

Installation Instructions

Gas Conversion Kit Natural-to-Propane for Variable-Speed and 2-Speed Furnaces

KGANP24012SP



NOTE: Read the entire instruction manual before starting the installation.

This symbol → indicates a change since the last issue.

SAFETY CONSIDERATIONS

Installing and servicing heating equipment can be hazardous due to gas and electrical components. Only trained and qualified personnel should install, repair, or service heating equipment.

Untrained personnel can perform basic maintenance functions such as cleaning and replacing air filters. All other operations must be performed by trained service personnel. When working on heating equipment, observe precautions in the literature, on tags, and on labels attached to or shipped with the unit, and other safety precautions that may apply.

→ Follow all safety codes. In the United States, follow all safety codes including the National Fuel Gas Code (NFGC) NFPA No. 54-1992/ANSI Z223.1-1992. In Canada, refer to the National Standard of Canada Natural Gas and Propane Installation Codes (NSCNGPIC), CAN/CGA-B149.1 and .2-M95.

Wear safety glasses and work gloves. Have a fire extinguisher available during start-up, adjustment procedures, and service calls.

Recognize safety information. This is the safety-alert symbol . When you see this symbol on the furnace and in instructions or manuals, be alert to the potential for personal injury.

Understand the signal words DANGER, WARNING, CAUTION, and NOTE. The words DANGER, WARNING, and CAUTION are used with the safety-alert symbol. DANGER identifies the most serious hazards which **will** result in severe personal injury or death. WARNING signifies hazards which **could** result in personal injury or death. CAUTION is used to identify unsafe practices which **would** result in minor personal injury, or product and property damage. NOTE is used to highlight suggestions which **will** result in enhanced installation, reliability, or operation.

→  **WARNING:** This conversion kit shall be installed by a qualified service agency in accordance with the manufacturer's instructions and all applicable codes and requirements of the authority having jurisdiction. If the 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. The qualified service agency performing this work assumes responsibility for the proper conversion of this furnace with this kit.

In Canada, the conversion shall be carried out in accordance with the requirements of the provincial authorities having jurisdiction and the National Standard of Canada Natural Gas and Propane Installation Code (NSCNGPIC).

 **AVERTISSEMENT:** Cet ensemble de conversion ne doit être installé que par le représentant d'un organisme qualifié et conformément aux instructions du fabricant et à tous les codes et exigences applicables de l'autorité compétente. Quiconque ne respecte pas à la lettre les instructions dans le présent manuel risque de déclencher un incendie ou une explosion entraînant des dommages matériels, des lésions corporelles ou la perte de vies humaines. L'organisme qualifié qui effectue les travaux est responsable de la conversion correcte de ce générateur d'air chaud à l'aide de cet ensemble.

INTRODUCTION

This instruction covers the installation of gas conversion kit Part No. KGANP24012SP to convert the following furnaces from natural gas usage to propane gas usage. See appropriate section for your furnace type.

- • Section 1—Models 58DXT, 58TMA, 58TUA, 58UHV, 58UXT, 58UXV, 330AAV, 330JAV, 331AAV, 331JAV, 333BAV, and 333JAV Induced-Combustion, Hot Surface Ignition, 2-Speed and Variable-Speed, Non-Condensing Furnaces. This kit is designed for use in furnaces with 40,000 through 140,000 Btuh gas input rates.
- Section 2—Models 58MVP and 355MAV Direct-Vent, Multipoise, Hot Surface Ignition, Variable-Speed, Condensing Furnaces. This kit is designed for use in furnaces with 40,000 through 120,000 Btuh gas input rates.

⚠ WARNING: Improper installation, adjustment, alteration, service, maintenance, or use can cause carbon monoxide poisoning, explosion, fire, electrical shock, or other conditions which could result in personal injury or death. Consult a qualified installer, service agency, local gas supplier, or your distributor or branch for information or assistance. The qualified installer or agency must use only factory-authorized kits or accessories when modifying this product. Failure to follow instructions could result in serious injury or property damage.

- **⚠ CAUTION:** Gas supply **MUST** be shut off before disconnecting electrical power and proceeding with conversion.

DESCRIPTION AND USAGE

This kit is designed for use in the furnaces listed above. See Table 1 for kit contents. The conversion uses a White-Rodgers 36E 2-stage gas valve. More parts are shipped in kit than will be needed to complete conversion. When installation is complete, discard extra parts.

Table 1—Kit Contents

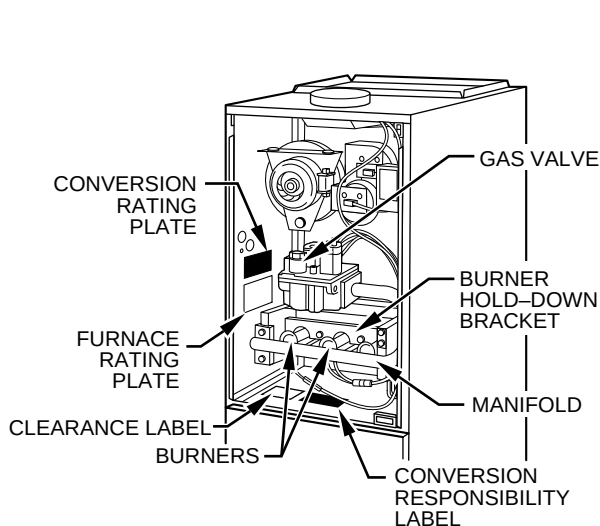
DESCRIPTION	PART NO.	QUANTITY
Gas Valve—Propane (White-Rodgers 36E 2-Stage, Red Knob)	EF33CZ201	1
Main Burner Orifice (Drill Size 1.25mm)	LH32DB209	7
Main Burner Orifice (Drill Size No. 55)	LH32DB201	7
Main Burner Orifice (Drill Size No. 56)	LH32DB206	7
Conversion Rating Plate Label	321221-101	1
Conversion Responsibility Label	321201-103	1
Installation Instructions	AG-GANP-15	1

