

Installation, Start-Up and Service Instructions

For Sizes 040-120 (130 Series)



⚠ CAUTION

Read these instructions carefully and thoroughly before installing the furnace.

INTRODUCTION

Before installing the furnace, refer to Procedures for Deluxe Gas-Fired Condensing Furnaces (packaged with the equipment) for information concerning combustion, venting, piping and other standard installation practices. Refer also to the current edition of the American National Standard NFPA 54-1984/ANSI Z223.1-1984 National Fuel Gas Code.

Each furnace is shipped from the factory completely assembled with multispeed direct-drive blower and wired for indoor heating installation. The furnace's blower control center features an easy-to-read, low-voltage terminal strip to ensure proper connection.

Ratings for output capacity and product efficiency derive from standard Department of Energy test procedures. The operation of installed units may vary, depending on installation, weather and other factors.

The design of this upflow gas-fired condensing furnace is AGA certified for installation in alcoves, basements, closets or utility rooms. The design of this furnace is *not* AGA certified for installation in mobile homes or recreation vehicles, or outdoors. Do NOT install directly on carpeting, tile, or combustible material other than wood flooring.



Fig. 1 — Model 58SX

⚠ CAUTION

Do not connect return-air duct to rear of furnace. Use side(s) or bottom only. Air delivery above 1800 cfm requires that both sides, or a combination of one side and bottom, or bottom only of the furnace be used for return air.

Installation Procedures

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*Refer to the appropriate sections of Procedures for Deluxe Gas-Fired Condensing Furnaces packaged with this unit for appropriate installation information.

For accessory installation details, refer to applicable installation literature.

INSTALLATION

Electrical Connections

LINE VOLTAGE WIRING

IMPORTANT: Before electrical connections are made, ensure that voltage, frequency and phase correspond to those values specified on the unit rating plate. Also check that the service provided by your local utility meets the additional load imposed by this equipment. Refer to the unit rating plate for equipment electrical requirements.

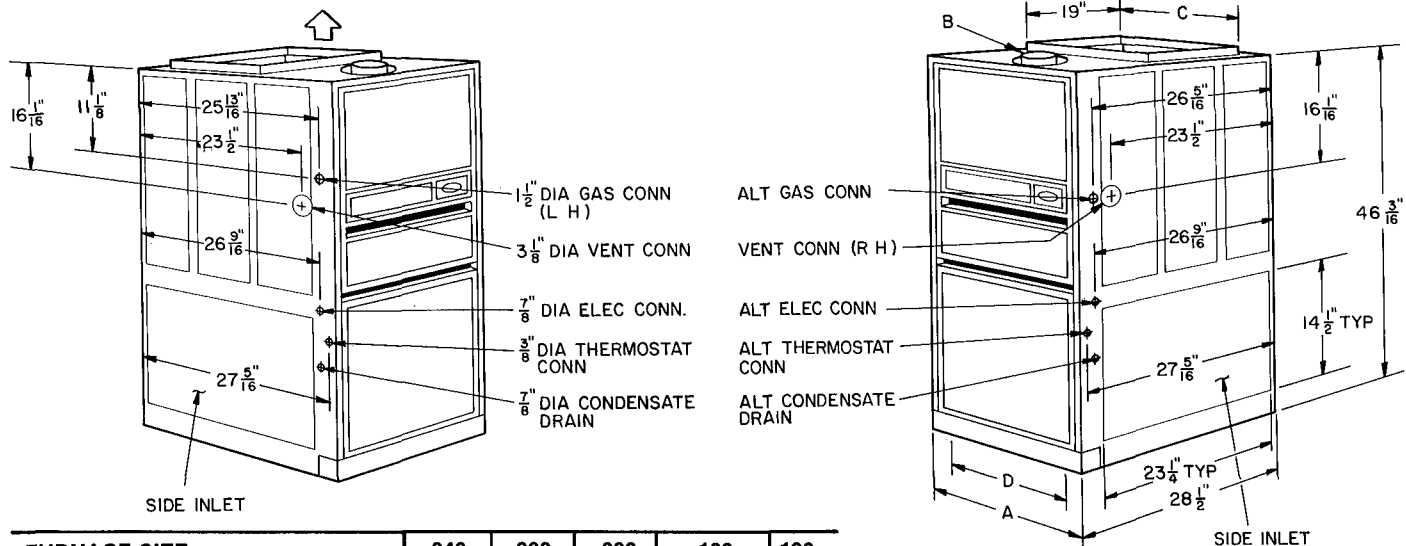
⚠ CAUTION

Do not connect aluminum wire between disconnect switch and furnace. Use copper wire only.

