

# WIRE HARNESS KIT INSTRUCTIONS

**050/075/100 Kit #550002300**

**150/200 Kit #550002315**

**150/200 Kit #550002835 w/ Pump Relay Terminals**

**299 Kit #550002815**

Kit installation shall be completed by qualified agency.

## **⚠ WARNING**

Fire, explosion, asphyxiation and electrical shock hazard. Improper installation could result in death or serious injury. Read this instruction and understand all requirements, including requirements of authority having jurisdiction, before beginning installation. Installation not complete until appliance operation verified per Installation, Operation & Maintenance Manual provided with boiler.

### **Wire Harness Removal:**

1. Tools required:
  - Needle nose pliers
  - Small (No. 1) phillips screwdriver
  - Small wire ties
  - 11/32" Nut Driver, Wrench or Socket
  - 1/4" Nut Driver
  - Side cutters
2. Follow instructions to **TURN OFF GAS TO APPLIANCE** found on Operation Instructions label on boiler or in Installation, Operation & Maintenance Manual. Verify all electrical power to boiler is turned off.

## **WARNING**

Electric shock hazard. Turn OFF electrical power supply at service panel.

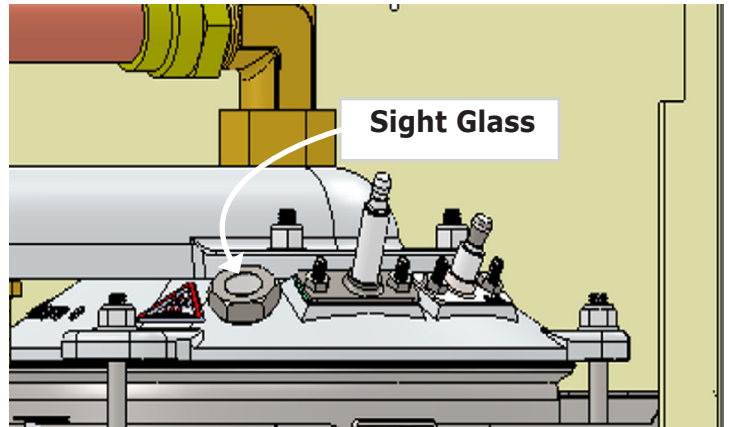
3. Remove front jacket panel(s).

## **⚠ WARNING**

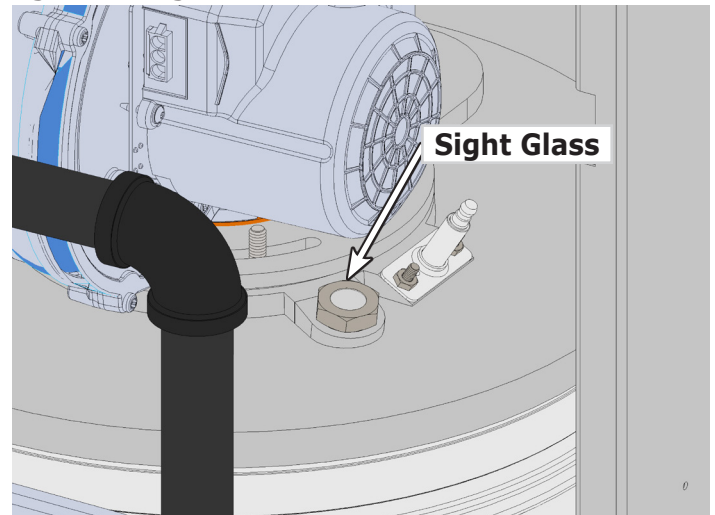
Burn hazard. Verify heat exchanger has cooled or use appropriate personal protection equipment.

4. Inspect combustion chamber through sight glass. Verify flame is not present. See figures 1 & 2.
5. Disconnect multi-pin connector from lower jacket and remove lower jacket. See figure 3.
6. Disconnect High Voltage Terminal Box
  - Remove retaining screw from high voltage terminal box remove cover.
  - Remove two (2) screws holding high voltage terminal strip. Lift strip up and out. Leave field wiring attached to strip. Disconnect boiler connections from rear terminals.

