

Fuel Safety Bulletin

2011-02

Dated: March 02, 2011

Subject: Uncertified LAARS oil-fired boilers

Recently, a series of Fuel Safety inspections have revealed a number of newer LAARS MAX and DMAX oil-fired boilers which are not certified to any recognizable national standard. This makes them illegal for sale, use or service in Canada. We have been in contact with LAARS Heating Systems Company staff at their Rochester, New Hampshire main office in an effort to correct this problem. They have been very agreeable in their handling of this issue, and have informed us that 393 units in 10 separate models of MAX and DMAX boilers were shipped to eastern Canada without the required certification marks. The MAX-75, MAX-100, MAX-120, MAX-140 and MAX-165 are Chimney Connect boilers. The DMAX-75, DMAX-100, DMAX-120, DMAX-140 and DMAX-165 are Direct Vent boilers.

These units were distributed through the following distributors;

Thornes (Now called Source Atlantic)

3630 Strawberry Hill Street, Halifax, NS B3K 5A9

Emco Distribution Group (Was called Sumner Supply)

90 Wright Avenue, Dartmouth, NS B3B 1P2

Kerr Controls Ltd.

125 Polymer Road, Truro, NS V2N 5V2

In an effort to quickly correct this problem, Laars have released seven (7) separate upgrade kits (see instructions attached) for the affected boilers and have made arrangements for CSA to field label each of these units. Please contact LAARS directly for these kits and the certification arrangements. Provide the model and serial number to; Service Manager, Errol Hibbard at: ehibbard@laars.com.

For any questions regarding this Bulletin, please contact me at our Halifax offices.

Dale C. Stewart

Chief Inspector, Fuel Safety

Kits R2061705 & R2061706 Installation Instructions

For MAX Front Door Assembly Replacement

FOR YOUR SAFETY: This procedure must be performed by a professional service technician, qualified in hot water boiler installation. Improper boiler conversion could create carbon monoxide gas which could cause serious injury, property damage, or death.



WARNING

If the information in these instructions is not followed exactly, a fire or explosion may result, causing property damage, personal injury or death.

This kit contains a complete Front Door Assembly with a burner flame observation window for the replacement of an existing Front Door Assembly. Kit R2061705 is for use with Kits R2061702 & R2061704. Kit R2061706 is for use with Kit R2061707.

DETAILED INSTALLATION SUMMARY

1. Turn off electrical power to boiler.
2. Remove burner assembly and set aside.
3. Remove the four (4) retaining bolts that secure the Front Door Assembly to the boiler.
4. Remove the four (4) screws that attach the front panel to the Front Door Assembly and remove the panel.
5. Swing the Front Door Assembly open, loosen the top hinge mounting cap screws and lift the door out of the lower hinge to remove the door.
6. Place the new door assembly lower hinge pin in the lower hinge. Lift the top hinge on the boiler and align the upper hinge pin on the door with it. Lower the upper hinge and tighten the cap screws.
7. Close the door and install the new front panel and tighten the screws.
8. Place the Burner Gasket on the burner flange, replace the burner and tighten the mounting bolts.
9. Restore electrical power and start the boiler in accordance with the start-up instruction label.
10. Check boiler operation.

Kit R2061704 Installation Instructions

For MAX 140 & 165DV with Beckett CF375

FOR YOUR SAFETY: This procedure must be performed by a professional service technician, qualified in hot water boiler installation. Improper boiler conversion could create carbon monoxide gas which could cause serious injury, property damage, or death.



WARNING

If the information in these instructions is not followed exactly, a fire or explosion may result, causing property damage, personal injury or death.

When equipped with a Beckett CF375, a MAX 140DV or 165DV requires the addition of a blocked flue switch, P/N E2333800 and the addition of a sight port to observe the flame to comply with its certification to CSA B140.0 and B140.7. This kit contains the required parts to upgrade for compliance. An updated Installation, Operation and Maintenance manual, P/N 70-196, for the boiler and a start-up label, P/N H2335400, are also provided.

