Kit shall be installed by qualified service agency in accordance with manufacturer's instructions and all applicable codes and requirements of authority having jurisdiction. If information in these instructions is not followed exactly, a fire, explosion or production of carbon monoxide may result causing property damage, personal injury or loss of life. Qualified service agency is responsible for proper installation of this kit. Installation is not proper and complete until operation of appliance is checked as specified in manufacturer's instructions supplied with the kit.

NOTICE

Verify proper operation after servicing.

Wire Harness Removal:

- Tools required:
 - Needle nose pliers
 - Small (#1) phillips screwdriver
 - Small wire ties
 - 1/4" nut driver
 - Side cutters
- Follow instructions To Turn Off Gas to Appliance found on Operating Instructions label inside jacket or in Installation, Operation & Maintenance Manual. Verify all electrical power to boiler is turned off.
- Remove jacket from boiler. Grasp front cover at lip behind plastic smoke-colored control cover. Pull forward to release snap action latches. Lift jacket up and off bottom jacket rest.
- Remove low voltage terminal strip plug by removing plug from chassis mounted socket. See Figure 2.
- Spread retaining tabs of connector frame, freeing low voltage strip for removal from inside chassis.
- Remove four screws holding user interface bracket in place and remaining screw holding high voltage junction box. Remove high voltage terminal cover.
- Label then disconnect field wiring from high voltage terminal strip. Remove two screws holding high voltage terminal strip in place.
- Lift User Interface up and disconnect wire harness connector underneath.
- Remove nut on flame rod bracket with ground wire, remove it and flame rod lead.
- Slide grommet with wires out of slot on high voltage box.
- Slide two (2) grommets out of slots on User Interface bracket and set aside removed high voltage harness.

Figure 1 - Internal Access Panel Closed with Latch

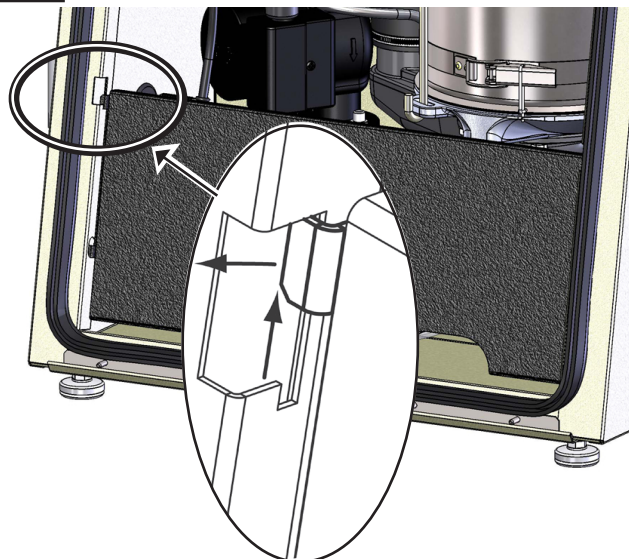
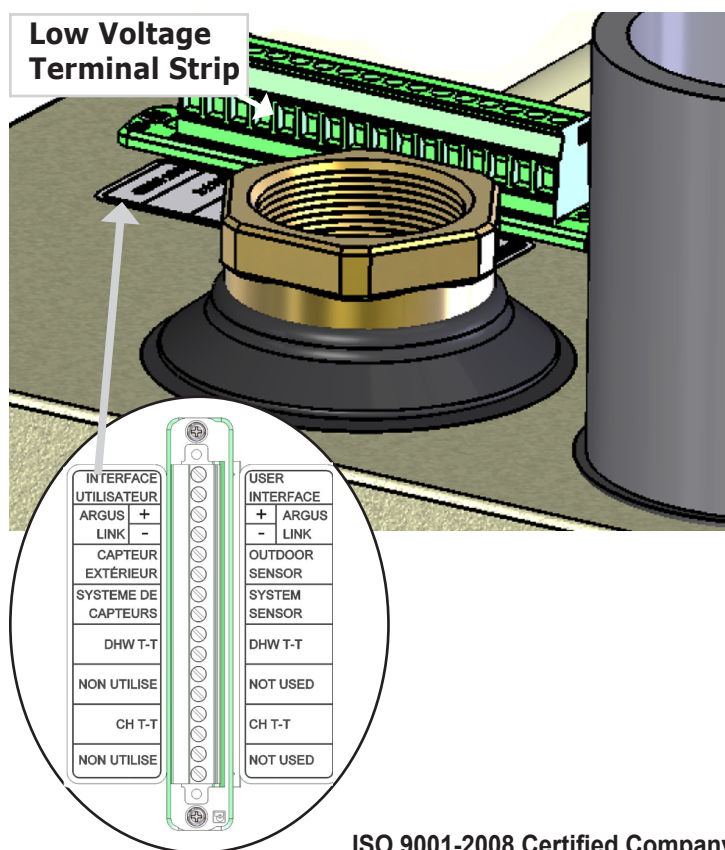