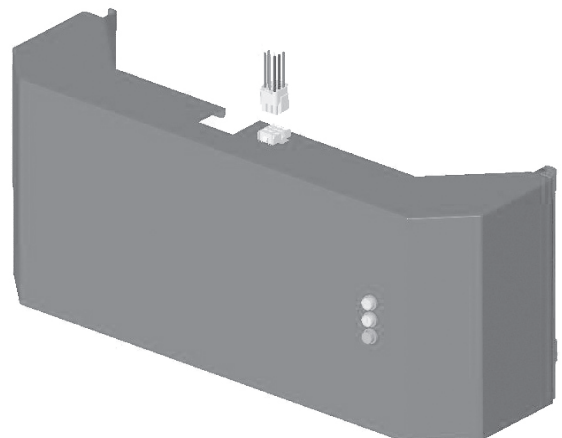
**Figure 1 - Sight Glass 050/075/100/150/200**



**Figure 2 - Sight Glass 299**



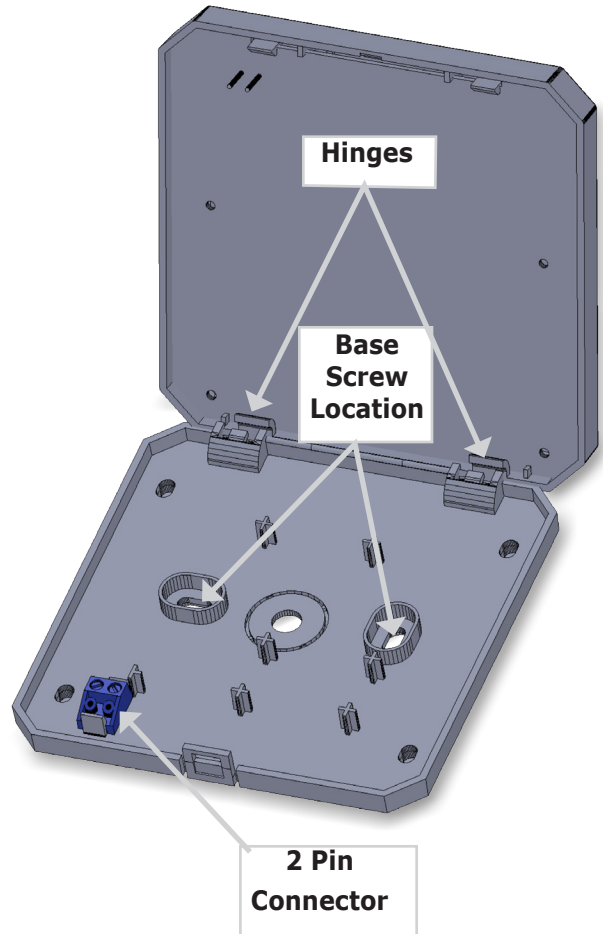
**Figure 3 - Lower Jacket Panel with Light Display**



## WIRE HARNESS KIT INSTRUCTIONS

- Leave low voltage field connections in place. Unplug low voltage terminal strip from low voltage socket.
  - Remove two (2) screws holding terminal frame in place.
  - Spread retaining tabs on terminal frame from back side of panel. Push low voltage socket back through frame.
  - Disconnect boiler low voltage wires from socket.
7. Disconnect wire harness from return water sensor.
  8. Disconnect wire harness from control module.
  9. Disconnect wire harness from pump relays (if equipped).
  10. Disconnect flame sensor cable from flame sensor. Remove right-side 8-32 hex nut using 11/32" nut driver, wrench or socket. Disconnect ground wire from stud.
  11. Disconnect two (2) wire harnesses from transformer, two (2) wire harnesses from blower motor, and cable from Low Water Cutoff, and high temperature supply switch.
  12. Disconnect wire harness from heat exchanger pump.
    - Remove screw from pump electrical box cover. Remove cover.
    - Remove ground screw. Remove ground wire.
    - Loosen wire nuts. Disconnect wire harness from pump power wires.
    - Squeeze tabs on strain relief. Remove wire harness from pump.
  13. Disconnect ground screw wire from left side of transformer.
  14. Disconnect wire harness from vent temperature sensor.
  15. Remove wire harness from boiler.