The Blocked Flue Switch, P/N E2333800, is mounted on the burner with the bracket, P/N 70-400, provided. It interrupts power to the burner flame sensing circuit when flue blockage causes an increase in vent pressure. Fittings, wiring and silicone tubing are provided to connect the Blocked Flue Switch to the vent system and burner control.

A Replacement Burner Door, Kit R2016705, with a sight port is also provided.

DETAILED INSTALLATION SUMMARY

1. Turn off electrical power to boiler.
2. Remove 1/8 NPT flue gas sample port plug.
3. Install 1/8 NPT nipple, P/N P2064000 and tee, P0027100, in sample port with the tee branch facing the left.
4. Replace the 1/8 NPT flue gas sample port plug in the tee.
5. Install the tube adapter elbow fitting, P/N 1-474, in the branch of the tee with the barb facing the burner.
6. Drill and tap (1/8-27 NPT) a hole in the fresh air supply duct to the burner in the location shown in Figure 1 (on back of sheet).
7. Install the straight tube adapter fitting, P/N P2073400, in the tapped hole.
8. Remove the screw from burner and install the Blocked Flue Switch and Bracket as shown in Figure 2 and replace screw.
9. Connect one end of the silicone tube, P/N Q0078800, to the Blocked Flue Switch + (black) port as shown in Figure 2.
10. Route the tube to the barb fitting on the tee, installed previously, cut it and attach to the barbed fitting.
11. Connect the remaining piece of the silicone tube between the Blocked Flue Switch (grey) port and the straight tube adapter installed in step 7 above.
12. Loosen the screws retaining the burner control and set the control aside.
13. Knock out a knockout from the burner control junction box and install the pie bushing, S0064900.
14. Connect both yellow wires provided to the Blocked Flue Switch terminals.
15. Disconnect one yellow wire from the burner control and cut the wire about 1" (2.5 cm) from the connector and strip insulation (1/8")(3 mm) from both ends.
16. Feed yellow wires from Blocked Flue Switch into junction box through pie bushing.
17. Insert one stripped end from step 15 above into the connector on one wire from the Blocked Flue Switch and crimp.
18. Insert the other stripped end from step 15 above into the other connector on the remaining wire from the Blocked Flue Switch and crimp.
19. Turn on electrical power and start boiler in accordance with start-up label provided.
20. Check boiler operation.
21. Remove backing from start-up label and stick the label on the right front corner of the jacket top.

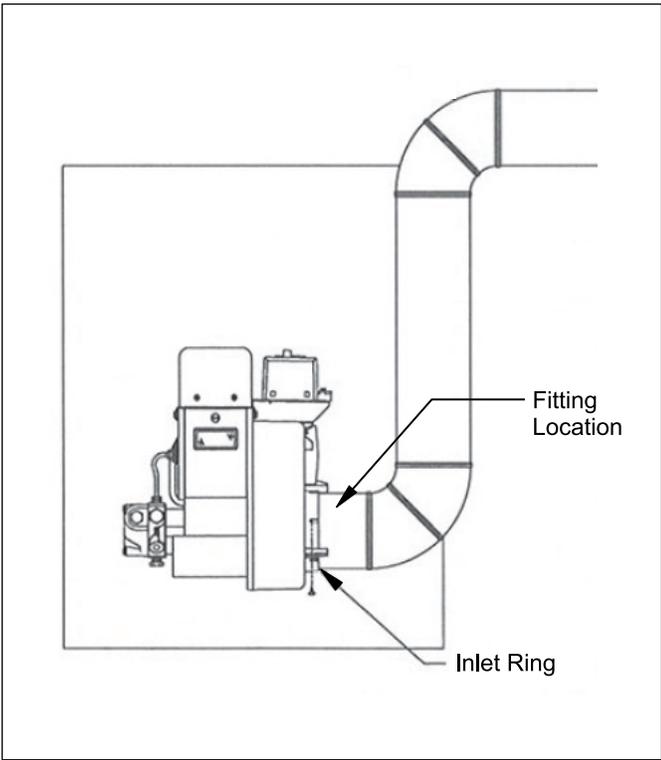


Figure 1.