- **SECTION 1—MODELS 58DXT, 58TMA, 58TUA, 58UHV, 58UXT, 58UXV, 330AAV, 330JAV, 331AAV, 331JAV, 333BAV, AND 333JAV INDUCED-COMBUSTION, HOT SURFACE IGNITION, 2-SPEED AND VARIABLE-SPEED, NON-CONDENSING FURNACES**

PROCEDURE 1—INSTALL MAIN BURNER ORIFICES

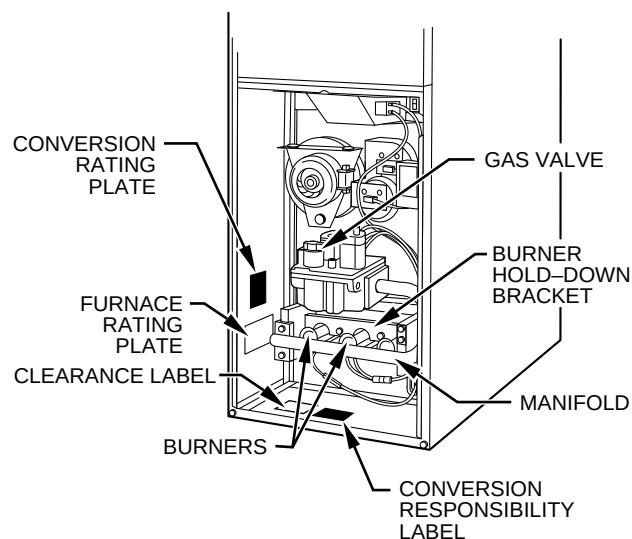
NOTE: See Fig. 1 or 2 for component location.

1. Turn off furnace gas and electrical supplies.
2. Remove control access door.



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→ **Fig. 1—Upflow and Upflow/Horizontal, 2-Speed and Variable-Speed, Non-Condensing Furnace Components and Conversion Label Location**



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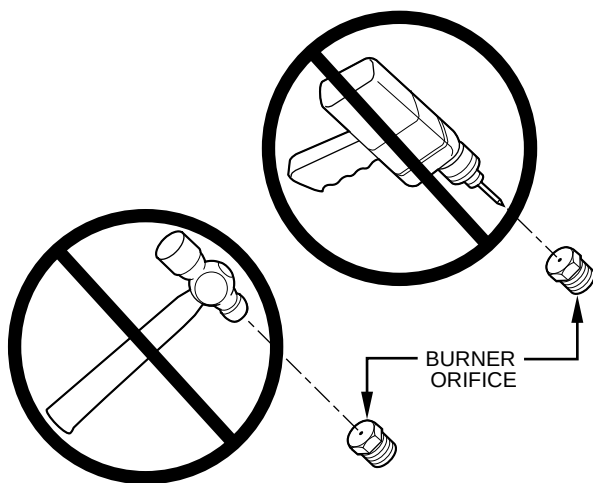
→ **Fig. 2—Downflow and Downflow/Horizontal, 2-Speed, Non-Condensing Furnace Components and Conversion Label Location**

- 3. Turn furnace gas valve control knob to OFF position.
4. Remove burner hold-down bracket.
5. Remove burners from manifold.
6. Remove and discard orifices from manifold.
7. Refer to Table 2 to determine main burner orifice size.

→ **Table 2—Orifice Size Selection for Propane, 2-Speed and Variable-Speed, Non-Condensing Furnaces**

INPUT PER BURNER AT SEA LEVEL	SUPPLY PRESSURE		ALTITUDE OF INSTALLATION (FT ABOVE SEA LEVEL)			
			0 to 2000	2001 to 3000	3001 to 4000	4001 to 5000
Downflow and Downflow/Horizontal Furnaces 21,000—High 13,500—Low Btuh	13.6-in. wc max 11.0-in. wc min	Orifice Size	55	55	1.25mm	1.25mm
		Manifold Pressure High/Low	11.0-in. wc/ 4.5-in. wc	10.0-in. wc/ 4.2-in. wc	11.0-in. wc/ 4.5-in. wc	10.5-in. wc/ 4.2-in. wc
Upflow and Upflow/Horizontal Furnaces 20,000—High 13,000—Low Btuh	13.6-in. wc max 11.0-in. wc min	Orifice Size	55	1.25mm	1.25mm	1.25mm
		Manifold Pressure High/Low	10.0-in. wc/ 4.2-in. wc	11.0-in. wc/ 4.5-in. wc	10.5-in. wc/ 4.2-in. wc	10.0-in. wc/ 4.2-in. wc

- a. The U.S.A. full input ratings for natural and propane gases are approved for altitudes up to 2000 ft. The input rating for altitudes above 2000 ft must be reduced by 4 percent for each 1000 ft above sea level. Refer to the NFGC, Appendix F, Table F-4 for proper orifice sizing at high altitudes.
- b. The Canadian full input ratings for natural and propane gases are approved for up to 2000 ft above sea level. Adjustments for input ratings above 2000 ft must be made in accordance with NSCNGPIC. Derate furnace input 10 percent for altitudes of 2000 ft to 4500 ft above sea level.
8. Install main burner orifices. Do not use Teflon tape. Finger-tighten orifices at least 1 full turn to prevent cross-threading, then tighten with wrench. There are enough orifices in each kit for largest furnace. Discard extra orifices. Orifices of other sizes must be field supplied and are available through your local distributor.



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⚠ CAUTION: DO NOT redrill burner orifices. Improper drilling (burrs, out-of-round holes, etc.) can cause excessive burner noise and misdirection of burner flames. This can result in flame impingement of the burners and heat exchangers, causing failure. Obtain new orifices if orifice size must be changed.

NOTE: DO NOT reinstall main burners or burner hold-down bracket at this time.

PROCEDURE 2—REPLACE GAS VALVE

NOTE: Discard labels and instructions packaged with White-Rodgers gas valve. All necessary information is provided in this instruction.

1. Be sure gas and electrical supplies to furnace are off.
2. Remove wires from gas valve. Note location for reassembly.

⚠ CAUTION: Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation.

⚠ ATTENTION: Lors des opérations d'entretien des commandes, étiqueter tous les fils avant de les déconnecter. Toute erreur de câblage peut être une source de danger et de panne.