**Figure 4 - User Interface**



### Wire Harness Replacement:

1. Connect wire harness to control module.

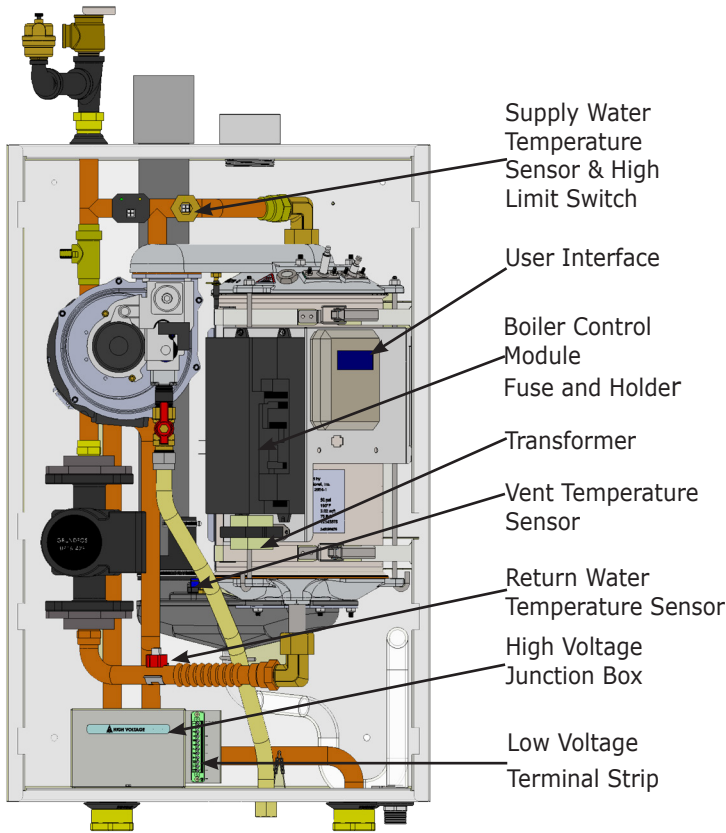
#### NOTICE

Control module has two (2) 4-wire connectors (J2 and J4). Wires into plugs are labeled to assist in connection to proper jack.

2. Connect wire harness to pump relays (if equipped). Refer to pump relay labels and wire diagram for proper installation.
3. Attach green ground wire to left side of transformer. Secure with green ground screw.
4. Insert user interface plug into mounting plate, snap into place. Connect user interface plug.
5. Insert harness into boiler and secure by pushing cable tie barbs into place.

