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GAS UNITS KITS & ACCESSORIES

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GAS CHANGEOVER KIT

INSTALLATION INSTRUCTIONS FOR NATURAL TO REGULATED LP/PROPANE GAS KITS (19K05 & 19K06) USED WITH EL195UHNE & SL297UHNV

⚠ WARNING

This conversion kit is to be installed by a licensed professional service technician (or equivalent) or other qualified agency in accordance with the manufacturer's instructions, all codes and requirements of the authority having jurisdiction in the USA, and the requirements of the CSA-B149 installation codes in Canada. If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life. The qualified agency performing this work assumes responsibility for this conversion.

⚠ CAUTION

As with any mechanical equipment, contact with sharp sheet metal edges can result in personal injury. Take care while handling this equipment and wear gloves and protective clothing.

Shipping and Packing List

Package 1 of 1 contains:

- 1 - Main gas orifice
- 1 - Gas conversion sticker
- 1 - Nameplate conversion sticker
- 1 - Low gas inlet pressure switch (S145)
- 1 - Gas valve inlet fitting
- 1 - Wire harness
- 1 - Air orifice

Application

Use natural to LP/Propane gas conversion kit 19K05 and 19K06 to convert the EL195UHNE and SL297UHNV units from from natural gas to regulated LP/propane gas. **These kits are applicable for the -060 and -080 capacity units only.** See table 1.

TABLE 1
Orifice Sizing Table

Unit Capacity	Gas Orifice	Air Orifice	Kit Number
-060	0.0469	0.970	19K05
-080	0.0550	1.062	19K06

Installation (Figure 1)

⚠ WARNING

Danger of explosion.

There are circumstances in which odorant used with LP/propane gas can lose its scent. In case of a leak, LP/propane gas will settle close to the floor and may be difficult to smell. An LP/propane leak detector should be installed in all LP applications.

- 1 - Set the thermostat to the lowest setting. Shut off the gas supply to the furnace, then disconnect the electrical power.
- 2 - Remove the access panel. Move the automatic gas valve switch to the OFF position.
- 3 - Disconnect the gas supply and the two-wire plug at the gas valve.
- 4 - Remove the two screws holding the black air intake coupling to the cabinet.
- 5 - Loosen the clamp attaching the intake to the gas-air elbow. Remove the intake from the gas-air elbow.
- 6 - Use a socket wrench to remove the gas orifice from inside of the manifold pipe. Replace with provided gas orifice. **DO NOT USE** sealant on orifice.
- 7 - Install the provided LP air orifice. Re-attach the intake to the gas-air elbow and tighten the clamp. Re-install the gas-air elbow to the collector box. Re-install the black air intake coupling to the cabinet.
- 8 - Thread provided fitting to gas valve inlet until hand tight. Using properly sized wrench, tighten fitting 2 to 3 full turns being careful to position the side port to allow clearance for the pressure switch and harness. See figures 2 or 3.

NOTE - Never use channel lock pliers or a pipe wrench on the brass fitting.

NOTE - Some installations may require the pressure switch and fitting assembly to be positioned differently than shown in figures 2 and 3.



9 - Thread the gas supply to the fitting until hand tight. A field provided coupling may be needed. See figure 3. Using properly sized wrench to support fitting, tighten supply line into fitting 2 to 3 full turns to achieve leak free joint.

NOTE - Do not over tighten. (Maximum 3 full turns past hand tight for ½" NPT per ASME B1.20.1-2013)

10 - Thread pressure switch (S145) to fitting 2 to 3 turns past hand tight, then connect provided wire harness as shown in figure 4.

11 - Reconnect two wire plug to gas valve.

12 - Restore the electrical power to the unit.

13 - Inspect all sides of assembly. Turn on gas supply. **Immediately check the entire fitting surface and assembly joints for gas leaks.**

14 - On the nameplate conversion sticker, mark the appropriate box that corresponds to the unit model number. Affix the sticker next to unit nameplate.

15 - Complete the information required on the converter sticker: date, name, and address. Affix sticker to the exterior of the unit in a visible area.

16 - Follow the steps given in the start-up and adjustment section.

17 - Replace the access panel.