3. Remove gas supply line from gas valve if supply is already installed.
4. Remove natural gas valve from manifold using a backup wrench and discard valve. On some models, pressure switch assembly may need to be loosened and moved aside to permit removal of gas valve.

NOTE: Natural gas valve has BLUE knob. Propane gas valve has RED knob.

5. Modify propane gas valve.
 - a. Remove burner enclosure reference pressure tap from new propane gas valve. (See Fig. 3.)
 - b. Remove plug button from same location on removed natural gas valve and insert in hole in new propane gas valve from which pressure tap was removed.
6. Install new propane gas valve to manifold.

NOTE: Use propane-gas-resistant pipe dope to prevent gas leaks. DO NOT use Teflon tape.

7. Reinstall main burners on manifold. Burners should be installed left (flame sensor side) to right (ignitor side) to ensure proper alignment of the burner crossover slot. (See Fig. 4 for ignitor position.)
8. Reinstall burner hold-down bracket. (For 58DXT, 58UXT, 58UXV, 330JAV, 331JAV, and 333JAV, complete Procedure 6 of this section before continuing.)

⚠ CAUTION: Furnace models 58DXT, 58UXT, 58UXV, 330JAV, 331JAV, and 333JAV, must have low NO_x coils removed prior to operating furnace on propane gas.

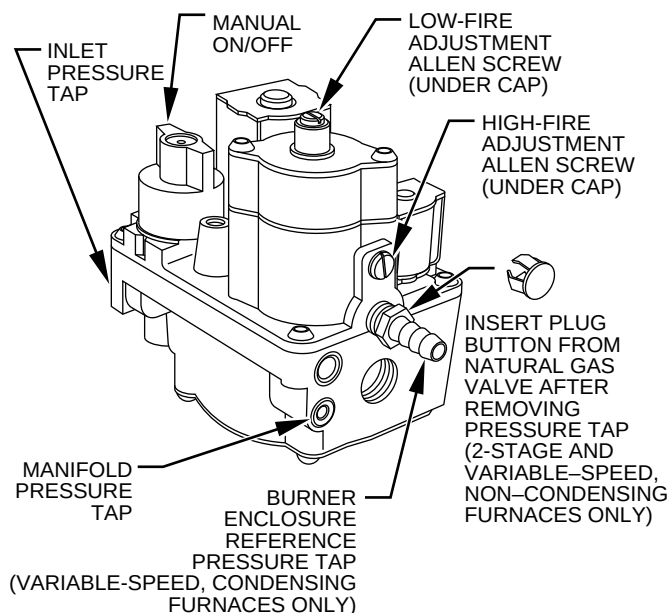
9. Reconnect wires to gas valve. See wiring label on furnace to ensure proper location of wires.
10. Reconnect gas supply pipe to gas valve using backup wrench on gas valve to prevent rotation and improper orientation.

NOTE: Use propane-gas-resistant pipe dope to prevent gas leaks. DO NOT use Teflon tape.

→ PROCEDURE 3—CHECK INLET GAS PRESSURE

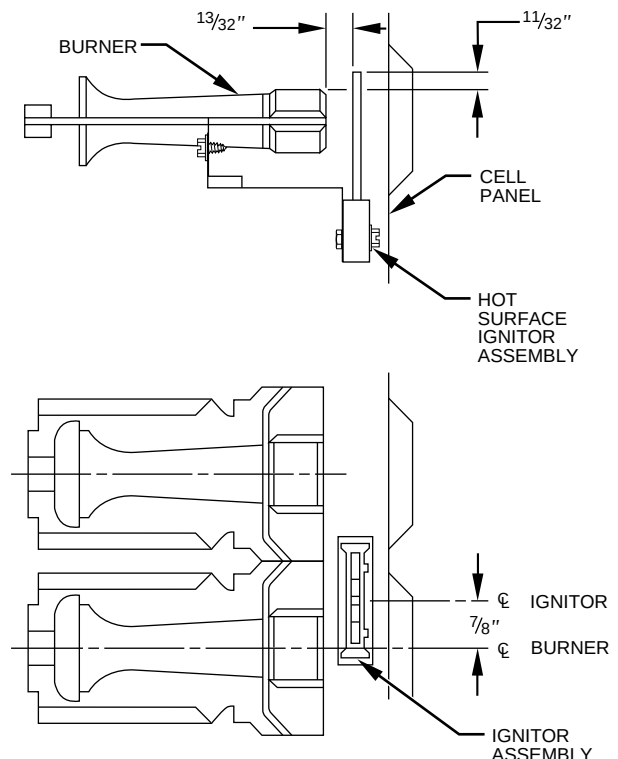
NOTE: This kit is to be used only when inlet gas pressure is between 11.0-in. wc and 13.6-in. wc.

1. Be sure main gas and electric supplies to furnace are off.
2. Remove 1/8-in. pipe plug from inlet pressure tap on gas valve. (See Fig. 3.)



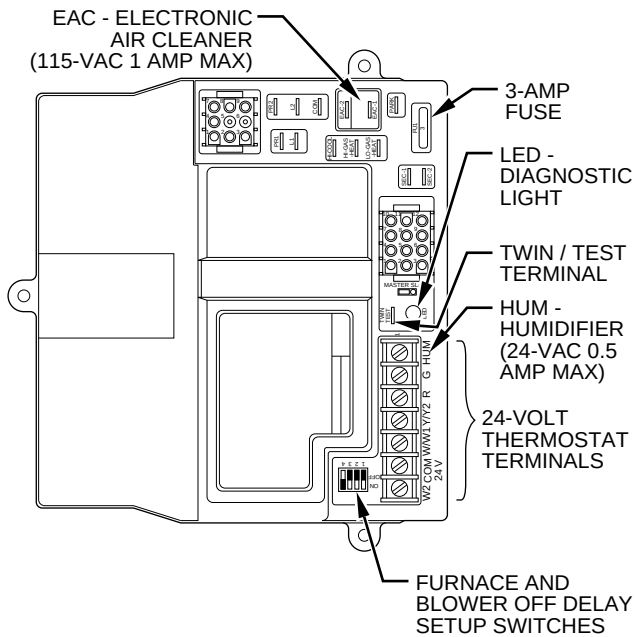
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→ Fig. 3—Redundant Automatic 2-Stage Gas Valve