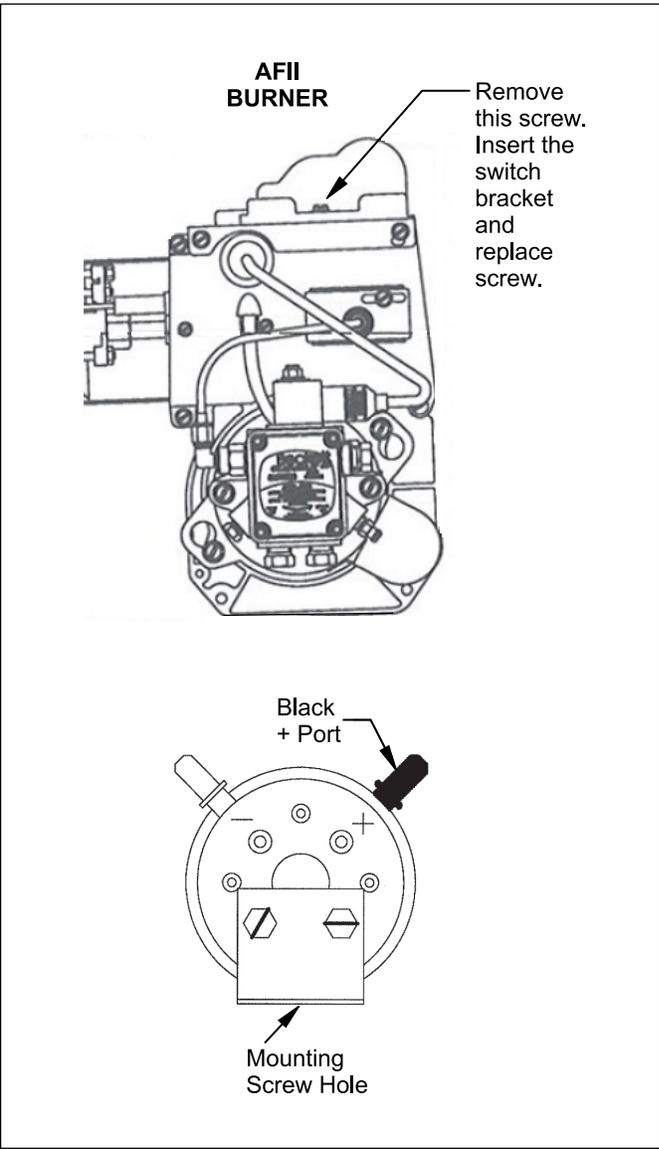


Figure 2.

Kit R2061703 Installation Instructions

For MAX 75, 100 & 120DV Equipped with Beckett AFII Burner

FOR YOUR SAFETY: This procedure must be performed by a professional service technician, qualified in hot water boiler installation. Improper boiler conversion could create carbon monoxide gas which could cause serious injury, property damage, or death.

WARNING

If the information in these instructions is not followed exactly, a fire or explosion may result, causing property damage, personal injury or death.

When equipped with a Beckett AFII, a MAX 75, 100 or 120DV requires the addition of a blocked flue switch, P/N E2333800, to comply with its certification to CSA B140.0 and B140.7. This kit contains the required parts to upgrade for compliance. An updated Installation, Operation and Maintenance manual, P/N 70-196, for the boiler and a start-up label, P/N H2335400, are also provided.

The Blocked Flue Switch is mounted on the burner with the bracket provided. It interrupts power to the burner flame sensing circuit when flue blockage causes an increase in vent pressure. Fittings, wiring and silicone tubing are provided to connect the Blocked Flue Switch to the vent system and burner control.

