



INSTALLATION INSTRUCTIONS

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GAS KITS AND ACCESSORIES

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IGNITION CONTROL REPLACEMENT KIT

INSTALLATION INSTRUCTIONS FOR IGNITION CONTROL REPLACEMENT KIT 53L89 (LB-96306A) USED WITH ROBERTSHAW SP730A AND SP750 IGNITION SYSTEMS

Shipping & Packing List

Package 1 of 1 contains

- 1 - Replacement ignition control (Honeywell)
- 1 - Main burner with pilot bracket
- 1 - Pilot burner assembly (includes sensor)
- 1 - Pilot tubing
- 1 - Stand-off bracket
- 2 - #10-32 x 1/4" thread-forming screws (TFS)
- 4 - #8-32 x 1/2" thread-forming screws (TFS)
- 1 - Insulating sleeve
- 2 - 1/4" Double quick-connect terminals
- 1 - 1/4" quick-connect terminal
- 2 - Inline connectors
- 3 - Wires and one wire harness
- 3 - Wire ties
- 2 - Wiring diagram stickers

Shipping Damage

Check equipment for shipping damage. If you find any damage, immediately contact the last carrier.

Application

Use ignition control replacement kit #53L89 (LB-96306A) with Robertshaw SP730A and SP750 ignition systems. This replacement kit includes a Honeywell ignition control.

Installation

Replacing the Main Pilot Burner

- 1 - Turn off the unit's electrical power and gas supply.
- 2 - Remove the access panel.
- 3 - Disconnect the gas supply piping from the manifold assembly.
- 4 - **Units with SP730A Ignition Control:**
Disconnect the wires between the gas valve terminals and ignition control and discard the wires.
Units with SP750 Ignition Control:
Locate, mark, and disconnect from the existing ignition control all the wires that run from the gas valve.
- 5 - Disconnect the white sensor wire and the ignition lead from the existing ignition control.
- 6 - Disconnect the pilot tubing at the gas valve and do the following:

- remove the two screws holding the gas manifold in place
 - remove the manifold
 - pull the main burner assembly including the pilot burner from the heat exchanger
- 7 - Disconnect the pilot tubing from the pilot burner. Then discard the main burner and the pilot burner (including the sensor wire and ignition lead).
 - 8 - Connect the existing pilot tubing to the replacement pilot burner. (If the existing pilot tubing is not serviceable, use new provided tubing.)
Then connect the replacement sensor wire to the replacement pilot burner sensor. Secure the pilot burner assembly to the new main burner with the #10-32 X 1/4" provided screws.
 - 9 - Slide the main burner assembly with the pilot burner assembly into the heat exchanger, secure the manifold to the unit with the existing two screws and reconnect the pilot tubing to the gas valve.

Replacing the Ignition Control

- 1- **Units with SP730A Ignition Control:**
Disconnect the gray wire from the "T2" terminal and the yellow/blue wire from the "T1" terminal of the existing ignition control.
Units with SP750 Ignition Control:
Disconnect the remaining wires/wire harness from the existing ignition control.
- 2- Remove the existing ignition control and stand-off bracket and discard them.
- 3- Install the replacement stand-off bracket to the replacement ignition control with two of the provided #8-32 X 1/2" thread-forming screws. Place the ignition control assembly to the vestibule panel for convenient wiring. Drill two 9/64" holes in the vestibule panel and secure the ignition control with two of the provided #8-32 X 1/2" thread-forming screws.
- 4- Attach the replacement high-temperature white wire to the "8-SENSE" terminal on the ignition control.
- 5- Connect the orange ignition wire of the pilot assembly to the "9-SPARK" terminal on the ignition control.

IMPORTANT

Do not include the ignition lead in any group of bundled wires. Route the ignition lead separately.

6- Connect the green ground wire to the ignition control terminal "4-GND" (burner) and secure the opposite end to a unit ground screw.

7- Units with SP730A Ignition Control (See figure 1):

- a - Connect the existing gray wire from the transformer common to the "5-24V (GND)" terminal on the ignition control.
- b - Connect the yellow/blue wire from w-thermostat to "6-24V" terminal on the ignition control.
- c - Plug the replacement wiring harness into the gas valve and make the following connections to the replacement ignition control:
 - connect the blue/purple wire to the "3-PV" terminal
 - connect the orange wire to "1-MV" terminal
 - connect the black/yellow wire to "2-MV/PV" terminal

8- Units with SP750 Ignition Control (See figure 2):

- a - Remove the brown wire (it was connected to terminal "T1" of the existing ignition control) from terminal 5 of the limit control.
- b - Attach the double quick-connect (provided) to the existing 6" (150 mm) brown lead from the damper harness and connect it to terminal 5 of the limit control.

NOTE - On units that require additional wire length, splice the existing brown wire from step 8a above into the existing damper harness lead using the provided inline connector.
- c - Connect the red wire (provided) to terminal 5 of the limit control and use the inline connector (provided) to connect to the red wire from the control box (thermostat lead "R").
- d - connect the existing 6" (150 mm) white damper harness wire to terminal "6-24V" on the ignition control.
- e - Connect the existing 6" (150 mm) yellow damper harness wire and the existing 36" yellow

control box wire (24 volt yellow transformer lead) with the double quick-connect (provided) to the "5-24V GND" terminal on the ignition control.