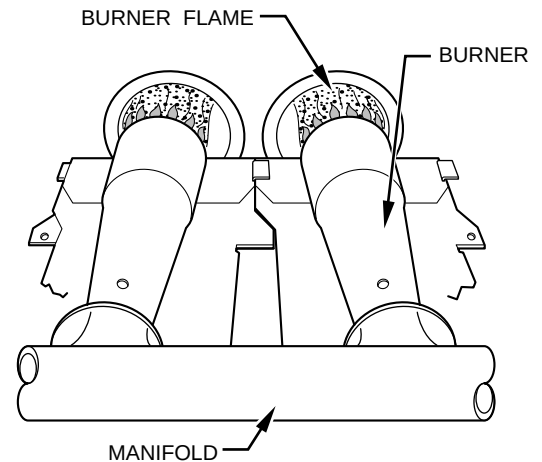
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Fig. 4—Position of Ignitor to Burner



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Fig. 5—Non-Condensing Furnace Control Center (2-Speed Control Shown)



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Fig. 6—Burner Flame

3. Attach manometer to inlet pressure tap on gas valve. (See Fig. 13.)

⚠ CAUTION: DO NOT operate furnace more than 1 minute to check inlet gas pressure as conversion is not complete at this time.

4. Turn on furnace power supply.
5. Jumper R and W2 thermostat connections on control. (See Fig. 5.) This keeps furnace locked in high heat.
6. Turn gas supply manual shutoff valve to ON position.
7. Turn furnace gas valve control knob to ON position.
8. When main burners ignite, confirm inlet gas pressure is between 11.0-in. wc and 13.6-in. wc.
9. Remove jumper across R and W2 thermostat connections to terminate call for heat.
10. Turn furnace gas valve control knob to OFF position.
11. Turn gas supply manual shutoff valve to OFF position.
12. Turn off furnace power supply.
13. Remove manometer and reinstall gas valve inlet pressure tap plug. (See Fig. 3.)

NOTE: Use propane-gas-resistant pipe dope to prevent gas leaks. DO NOT use Teflon tape.

PROCEDURE 4—CHECK FURNACE OPERATION AND MAKE NECESSARY ADJUSTMENTS

1. Be sure main gas and electric supplies to furnace are off.
2. Remove 1/8-in. pipe plug from manifold pressure tap on downstream side of gas valve. (See Fig. 3.)
3. Attach manometer to manifold pressure tap on gas valve.
4. Turn gas supply manual shutoff valve to ON position.
5. Turn furnace gas valve control knob to ON position.
6. Check all threaded pipe connections for gas leaks.

⚠ WARNING: NEVER use matches, candles, flame, or other sources of ignition to check for gas leakage. Use a soap-and-water solution to check for leaks. Failure to follow this warning could result in fire, explosion, personal injury, or death.

7. Turn on furnace power supply.
- 8. Jumper R and W/W1 thermostat connections to call for heat.
9. Check manifold orifices for gas leaks when main burners ignite.

PROCEDURE 5—SET GAS INPUT RATE

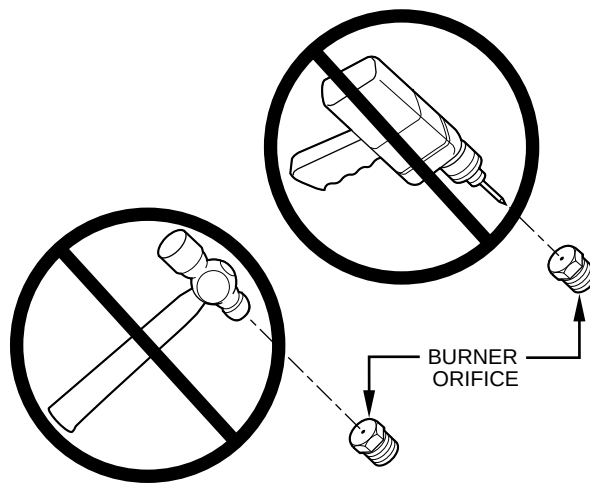
The gas input rate for propane is the same as for natural gas. See furnace rating plate for input rate. The input rate for propane is determined by manifold pressure only. The gas valve regulator must be set for high heat and set for low heat. (See Table 2.)

NOTE: Approved input rates:

The U.S.A. approved full input ratings for natural and propane gases are approved for altitudes up to 2000 ft. The input rating for altitudes above 2000 ft must be reduced by 4 percent for each 1000 ft above sea level. Refer to the NFGC, Appendix F, Table F-4 for proper orifice sizing at high altitudes.

The Canadian approved full input ratings for natural and propane gases are approved for up to 2000 ft above sea level. Adjustments for input ratings above 2000 ft must be made in accordance with NSCNGPIC. Derate furnace input 10 percent for altitudes of 2000 ft to 4500 ft above sea level.

1. Adjust gas manifold pressure.
 - a. Remove caps that conceal adjustment screws for gas valve regulators. (See Fig. 3.)
 - b. Turn setup switch SW-2 on control to ON position. (See Fig. 5.) This keeps furnace locked in low-heat operation.
 - c. Adjust low-heat input rate manifold pressure for propane gas. (See Table 2.) Turn low-heat adjusting screw (5/64 hex allen wrench) counterclockwise (out) to decrease input rate or clockwise (in) to increase input rate.
 - d. Turn setup switch SW-2 to OFF position after low-heat adjustment.
 - e. Jumper R and W2 thermostat connections on control. This keeps furnace locked in high-heat operation.
 - f. Adjust high-heat input rate manifold pressure for propane gas. (See Table 2.) Turn high-heat adjusting screw (5/64 hex allen wrench) counterclockwise (out) to decrease input rate or clockwise (in) to increase input rate.



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⚠ CAUTION: DO NOT redrill burner orifices. Improper drilling (burrs, out-of-round holes, etc.) can cause excessive burner noise and misdirection of burner flames. This can result in flame impingement of the burners and heat exchangers, causing failure. Obtain new orifices if orifice size must be changed.