DETAILED INSTALLATION SUMMARY

1. Turn off electrical power to boiler.
2. Remove 1/8 NPT flue gas sample port plug.
3. Install 1/8 NPT nipple and tee, P/N's P2064000 & P0027100 in sample port with the tee branch facing the left.
4. Replace the 1/8 NPT flue gas sample port plug in the tee.
5. Install the tube adapter elbow fitting, P/N 1-474, in the branch of the tee with the barb facing the burner.
6. Drill and tap (1/8-27 NPT) a hole in the fresh air supply duct to the burner in the location shown in Figure 1 (on back of sheet).
7. Install the straight tube adapter fitting, P/N P2073400 in the tapped hole.
8. Remove the screw from burner and install the Blocked Flue Switch, E2333800, and Bracket, P/N 70-400, as shown in Figure 2 and replace screw.
9. Connect one end of the silicone tube, P/N Q0078800, to the Blocked Flue Switch + (black) port as shown in Figure. 2.
10. Route the tube to the barb fitting on the tee installed previously, cut the tube and install it on the barb fitting.
11. Connect the remaining piece of silicone tube between the Blocked Flue Switch (grey) port and the straight tube adapter installed in step 7 above.
12. Loosen the screws retaining the burner control and set the control aside.
13. Knock out a knockout from the burner control junction box and install the pie bushing, P/N S0064900.
14. Connect both yellow wires to the Blocked Flue Switch terminals.
15. Disconnect one yellow wire from the burner control and cut the wire about 1" (2.5 cm) from the connector and strip insulation (1/8")(3 mm) from both ends.
16. Feed yellow wires from Blocked Flue Switch into junction box through pie bushing.
17. Insert one stripped end from step 15 above into the butt splice connector, P/N 1-748, on one wire from the Blocked Flue Switch and crimp.
18. Insert the other stripped end from step 15 above into the other connector on the remaining wire from the Blocked Flue Switch and crimp.
19. Replace burner control on burner control junction box and tighten screws.
20. Turn on electrical power and start boiler in accordance with start-up label provided.
21. Remove backing from start-up label and apply the label on the right front corner of the jacket top.

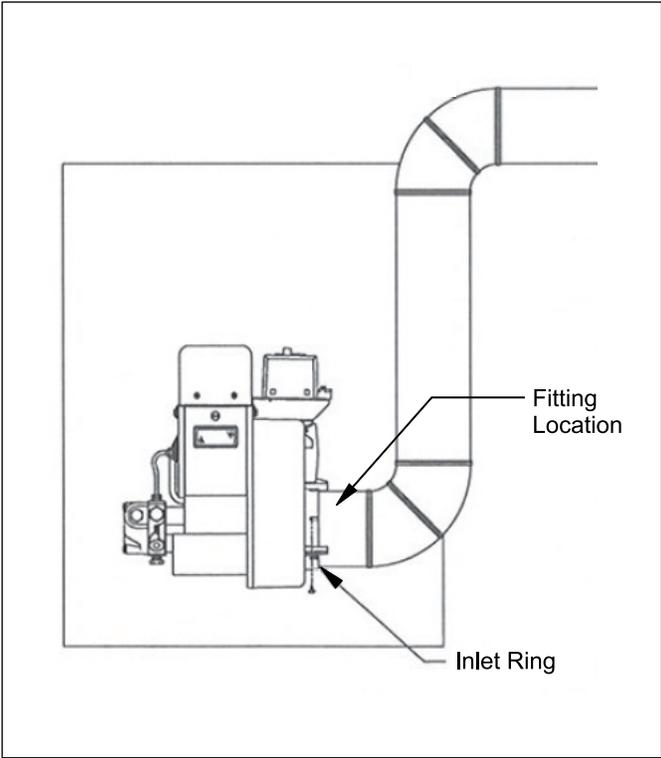


Figure 1.