Figure 2 - Low Voltage Terminal Strip



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ECR International, Inc.

2201 Dwyer Ave.

Utica, NY 13501



12. Remove User Interface from base by grasping User Interface at top and bottom and squeeze to depress bottom tab while lifting bottom of User Interface. User Interface is hinged at top and will release from bottom of base first. Swing up and off top hinges. See Figure 3. Remove wires from base connector, slide grommet out of bracket.
13. Remove wire harness connector located in top of chassis by twisting entire connector and unscrewing it clockwise, as viewed from top of jacket. See Figure 4.
14. Disconnect wire harness connector on water temperature sensor, low water cutoff, blower motor, and vent temperature sensor.
15. Disconnect gas valve connector. Disconnect two wires from air pressure switch, if present.
16. Remove two screws holding air pressure switch bracket and lay switch aside, if present.
17. Remove 1/4" ground screw and wire on left side of chassis.
18. Remove cover from terminal box on heat exchanger pump. Disconnect wires, remove connector and wires together.
19. Remove high voltage spark lead from control module.
20. Disconnect wire harness connector from return water temperature sensor located next to boiler drain valve.
21. Using side cutters, cut four (4) plastic wire bundle ties holding bundle to control board panel. Push remaining portion of barbed wire ties through to middle of control panel. Completely remove control panel by aligning bottom control panel hinge/tab with relief slot cut in jacket. Push panel inward to slide hinges out of slots. Angle panel up and out of boiler. Remove barb wire ties cut previously from middle of panel, reattach panel. See Figure 1.
22. Disconnect all wire harness connectors from control module and transformer. Remove ground screw next to module.
23. Disconnect four (4) wires from relay on access panel.
24. Disconnect wires from service switch, auxiliary power outlet and circuit breaker on left inside of chassis.
25. Using needle nose pliers squeeze all wire tie barbs together and push through jacket to completely remove harness from boiler.

Figure 3 - User Interface

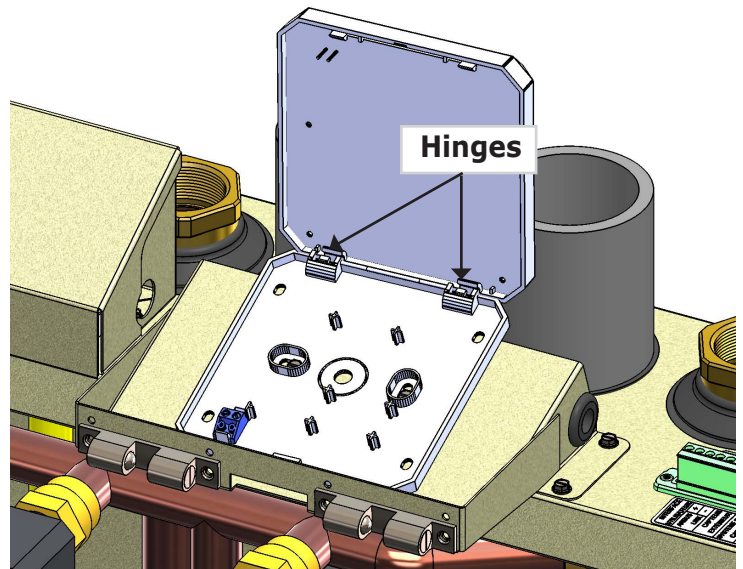
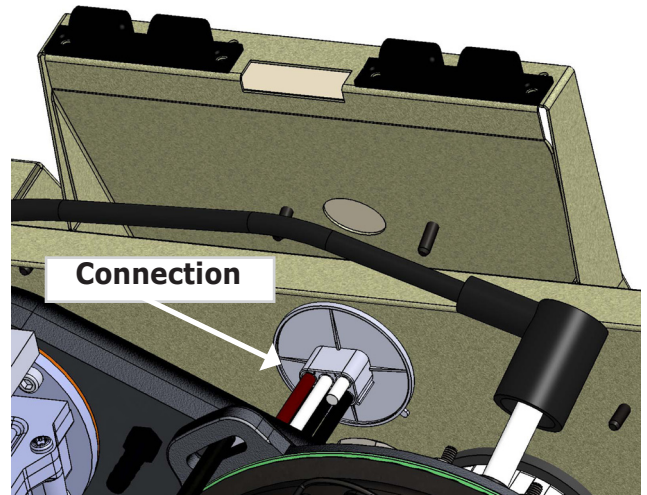