Figure 3 shows proper field wiring for both high and low voltage. Make all electrical connections in accordance with the National Electrical Code and any local codes or ordinances that apply.

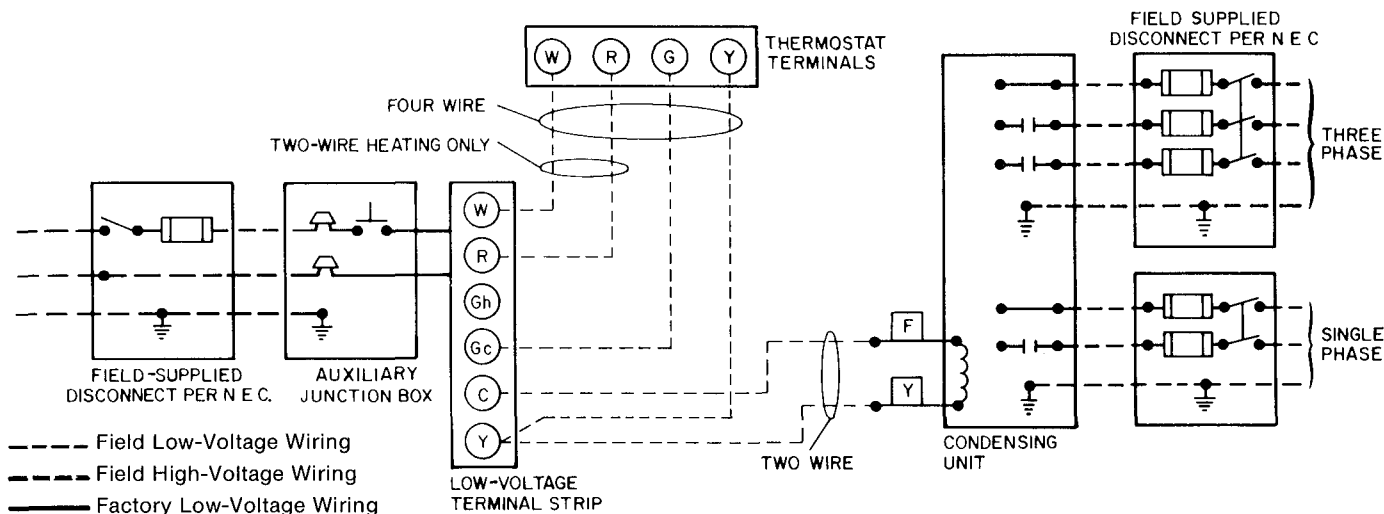
Use a separate, fused branch electrical circuit containing a properly sized fuse or HACR-type circuit breaker. Locate a disconnecting means in a position in

58SX Deluxe Gas-Fired Condensing Furnaces



FURNACE SIZE		040	060	080	100	120
DIMENSIONS (in.)						
Width	A	17 1/2	17 1/2	17 1/2	21	24 1/2
Combustion Air Vent Diameter	B	1 1/2 or 2	1 1/2 or 2	2 or 2 1/4	2, 2 1/2 or 3	3
Outlet Duct Opening (C x 19)		15 5/8	15 5/8	15 5/8	19 5/8	22 7/8
Bottom Return Opening (D x 26)		15	15	15	18 1/2	22

Fig. 2 — Unit Dimensions



NOTE: If any of the original wire as supplied must be replaced, use same type or equivalent wire

Fig. 3 — Heating and Cooling Application Wiring Diagram

sight and readily accessible from the furnace. The blower door switch may be an acceptable disconnecting means in some areas.

To move the auxiliary junction box to the right-hand side of the furnace when a right-hand power supply is desired.

1. Remove 2 screws holding auxiliary junction box.
2. Drill 2 holes in same position on opposite side and mount auxiliary junction box. Rotate the junction box 180° to position switch in the notch in the casing flange.

3. Plug or cap unused electrical entry holes in left side of casing.

Table 1 — Clearances (in.)