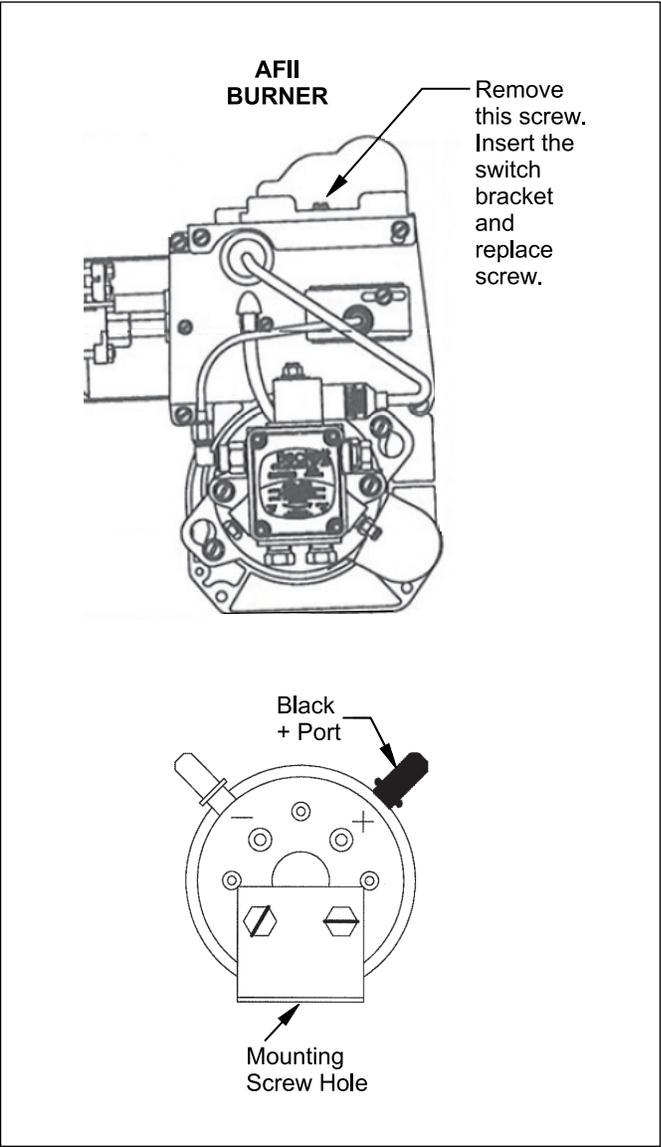


Figure 2.

Kit R2061702 Installation Instructions

For MAX 140 & 165

FOR YOUR SAFETY: This procedure must be performed by a professional service technician, qualified in hot water boiler installation. Improper boiler conversion could create carbon monoxide gas which could cause serious injury, property damage, or death.

WARNING

If the information in these instructions is not followed exactly, a fire or explosion may result, causing property damage, personal injury or death.

The MAX 140 or 165 requires the addition of a high limit switch, P/N 70-178, a blocked flue switch, P/N E2333700 and the addition of a sight port to observe the flame in order to comply with its certification to CSA B140.0 and B140.7. This kit contains the required parts to retrofit to those standards. An updated Installation, Operation and Maintenance manual, P/N 70-196, for the boiler, a start-up label, H2335400 and a copy of the Installation and Maintenance (I/M) sheet for the blocked Flue Switch (packed inside the box containing the switch) are also provided. Follow the directions in the I/M sheet for the location of the Blocked Flue Switch. It should be mounted in the flue pipe on the left side of the boiler because it is wired in series with the high limit switch that is also to be added as described below. Mounting screws are provided.

To install the high limit switch, remove the $\frac{3}{4}$ NPT plug from the control center and install the thermal well, P/N 53-106, provided in the kit. Insert the thermal bulb of the high limit switch into the well and attach the switch. Remove the cover from the Honeywell L8148 and remove the existing burner power wire from terminal B1. Knock out the knockout closest to terminal B1 and attach the unconnected conduit in that open hole. Connect the terminated red wire from that conduit to terminal B1. Connect the other red wire from that conduit to the wire removed from terminal B1. To do this, cut off the existing terminal, strip back insulation $\frac{1}{2}$ " and twist the two wires together and secure with the wire nut provided.