- g. Remove jumper across R and W2 after high-heat adjustment.
 - h. Replace caps that conceal gas valve regulator adjustment screws.
 - i. Main burner flame should be clear blue, almost transparent. (See Fig. 6.)
 - 2. Remove jumper across R and W/W1 thermostat connections to terminate call for heat.
 3. Turn furnace gas valve control knob to OFF position.
 4. Turn off furnace power supply.
 5. Remove manometer and replace manifold pressure tap plug. (See Fig. 3.)
- NOTE:** Use propane-gas-resistant pipe dope to prevent gas leaks. DO NOT use Teflon tape.
6. Turn on furnace power supply.
 7. Turn furnace gas valve control knob to ON position.
 8. Set room thermostat to call for heat.
 9. Check pressure tap plug for gas leaks when main burners ignite.
 10. Check for correct burner flame. (See Fig. 6.)
 - 11. Observe unit operation through 2 complete heating cycles. See sequence of operation in furnace Installation, Start-Up, and Operating Instructions.

→ 12. Set room thermostat to desired temperature.

PROCEDURE 6—LABEL APPLICATION

NOTE: See Fig. 1 or 2 for label location.

1. Fill in Conversion Responsibility Label (321201-103) and apply to inside of furnace as shown. Date, name, and address of organization making this conversion are required.
2. Attach Conversion Rating Plate Label (321221-101) near existing furnace rating plate.
3. Check for correct normal operating sequence of the ignition system as described in furnace Installation, Start-Up, and Operating Instructions.
4. Replace control access door.

PROCEDURE 7—REMOVE NO_x EMISSIONS REDUCING DEVICE

→ **NOTE:** Models 58DXT, 58UXT, 58UXV, 330JAV, 331JAV, and 333JAV are supplied with NO_x emissions reduction devices necessary for use with Natural Gas in NO_x emissions regulated areas.

NOTE: This procedure is an extension of SECTION 1, PROCEDURE 2—REPLACE GAS VALVE. If items 1 through 8 have not been completed, proceed to SECTION 1, PROCEDURE 2 before continuing.

1. Remove wires from flame sensor and flame roll out safety switch(es). Disconnect ignitor wire connector.
2. Remove 4 screws that hold gas control assembly to heat exchanger cell panel and remove gas control assembly.
3. Using needle nose pliers, remove coil from bracket on each heat exchanger cell inlet plate. (See Fig. 7.)
4. Replace gas control assembly and secure to heat exchanger cell panel using 4 previously removed screws.
5. Reconnect wires to flame sensor and flame roll out safety switch(es), and reconnect ignitor wire connector. See furnace wiring label to ensure proper location of wires.
6. Proceed to item 9 of SECTION 1, PROCEDURE 2.

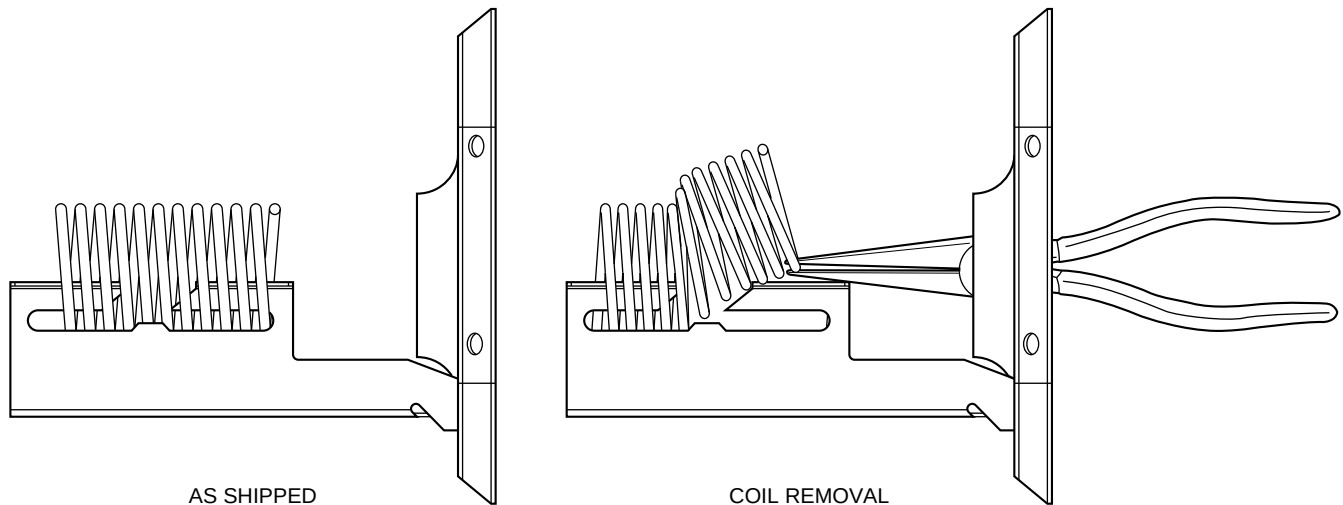


Fig. 7—Removal Of Low NO_x Coil

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**SECTION 2—MODELS 58MVP AND 355MAV DIRECT-VENT, MULTIPOISE, HOT SURFACE IGNITION,
VARIABLE-SPEED, CONDENSING FURNACES**

PROCEDURE 1—INSTALL MAIN BURNER ORIFICES

NOTE: See Fig. 8 for component location in upflow furnaces. Re-orient component arrangement when furnace is installed in other positions.

1. Turn off furnace gas and electrical supplies.
2. Remove main furnace door.
- 3. Turn furnace gas valve control knob to OFF position.
4. Remove burner box cover.
5. Remove gas supply pipe from gas valve.
6. Remove wires from gas valve. Note location for reassembly.

⚠ CAUTION: Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation.