- f - Make the following connections to the ignition control:
 - connect the existing orange wire from the pilot operator terminal of the gas valve to the "3-PV" terminal of the ignition control
 - connect the existing red wire from "TR" terminal of the gas valve to "2-MV/PV" terminal of the ignition control

NOTE - Leave fan control heater wire (Camstat - yellow, Honeywell - black) connected to the "TR" terminal of the gas valve.
 - connect the existing black wire from the "TH" terminal of gas valve to double quick-connect (provided) and connect to the "1-MV" terminal on the ignition control and connect the fan control heater wire (Camstat - red, Honeywell - black) to "1-MV" terminal of the ignition control
- 9- Reconnect the gas supply and restore gas to the unit.

IMPORTANT

Carefully check all piping connections for gas leaks. You must check pilot line connections while the unit is operating (intermittent ignition systems).

CAUTION

Some soaps used for leak detection are corrosive to certain metals. Rinse the piping thoroughly after you have completed the leak test. Do not use matches, candles, flame, or other sources of ignition to check for gas leaks.

- 10- Affix the replacement unit wiring diagram next to the existing diagram which is located on the blower access panel.
- 11- Follow the start-up and adjustment section.

Field Wiring Diagram for SP730A Replacement

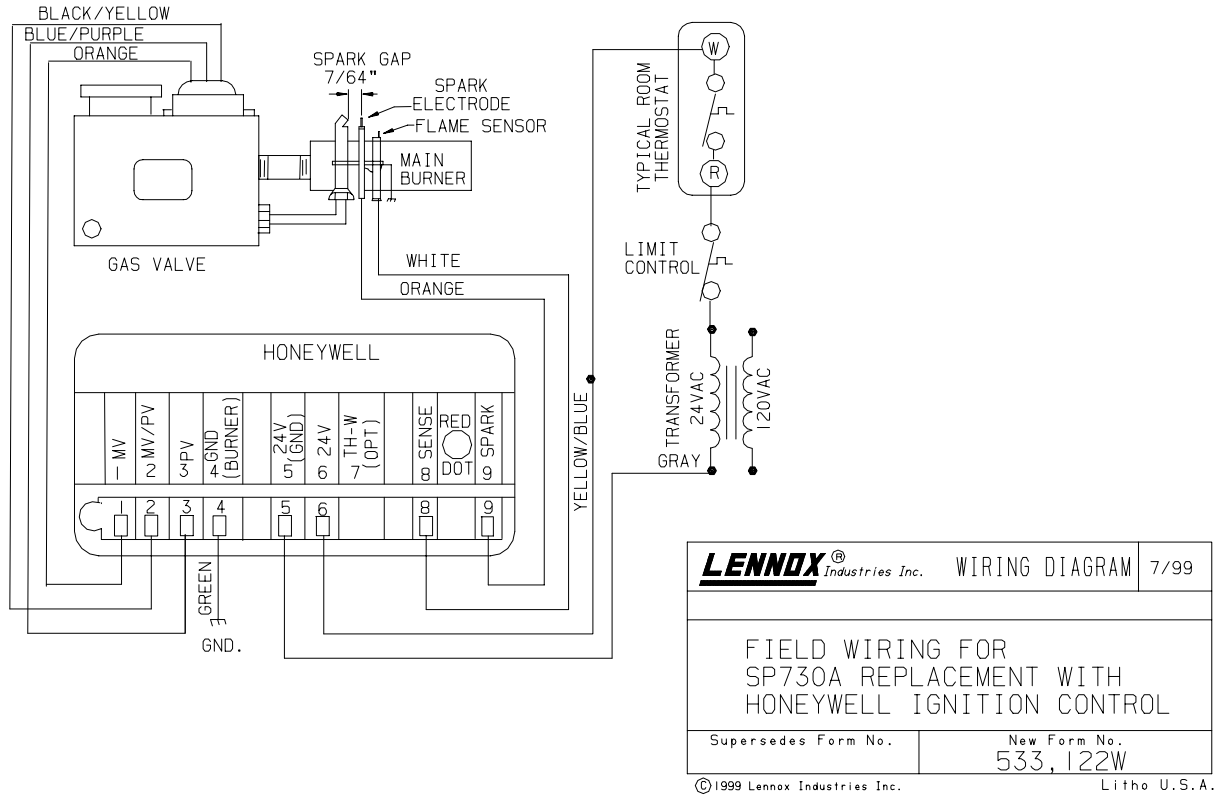


FIGURE 1

Field Wiring Diagram for SP750 Replacement

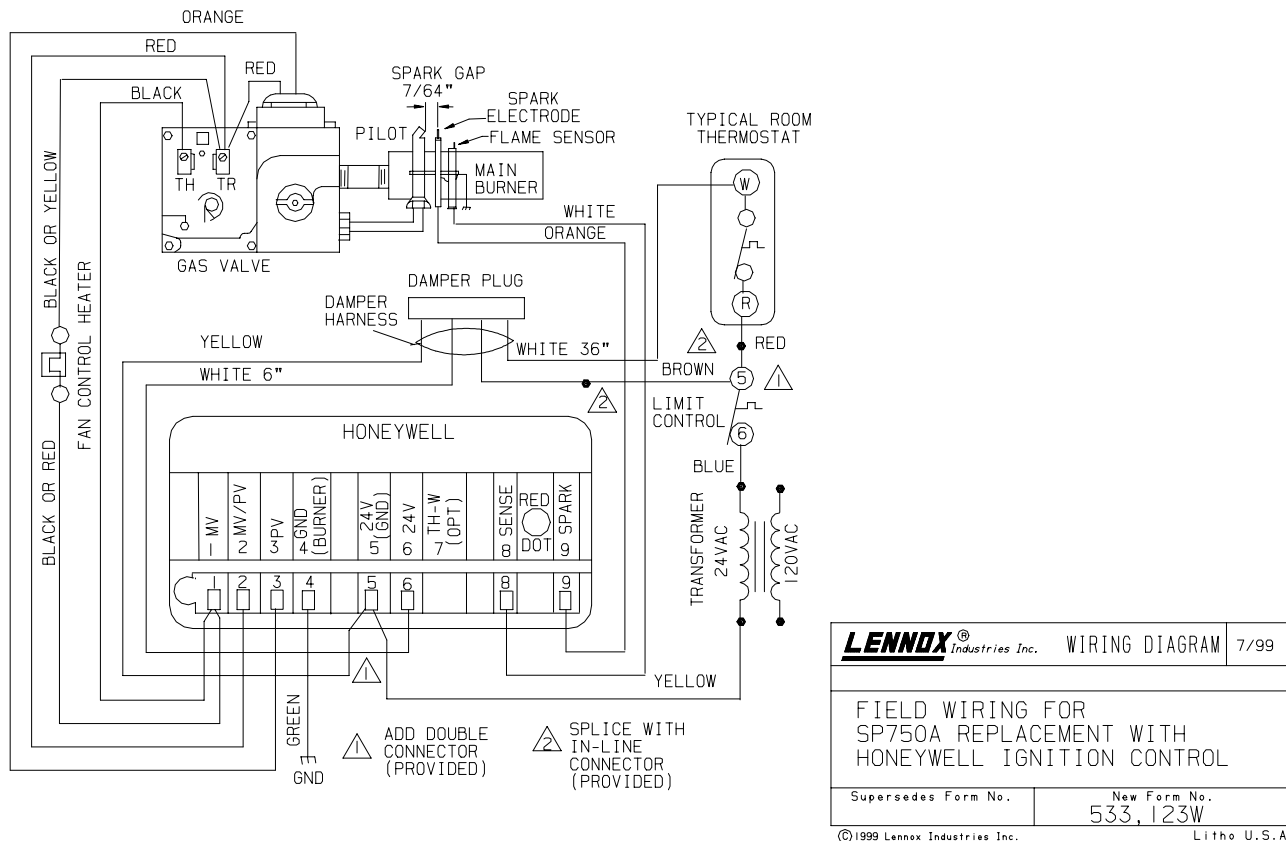


FIGURE 2

Start-up & Adjustment

BEFORE LIGHTING, smell all around the appliance for gas. Be sure to smell next to the floor because some types of gas are heavier than air and will settle on the floor.