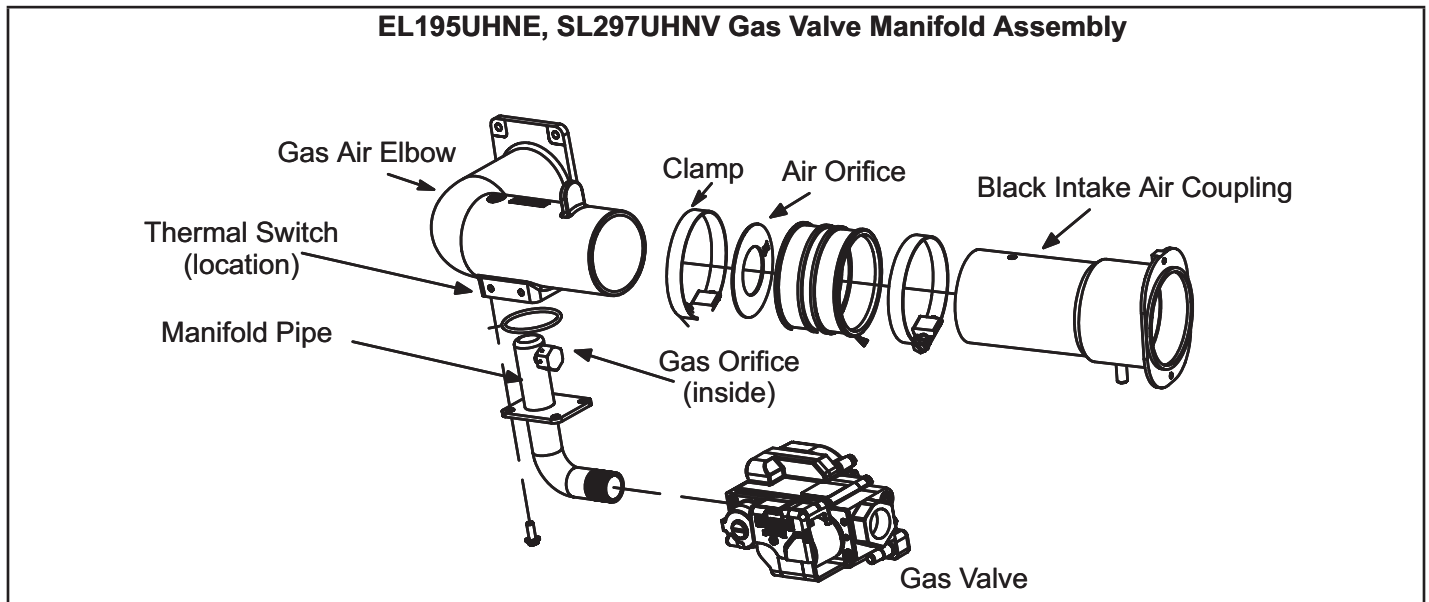


FIGURE 1

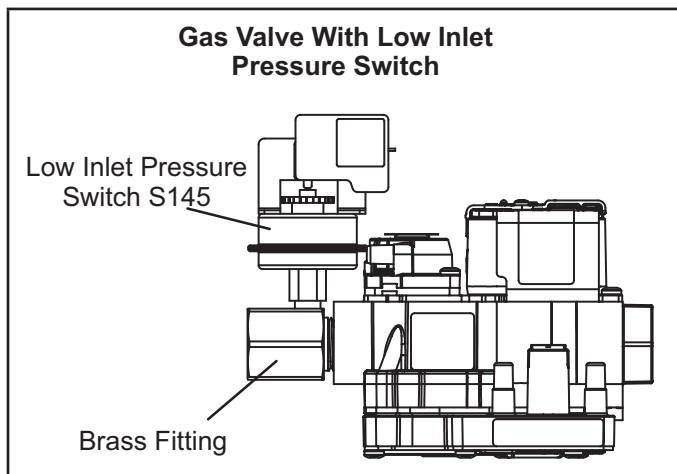


FIGURE 2

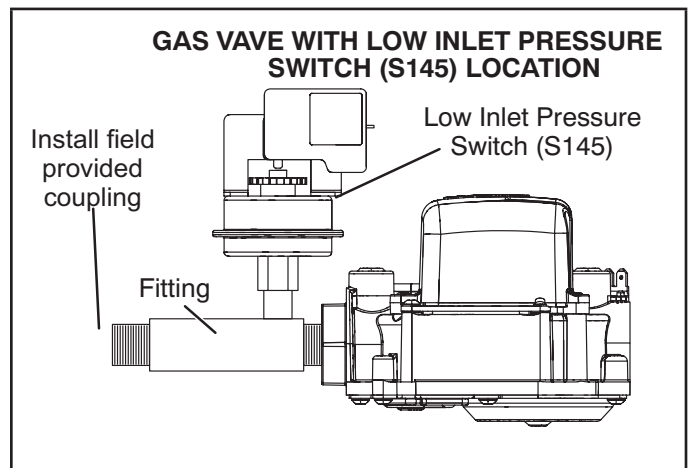


FIGURE 3

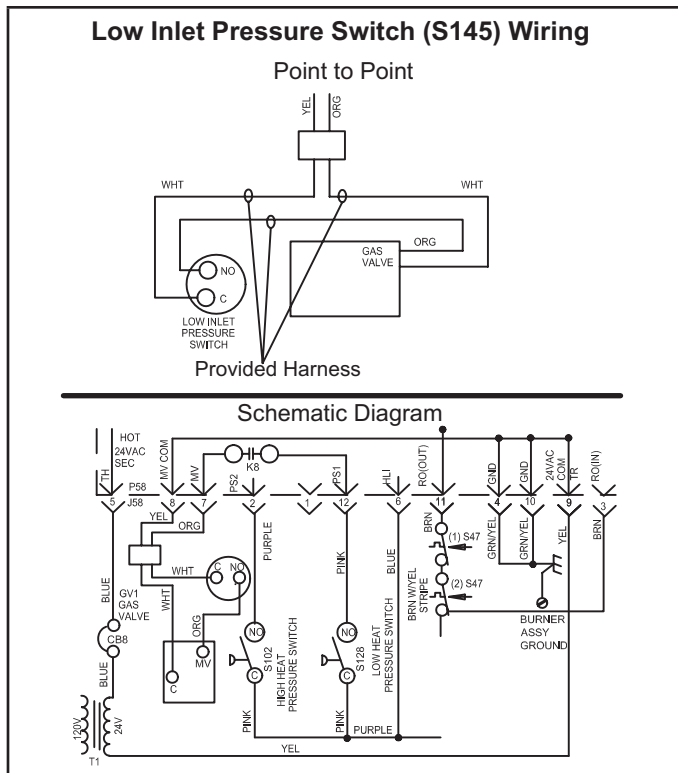


FIGURE 4

Start-Up & Adjustment

BEFORE PLACING THE UNIT INTO OPERATION, smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

The gas valve on this unit is equipped with a gas control switch. Use only your hand to move the control switch. Never use tools. If the switch will not move by hand, do not try to repair it. Force or attempted repair may result in a fire or explosion.

A - Placing the Furnace into Operation

⚠ IMPORTANT

Follow the lighting instructions provided on the unit. If lighting instructions are not available, refer to the following section.

Do not attempt to manually light burners on this furnace. Each time the thermostat calls for heat, the burners will automatically light. The ignitor does not get hot when there is no call for heat on units with this ignition system.

- 1 - STOP! Read the safety information at the beginning of this section.
- 2 - Set the thermostat to its lowest setting.
- 3 - Turn off all electrical power to the furnace.
- 4 - Do not try to light the burners by hand.
- 5 - Remove the unit access panel.
- 6 - Move the gas valve switch to the OFF position. See figure 5.