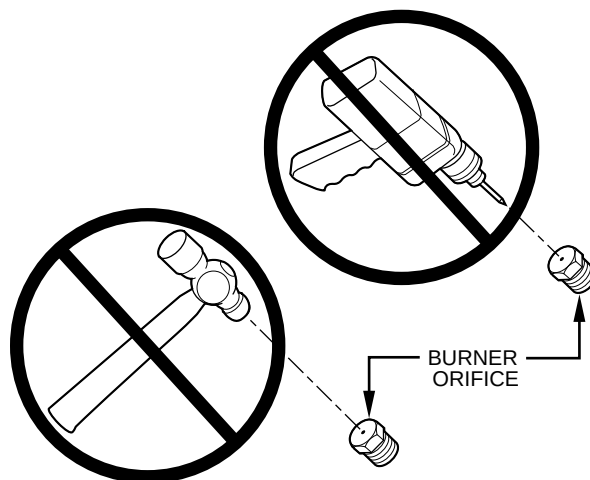
⚠ ATTENTION: Lors des opérations d'entretien des commandes, étiqueter tous les fils avant de les déconnecter. Toute erreur de câblage peut être une source de danger et de panne.

7. Remove burner box pressure tube from gas valve burner enclosure reference pressure tap fitting. (See Fig. 9.)
8. Remove screws that secure manifold to burner box and remove manifold, orifices, and gas valve as 1 assembly.
9. Remove and discard orifices from manifold.
10. Refer to Table 3 to determine main burner orifice size.

Table 3—Orifice Size Selection for Propane, Variable-Speed, Condensing Furnaces

INPUT PER BURNER AT SEA LEVEL	SUPPLY PRESSURE		ALTITUDE OF INSTALLATION (FT ABOVE SEA LEVEL)			
			0 to 2000	2001 to 3000	3001 to 4000	4001 to 5000
Multipoise Furnace 20,000—High 13,000—Low Btuh	13.6-in. wc max 11.0-in. wc min	Orifice Size	1.25mm	1.25mm	1.25mm	56
		Manifold Pressure High/Low	11.0-in. wc/ 4.7-in. wc	10.5-in. wc/ 4.2-in. wc	10.0-in. wc/ 4.2-in. wc	11.0-in. wc/ 4.7-in. wc

11. Install main burner orifices. Do not use Teflon tape. Finger-tighten orifices at least 1 full turn to prevent cross-threading, then tighten with wrench. There are enough orifices in each kit for the largest furnace. Discard extra orifices. Orifices of other sizes must be field supplied and are available through your local distributor.



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⚠ CAUTION: DO NOT redrill burner orifices. Improper drilling (burrs, out-of-round holes, etc.) can cause excessive burner noise and misdirection of burner flames. This can result in flame impingement of the burners and heat exchangers, causing failure. Obtain new orifices if orifice size must be changed.

NOTE: DO NOT reinstall the manifold, orifices, gas valve assembly, and burner box cover at this time.

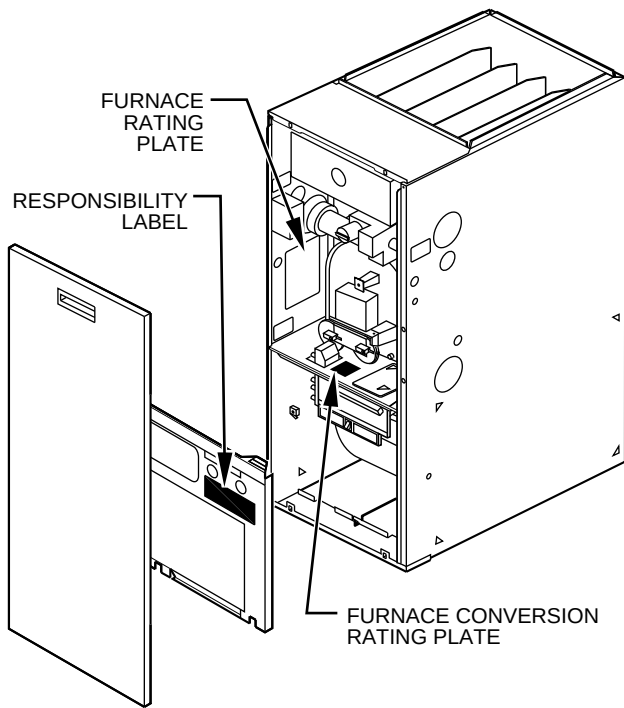
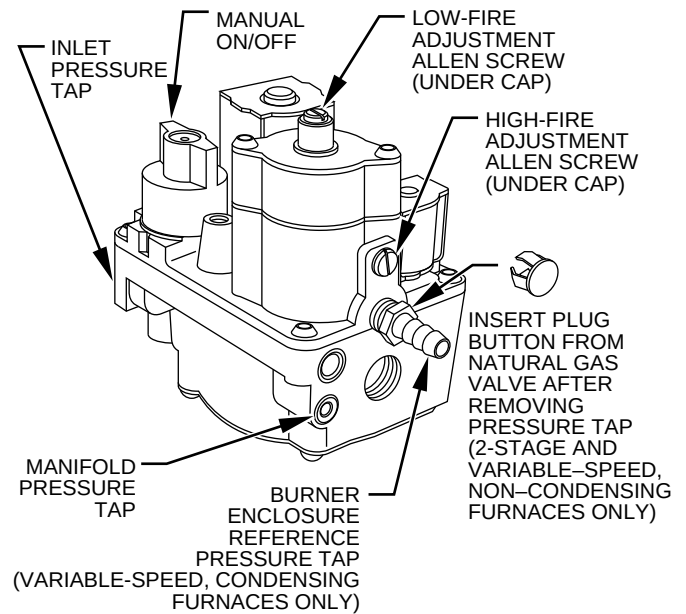


Fig. 8—Condensing Furnace Component and Conversion Label Location (Upflow Orientation Shown)

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→ Fig. 9—Redundant Automatic 2-Stage Gas Valve

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PROCEDURE 2—REPLACE GAS VALVE

NOTE: Discard labels and instructions packaged with White-Rodgers gas valve. All necessary information is provided in this instruction.

1. Be sure gas and electrical supplies to furnace are off.
2. Remove natural gas valve from manifold assembly and discard valve.

NOTE: Natural gas valve has BLUE knob. Propane gas valve has RED knob.