A replacement Burner Door, Kit R2061705, with a sight port is also provided.

DETAILED INSTALLATION SUMMARY

1. Turn off electrical power to boiler.
2. Isolate boiler from system, shut off boiler fill valve, relieve pressure and drain a small amount of water.
3. Remove $\frac{3}{4}$ NPT plug from Control Center and install Thermal Well.
4. Insert bulb from High Limit Switch into Thermal Well and attach switch.
5. Drill hole in flue pipe per instructions in the I/M sheet provided. The hole should be located in the flue on the left side of the boiler.
6. Mount the Blocked Flue Switch with the screws provided.
7. Remove cover from Honeywell L8148. Knock out the knockout closest to terminal B1 and attach the unconnected conduit in that open hole.
8. Remove the existing wire from terminal B1 on the Honeywell L8148, cut the terminal off of it and strip back insulation about $\frac{1}{2}$ " (13 mm).
9. Attach the terminated red wire from the new conduit to terminal B1.
10. Twist together the end of the other new red wire and the wire from item 8 above and secure with wire nut provided.
11. Check that both new switches are reset.
12. Remove Burner and Burner Door.
13. Install Replacement Burner Door from Kit R2061705 and replace Burner.
14. Open boiler fill valve and allow boiler to bleed off air.
15. Open isolation valves.
16. Turn on electrical power and start boiler in accordance with start-up instructions label provided.
17. Check boiler operation.
18. Remove backing from start-up label and apply to top right hand corner of jacket top.

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Kit R2061701 Installation Instructions

For MAX 75, 100 & 120 Equipped with Beckett AFII Burner

FOR YOUR SAFETY: This procedure must be performed by a professional service technician, qualified in hot water boiler installation. Improper boiler conversion could create carbon monoxide gas which could cause serious injury, property damage, or death.



WARNING

If the information in these instructions is not followed exactly, a fire or explosion may result, causing property damage, personal injury or death.

When equipped with a Beckett AFII burner, a MAX 75, 100 or 120 requires the addition of a high limit switch, P/N 70-178, and a blocked flue switch, P/N E2333700, to comply with its certification to CSA B140.0 and B140.7. This kit contains the required parts to upgrade for compliance. An updated Installation, Operation and Maintenance manual, P/N 70-196, for the boiler, a start-up label, P/N H2335400 and a copy of the Installation and Maintenance (I/M) sheet (packaged in box containing switch) for the blocked Flue Switch are also provided. Follow the directions in the I/M sheet for the location of the Blocked Flue Switch. It should be mounted in the flue pipe on the left side of the boiler because it is wired in series with the high limit switch that is also to be added as described below. Mounting screws are provided.

To install the high limit switch, remove the $\frac{3}{4}$ NPT plug from the control center and install the thermal well, P/N 53-106, provided in this kit. Insert the thermal bulb of the high limit switch, P/N 70-178, into the well and attach the switch to the thermal well. Remove the existing burner power wire from terminal B1 on the Honeywell L8148. Knock out the knockout closest to terminal B1 and attach the unconnected conduit in that open hole. Connect the terminated red wire from that conduit to terminal B1. Connect the other wire from that conduit to the wire removed from terminal B1. To do this, cut off the existing terminal, strip the wire and wire nut the two wires together.