Use only your hand to move the gas control knob. Never use tools. If the knob will not move by hand, do not try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.

NOTE - When the unit is initially started, you may need to repeat steps 1 through 7 to purge air from the pilot line.

Placing the unit into operation

- 1 - Make sure the thermostat is set below room temperature, and that the power is turned off to unit.
- 2 - This unit is equipped with an ignition device which automatically lights the pilot burner. **DO NOT** try to light the pilot burner by hand.
- 3 - Turn the gas valve knob to **OFF**. Do not force the knob.
- 4 - Wait 5 minutes to clear out any gas. If you then smell gas, immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions. If you do not smell gas, go on to the next step.
- 5 - Turn the gas valve knob to **ON**.
- 6 - Turn on electrical power to the unit.

- 7 - Set the thermostat above the room temperature.
- 8 - Check the gas line supply pressure while the unit is operating. The minimum pressure as shown on the unit name plate must be available. Then check and adjust the manifold pressure to the value indicated on the unit name plate.
- 9 - Set the heat anticipator according to table 1 for electromechanical thermostats. For electronic thermostats, see the thermostat instructions for heat anticipator settings.

TABLE 1
Heat Anticipator Settings (AMPS)

| Valve Type | Electromechanical Thermostat | |
|------------|------------------------------|-------------|
| | No Vent Damper | Vent Damper |
| 7100 KER | 0.60 | 0.70 |
| 7000 BKER | 0.85 | 0.95 |

- 10 -Run the unit through at least three cycles to check that it is operating normally.
- 11 -Set thermostat to desired setting.
- 12 -Replace the access panel.