3. Install new propane gas valve to manifold.

NOTE: Use propane-gas-resistant pipe dope to prevent gas leaks. DO NOT use Teflon tape.

⚠ WARNING: Gas valve knob MUST be facing forward or tilted upward. Failure to follow this warning could result in property damage, personal injury, or death.

4. Reinstall manifold, orifice, and gas valve assembly in burner box. Ensure manifold seal grommet is installed properly and burners fit over orifices. (See Fig. 10 for ignitor position.)
5. Reconnect wires to gas valve. Refer to furnace wiring schematic for proper wire location.
6. Reinstall burner box pressure tube to gas valve regulator fitting.
7. Reconnect gas supply pipe to gas valve using backup wrench on gas valve to prevent rotation and improper orientation.

NOTE: Use propane-gas-resistant pipe dope to prevent gas leaks. DO NOT use Teflon tape.

NOTE: DO NOT reinstall burner box cover at this time.

→ PROCEDURE 3—CHECK INLET GAS PRESSURE

NOTE: This kit is to be used only when inlet gas pressure is between 11.0-in. wc and 13.6-in. wc.

1. Be sure main gas and electric supplies to furnace are off.
2. Remove 1/8-in. pipe plug from inlet pressure tap on gas valve. (See Fig. 9.)
3. Attach manometer to inlet pressure tap on gas valve. (See Fig. 13.)

⚠ CAUTION: DO NOT operate furnace more than 1 minute to check inlet gas pressure as conversion is not complete at this time.

4. Turn on furnace power supply.
5. Jumper R and W2 thermostat connections on control. (See Fig. 11.) This keeps furnace locked in high-heat operation.

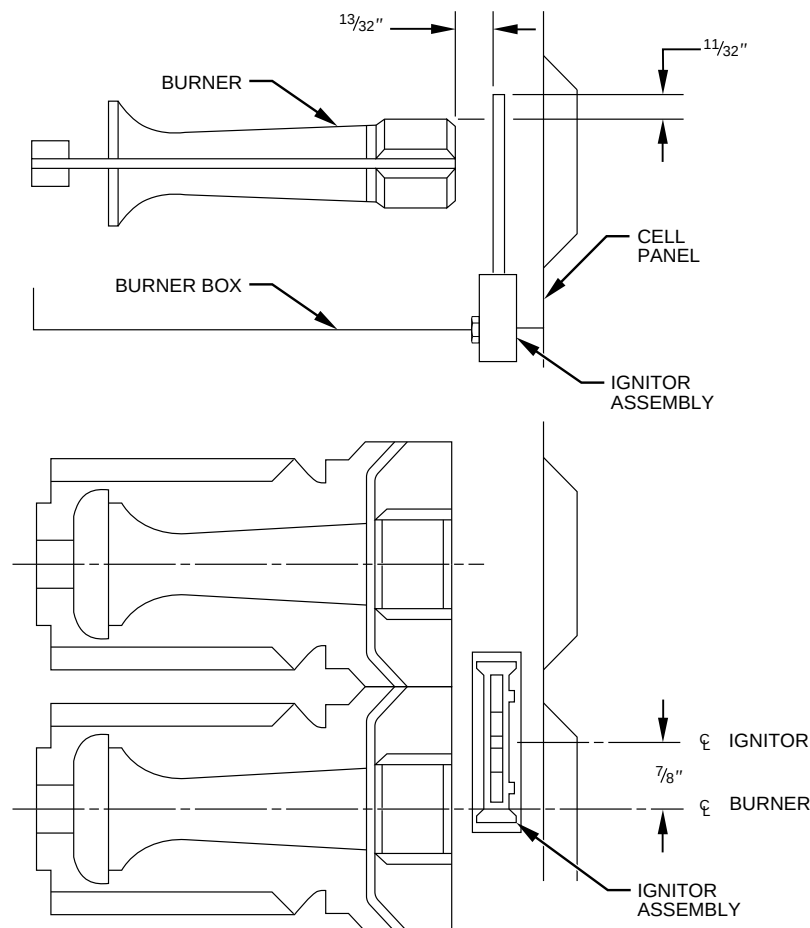


Fig. 10—Position of Ignitor to Burner

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6. Turn gas supply manual shutoff valve to ON position.
7. Turn furnace gas valve control knob to ON position.
8. When main burners have ignited, confirm proper inlet gas pressure is between 11.0-in. wc and 13.6-in. wc.
9. Remove jumper across R and W2 thermostat connections to terminate call for heat.
10. Turn furnace gas valve control knob to OFF position.
11. Turn gas supply manual shutoff valve to OFF position.
12. Turn off furnace power supply.

NOTE: Use propane-gas-resistant pipe dope to prevent gas leaks. DO NOT use Teflon tape.

PROCEDURE 4—CHECK FURNACE OPERATION AND MAKE NECESSARY ADJUSTMENTS

1. Be sure main gas and electric supplies to furnace are off.
- 2. Remove 1/8-in. pipe plug from manifold pressure tap on downstream side of gas valve. (See Fig. 9.)
- 3. Attach manometer to manifold pressure tap on gas valve. (See Fig. 9 and 13.)
4. Turn gas supply manual shutoff valve to ON position.
5. Turn furnace gas valve control knob to ON position.
6. Check all threaded pipe connections for gas leaks.

⚠ WARNING: NEVER use matches, candles, flame, or other sources of ignition to check for gas leakage. Use a soap-and-water solution to check for gas leaks. Failure to follow this warning could result in fire, explosion, personal injury, or death.

7. Turn on furnace power supply.
- 8. Jumper R and W/W1 thermostat connections to call for heat.
9. Check manifold orifices for gas leaks when main burners ignite.