DETAILED INSTALLATION SUMMARY

1. Turn off electrical power to boiler.
2. Isolate boiler from system, shut off boiler fill valve, relieve pressure and drain a small amount of water.
3. Remove $\frac{3}{4}$ NPT plug from Control Center and install Thermal Well.
4. Insert bulb from High Limit Switch into Thermal Well and attach switch to thermal well.
5. Drill hole in flue pipe per instructions in the I/M sheet provided. The hole should be located in the flue on the left side of the boiler.
6. Mount the Blocked Flue Switch with the screws provided.
7. Knock out the knockout closest to terminal B1 on the Honeywell L8148 and attach the unconnected conduit in that open hole.
8. Remove the existing wire from terminal B1 on the Honeywell L8148, cut the terminal off of it and strip back insulation about 1/2" (13 mm).
9. Attach the terminated wire from the new conduit to terminal B1.
10. Twist together the end of the other new wire and the wire from item 8. above and connect with wire nut.
11. Check that both new switches are reset.
12. Open boiler fill valve and allow boiler to bleed off air.
13. Open isolation valves.
14. Turn on electrical power and start boiler in accordance with start-up label provided.
15. Remove backing from start-up label, P/N H2335400, and apply the label to the front right corner of the jacket top.

Kit R2061707 Installation Instructions

For MAX 75-120 Equipped with Carlin or Riello Burners

FOR YOUR SAFETY: This procedure must be performed by a professional service technician, qualified in hot water boiler installation. Improper boiler conversion could create carbon monoxide gas which could cause serious injury, property damage, or death.

WARNING

If the information in these instructions is not followed exactly, a fire or explosion may result, causing property damage, personal injury or death.

The MAX 75-120 boilers equipped with a Riello or Carlin burner, require the addition of a high limit switch, P/N 70-178, a blocked flue switch, P/N E2333700, and the addition of a sight port to observe the burner flame in order to comply with its certification to CSA B140.0 and B140.7. This kit contains the required parts to upgrade for compliance. An updated Installation, Operation and Maintenance manual, P/N 70-196, for the boiler, a start-up instructions label, P/N H2335400 and a copy of the Installation and Maintenance (I/M) sheet for the blocked Flue Switch (packaged in the box with the switch) are also provided. Follow the directions in the I/M sheet for the location of the Blocked Flue Switch. It should be mounted in the flue pipe on the left side of the boiler because it is wired in series with the high limit switch that is also to be added as described below. Mounting screws are provided.

To install the high limit switch, remove the $\frac{3}{4}$ NPT plug from the control center and install the thermal well, P/N 53-106, provided in this kit. Insert the thermal bulb of the high limit switch into the well and attach the switch to the thermal well. Remove the existing burner power wire from terminal B1 on the Honeywell L8148. Knock out the knockout closest to terminal B1 and attach the unconnected conduit in that open hole. Connect the terminated red wire from that conduit to terminal B1. Connect the other wire from that conduit to the wire removed from terminal B1. To do this, cut off the existing terminal, strip the wire and wire nut the two wires together.

A replacement Burner Door, Kit R2061706, with a sight port is also provided.

DETAILED INSTALLATION SUMMARY

1. Turn off electrical power to boiler.
2. Isolate boiler from system, shut off boiler fill valve, relieve pressure and drain a small amount of water.
3. Remove $\frac{3}{4}$ NPT plug from Control Center and install Thermal Well.
4. Insert bulb from High Limit Switch into Thermal Well and attach switch.
5. Drill hole in flue pipe per instructions in the I/M sheet provided. The hole should be located in the flue on the left side of the boiler.
6. Mount the Blocked Flue Switch with the screws provided.
7. Remove cover from Honeywell L8148. Knock out the knockout closest to terminal B1 and attach the unconnected conduit in that open hole.
8. Remove the existing wire from terminal B1 on the Honeywell L8148, cut the terminal off of it and strip back insulation about $\frac{1}{2}$ " (13 mm).
9. Attach the terminated wire from the new conduit to terminal B1.
10. Twist together the end of the other new wire and the wire from item 8 above and connect with wire nut.
11. Check that both new switches are reset.
12. Remove Burner and Burner Door
13. Install Replacement Burner Door and replace Burner
14. Open boiler fill valve and allow boiler to bleed off air.
15. Open isolation valves.
16. Turn on electrical power and start boiler in accordance with start-up label provided.
17. Check boiler operation.
18. Remove backing from Start-up label and apply the label to the front right corner of the jacket top.

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