Figure 4 - User Interface Connection



Wire Harness Replacement:

1. Lay new harness into boiler in approximate position. Starting at top of boiler insert top center two (2) wire tie barbs into mounting hole. This will locate and support harness.
2. Screw wire harness connector into top of boiler.
3. Attach wire harness connectors to:
 - low water cutoff
 - water temperature sensor
 - top of blower motor
4. Attach ground wire to flame sensor stud, secure with nut. Attach flame sensor lead.
5. Attach new low voltage harness to User Interface base by threading wires through back side of base, attach to terminal block (not polarity sensitive). Slide grommet into bracket. Take new high voltage harness and slide grommet into left side of User Interface bracket.
6. Position User Interface bracket, plug high voltage wire harness connector in, secure User Interface base to cabinet with one (1) screw in right rear hole for now. See Figure 4.
7. Slide grommet into slot on high voltage terminal box, secure terminal strip with two (2) phillips screws. See Figure 2.
8. Reattach field wiring to high voltage terminal strip. Put high voltage junction box cover in place and secure User Interface bracket and high voltage junction box cover with screws.
9. Push low voltage terminal strip socket up into frame snapping into place. While holding socket from inside chassis firmly push plug into socket until fully engaged. Will require some pressure to engage fully.
10. Working around jacket secure all barb wire ties into jacket.
11. Attach wires to service switch, auxiliary power outlet and circuit breaker.
12. Attach pressure switch, if present, using two (2) screws, attach two (2) orange wires to switch terminals 1 and 2, wires interchangeable.
13. Attach gas valve harness to valve, wire harness connector to vent temperature sensor.
14. Ensure strain relief is in place on heat exchanger pump wires then insert into pump electrical box and wire nut wires. Reattach pump electrical box cover.
15. Replace ground wire and screw into left side of chassis.
16. Plug in eight (8) wire harness connectors to control module. All wire harness connectors are keyed to their socket and cannot be interchanged. Socket 14 is empty.
17. Plug ground wire onto rear of board, and high voltage lead onto control.
18. Plug two (2) wire harness connectors for transformer together.
19. Attach four (4) wires to relay on access panel.
20. Attach ground wire with screw to access panel.
21. Follow "Start-up" procedure in Installation, Operation and Maintenance Manual to restore and verify proper operation.
22. Check all controls for proper operation.
23. Fold up access panel.
24. Reattach jacket.

PARTS LIST

ECR97 Wire Harness Kit #550002198		
DESCRIPTION	PART #	QTY
Main Boiler Wiring Assembly Harness	-	1
120V Wire Harness, From Boiler Interface Module to High Voltage Terminal Block	-	1
Low Volt Terminal Block Harness	-	1
Universal Bushing 7/8"OD, Heyco 2119	-	1
Screw, #6-32X3/4, Philips, Type F Zinc	-	2
Screw, 6x3/8, Type B HPH, SZN	-	2
Screw, 8-32x5/16, Self Tapping, Ground, Green	-	2
Grommet, .438: ID x .938" OD, Heyco G1150	-	1
Instructions	240008599	1