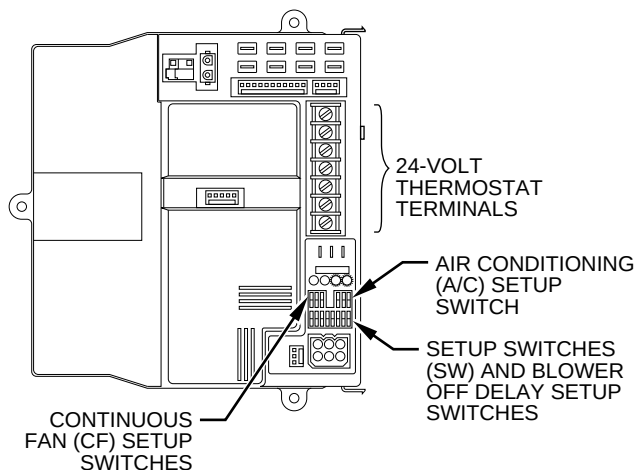


Fig. 11—Condensing Furnace Control Center

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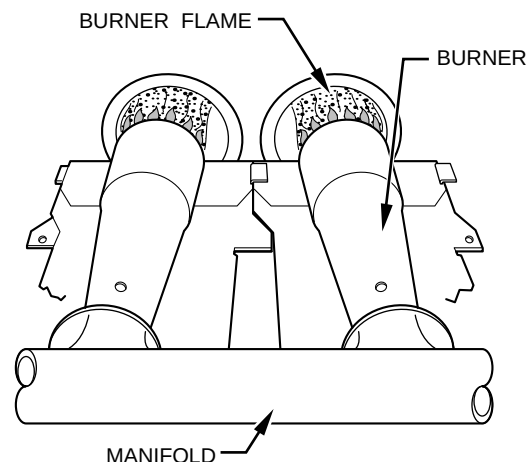


Fig. 12—Burner Flame

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PROCEDURE 5—SET GAS INPUT RATE

The gas input rate for propane is the same as for natural gas. See furnace rating plate for input rate. The input rate for propane is determined by manifold pressure only. The gas valve regulator must be set for high heat and set for low heat. (See Table 3.)

NOTE: Manifold pressure must always be measured with the burner box cover removed.

NOTE: Approved input rates:

The U.S.A. approved full input ratings for natural and propane gases are approved for altitudes up to 2000 ft. The input rating for altitudes above 2000 ft must be reduced by 4 percent for each 1000 ft above sea level. Refer to the NFGC, Appendix F, Table F-4 for proper orifice sizing at high altitudes.

The Canadian approved full input ratings for natural and propane gases are approved for up to 2000 ft above sea level. Adjustments for input ratings above 2000 ft must be made in accordance with NSCNGPIC. Derate furnace input 10 percent for altitudes of 2000 ft to 4500 ft above sea level.

1. Adjust gas manifold pressure.
 - a. Remove caps that conceal adjustment screws for gas valve regulators. (See Fig. 9.)
 - b. Turn setup switch SW-2 on control center to ON position. (See Fig. 11.) This keeps furnace locked in low-heat operation.
 - c. Adjust low-heat input rate manifold pressure for propane gas. (See Table 3.)
 - d. Turn low-heat adjusting screw (5/64 hex allen wrench) counterclockwise (out) to decrease input rate or clockwise (in) to increase input rate.
 - e. Turn setup switch SW-2 to OFF position after low-heat adjustment.
 - f. Jumper R and W2 on control center thermostat connections. This keeps furnace locked in high-heat operation.
 - g. Adjust high-heat input rate manifold pressure for propane gas. (See Table 3.)
 - h. Turn high-heat adjusting screw (5/64 hex allen wrench) counterclockwise (out) to decrease input rate or clockwise (in) to increase input rate.
 - i. Remove jumper across R and W2 after high-heat adjustment.
 - j. Replace caps that conceal gas valve regulator adjustment screws.
 - k. Main burner flame should be clear blue, almost transparent. (See Fig. 12.)
- 2. Remove jumper across R and W/W1 thermostat connections to terminate call for heat.
3. Turn furnace gas valve control knob to OFF position.
4. Turn off furnace power supply.
- 5. Remove manometer and reattach manifold pressure tap plug. (See Fig. 9 and 13.)
6. Reinstall burner box cover.
7. Turn furnace gas valve control knob to ON position.
8. Turn on furnace power supply.
9. Set room thermostat to call for heat.
10. Check pressure tap plug for gas leaks when main burners ignite.
- 11. Observe unit operation through 2 complete heating cycles. See sequence of operation in furnace Installation, Start-Up, and Operating Instructions.
- 12. Set room thermostat to desired temperature.

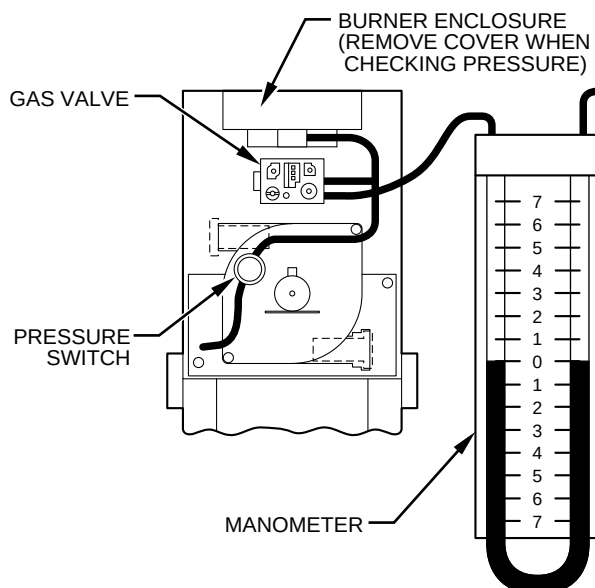


Fig. 13—Adjusting Manifold Pressure—Manometer Attachment

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PROCEDURE 6—LABEL APPLICATION

NOTE: See Fig. 8 for label location.

1. Fill in Conversion Responsibility Label (321201-103) and apply to blower access panel as shown. Date, name, and address of organization making this conversion are required.
2. Attach Conversion Rating Plate Label (321221-101) on blower shelf as shown.

NOTE: Discard labels and instructions packaged with White-Rodgers regulator spring conversion kit.

3. Reinstall main furnace door.

SERVICE TRAINING

Packaged Service Training programs are an excellent way to increase your knowledge of the equipment discussed in this manual, including:

- Unit Familiarization
- Maintenance
- Installation Overview
- Operating Sequence

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