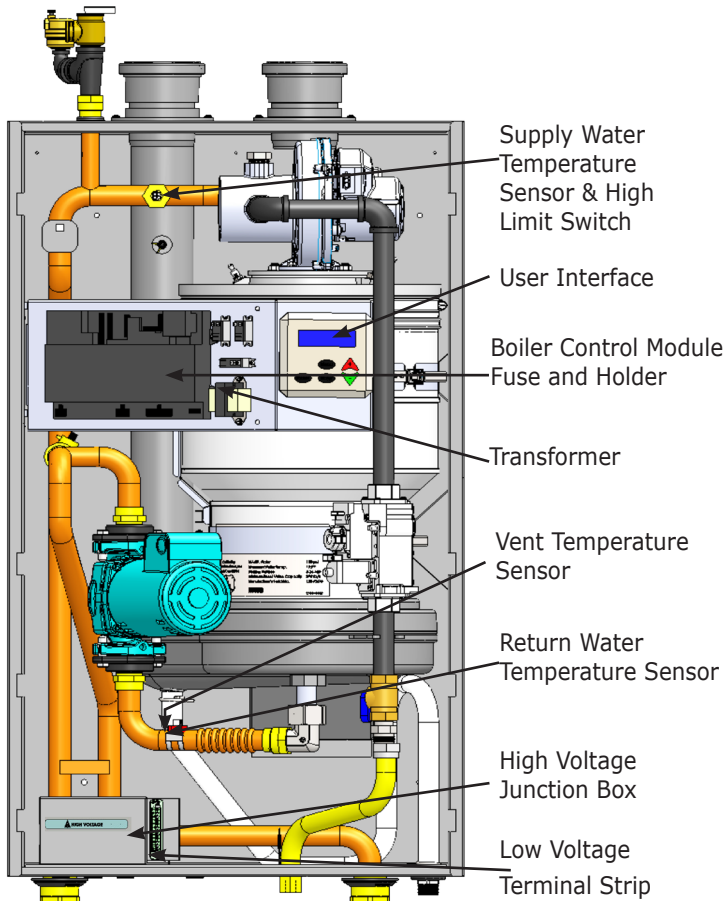
## WIRE HARNESS KIT INSTRUCTIONS

**Figure 5 - 050/075/100/150/200 Model**



6. Connect flame sensor plug. Attach ground wire to right stud of flame sensor and secure with nut. Do not over-tighten.
7. Connect igniter cable to control module.
8. Connect wire harness to low water cutoff and high temperature sensor supply switch.
9. Connect wire harness to blower (2 places).
10. Install Gas Valve harness. Attach gas valve harness to gas valve. Secure with integral screw.
11. Connect high voltage leads to high voltage terminal strip. Secure high voltage terminal strip with two (2) screws.
12. Connect wire harness to return water temperature sensor.
13. Connect low voltage wires to low voltage socket. Insert socket frame through front of panel. Push socket into frame from rear of panel engaging two (2) tabs on frame. Secure frame and panel with 2 screws.
14. Connect wire harness to vent temperature sensor.
15. Connect wire harness to heat exchanger pump.
  - Insert wire harness into pump junction box.
  - Insert strain relief into pump junction box. Snap into place.
  - Attach green ground wire to junction box. Secure with green ground screw.

**Figure 6 - 299 Model**



- Connect wire harness black and white wires to pump wires. Wires are interchangeable.
  - Attach junction box cover. Secure with screw.
16. Attach high voltage terminal box cover. Secure with screw.
  17. Install lower jacket, reconnect multi-pin connector.
  18. Resume operation using OPERATING INSTRUCTIONS found on Operating Instructions label on boiler or in Installation, Operation & Maintenance Manual.
  19. Verify proper operation by following START UP PROCEDURE in Installation, Operation & Maintenance Manual.
  20. Install front jacket panel(s).

**PARTS LIST**

<b>050/075/100 Wire Harness Kit #550002300</b>		
DESCRIPTION	PART #	QTY
Main Boiler 120V Wiring Assembly Harness To High Voltage Terminal Block 050/075/100	-	1
24V Wire Harness, From Boiler Interface Module to Low Voltage Terminal Block	-	1
Harness, Indicator Lights	-	1
Universal Bushing 7/8"OD, Heyco 2119	-	1
Screw, 6x3/8, Type B HPH, SZN	-	2
Screw, 8-32x5/16, Self Tapping, Ground, Green	-	1
Instructions	240008953	1
<b>150/200 Wire Harness Kit #550002315</b>		
Main Boiler 120V Wiring Assembly Harness to High Voltage Terminal Block 150/200	-	1
240V Wire Harness, From Boiler Interface Module to Low Voltage Terminal Block	-	1
Harness, Indicator Lights	-	1
Strain Relief on Pump, 1/2 NPT, Hub	-	1
Screw, 6x3/8, Type B HPH, SZN	-	2
Screw, 8-32x5/16, Self Tapping, Ground, Green	-	2
Instructions	240008953	1
<b>150/200 Wire Harness Kit #550002835 with Pump Relay Terminals</b>		
Main Boiler 120V Wiring Assembly Harness to High Voltage Terminal Block 150/200 w/ Pump Relay Terminals	-	1
240V Wire Harness, From Boiler Interface Module to Low Voltage Terminal Block	-	1
Harness, Indicator Lights	-	1
Strain Relief on Pump, 1/2 NPT, Hub	-	1
Screw, 6x3/8, Type B HPH, SZN	-	2
Screw, 8-32x5/16, Self Tapping, Ground, Green	-	2
Instructions	240008953	1
<b>299 Wire Harness Kit #550002815</b>		
Main Boiler 120V Wiring Assembly Harness to High Voltage Terminal Block 299	-	1
240V Wire Harness, From Boiler Interface Module to Low Voltage Terminal Block	-	1
Harness, Indicator Lights	-	1
Screw, 6x3/8, Type B HPH, SZN	-	2
Screw, 8-32x5/16, Self Tapping, Ground, Green	-	2
Wire Nuts	-	2
Instructions	240008953	1

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