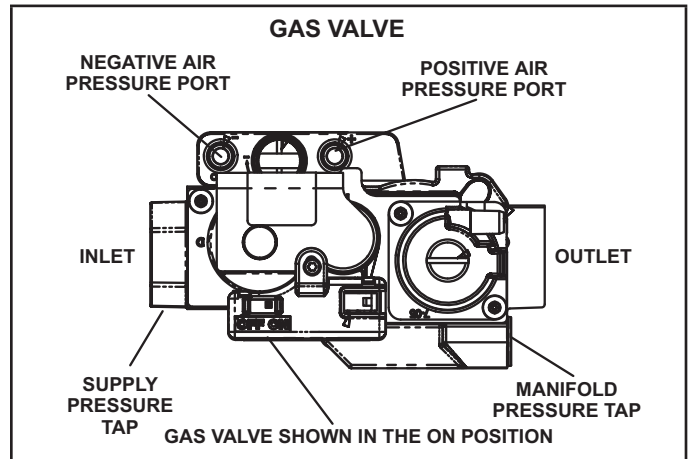


FIGURE 5

- 7 - Wait five (5) minutes for any gas to clear out. If you then smell gas, STOP! Immediately call the gas supplier from a neighbor's phone. Follow the gas supplier's instructions. If you do not smell gas, go to the next step.
- 8 - Move gas valve switch to ON position.
- 9 - Replace the unit access panel.
- 10 - Turn on all electrical power to the unit.
- 11 - Set the thermostat to desired setting.
- 12 - If the furnace will not operate, see the section "Turning Gas Off to the Unit" and call the gas supplier.

B - Turning Off Gas to the Unit

- 1 - Set the thermostat to its lowest setting.
- 2 - Turn off all the electrical power to the unit.
- 3 - Remove the access panel.
- 4 - Move the gas valve switch to the OFF position.

Gas Pressure Measurement

NOTE - To obtain accurate reading, shut off all other gas appliances connected to meter.

A - Gas Flow (Approximate)

**TABLE 2
GAS METER CLOCKING CHART LP/PROPANE**

Unit Input	Seconds for One Revolution	
	1 cuft Dial	2 cu ft Dial
060	150	300
080	112	224
LP Propane - 2500 btu/cu ft		

Furnace should operate at least 5 minutes before checking gas flow. Determine time in seconds for two revolutions of gas through the meter. (Two revolutions assures a more accurate time.) Divide by two and compare to time in table 2 below. If manifold pressure matches table 3 or 4 and rate is incorrect, check gas orifices for proper size and restriction. Remove temporary gas meter if installed.

NOTE - To obtain accurate reading, shut off all other gas appliances connected to meter.

IMPORTANT

For safety, connect a shut-off valve between the manometer and the gas tap to permit shut off of gas pressure to the manometer.

The gas valve is factory set and should not require adjustment. All gas valves are factory regulated. To correctly measure manifold pressure, follow the steps below:

- 1 - Remove the threaded plug from the outlet side of the gas valve and install a field-provided barbed fitting. Connect measuring device "+" connection to barbed fitting to measure manifold pressure.
- 2 - Start unit on low heat (two stage furnace) and allow 5 minutes for unit to reach steady state.
- 3 - After allowing unit to stabilize for 5 minutes, record manifold pressure and compare to value given in table 3 or table 4.

- 4 - Repeat on high heat (two stage furnace)
- 5 - Shut unit off and remove manometer as soon as an accurate reading has been obtained. Take care to remove barbed fitting and replace threaded plug.
- 6 - Start unit and perform leak check. Seal leaks if found.

C - Supply Pressure Measurement

A threaded plug on the inlet side of the gas valve provides access to the supply pressure tap. Remove the threaded plug, install a field-provided barbed fitting and connect a manometer to measure supply pressure. Replace the threaded plug after measurements have been taken.

D- Proper Combustion

Furnace should operate minimum 15 minutes with correct manifold pressure and gas flow rate before checking combustion. Take combustion sample beyond the flue outlet. See table 5 for correct combustion. **The maximum carbon monoxide reading should not exceed 100 ppm.**

**TABLE 3
Manifold and Supply Line Pressures LP/Propane**

SL297N	Manifold Pressure		Supply Pressure	
	Low Fire	High Fire		
-060	1.7" wc	3.6" wc	11.0"wc	13.0"wc
-080				

**TABLE 4
Manifold and Supply Line Pressures LP/Propane**

EL195N	Manifold	Supply
-060 / -080	3.6" WC	11.0"wc - 13.0"wc

TABLE 5

Model	CO ₂	
	Low Fire	High Fire
SL297N-080	9.3 - 10.0	9.3 - 10.0
SL297N -060	9.5 - 10.2	9.5 - 10.2
EL195N-080	8.4 - 9.9	
EL195N-060	9.0 - 10.4	