MODEL 58SX	040,060,080,100,120
Sides	0
Back	0
Top of Plenum	1
Vent Connector	0
Front	3
Casing Ventilation Service	30

Table 2 — Ratings and Performance*

MODEL 58SX	INPUT BTUH	CAPACITY BTUH†	TEMPERATURE RISE RANGE (F)	HEATING		COOLING		MOTOR Hp & TYPE	APPROX SHIPPING WT (lb)
				Ext Static Pressure (in.)	Cfm‡	Ext Static Pressure (in.)	Cfm‡		
040	44,000	41,000	20-50	0.10	1310	0.5	1160	½ PSC	170
060	66,000	61,000	30-60	0.12	1290	0.5	1205	½ PSC	177
080	88,000	81,000	45-75	0.15	1380	0.5	1235	½ PSC	190
100	110,000	102,000	45-75	0.20	1565	0.5	1660	½ PSC	221
120	132,000	122,000	50-80	0.20	2005	0.5	1945	½ PSC	263

*Ratings are certified for altitudes to 2000 ft above sea level. For elevations above 2000 ft, reduce ratings 4% for each 1000 ft above sea level.

†Tentative. Actual output capacities to be determined by U.S. Government tests.

‡Air delivery above 1800 cfm requires that both sides, or a combination of one side and bottom, or bottom only of the furnace be used for return air.

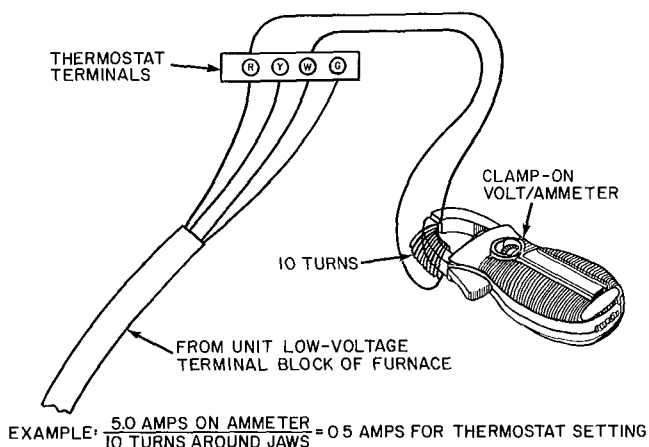


Fig. 4 — Amp Draw Check with Ammeter

⚠ WARNING

The furnace must be electrically grounded in accordance with local codes and/or the National Electrical Code ANSI/NFPA 70-1984. Do NOT use gas piping as an electrical ground.

If line-voltage wiring to unit is encased in a non-metallic sheath, connect incoming ground wire to grounding wire inside furnace junction box. When properly grounded metallic conduit is used, it may serve as the furnace ground.

LOW-VOLTAGE WIRING — Make low-voltage connections at the low-voltage terminal strip (Fig. 3).

NOTE: Use AWG no. 18 "color-coded," copper thermostat wire for lengths up to 100 feet. Over 100 ft, use AWG no. 16 wire.

IMPORTANT: Set thermostat heat anticipation to match amp draw of gas valve and other electrical components in the R-W circuit. Obtain accurate amp draw readings at thermostat subbase terminals R and W. Figure 4 illustrates an easy method of obtaining actual amp draw. Take the amp reading after the blower has started.

Locate the room thermostat in the natural circulation path of room air. Avoid locations where the thermostat would be exposed to cold-air infiltration; to drafts from

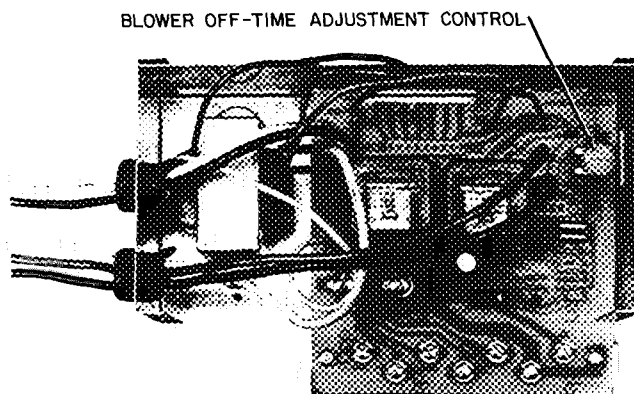


Fig. 5 — Blower Control Center

windows, doors or other openings leading to the outside; or to air currents from warm- or cold-air registers; as well as other locations where the natural circulation of air is restricted, such as behind doors or above or below shelves or mantels.

Do not expose thermostat to heat from fireplaces, radios, televisions, lamps or the rays of the sun. Do not mount on a wall containing warm-air ducts, or flue or vent pipes. Do not choose a location that is inadequately sealed from the attic, crawlspace or basement.

Suitably seal any hole in the plaster or panel through which the wires from the thermostat pass to prevent drafts from affecting the thermostat.

BLOWER CONTROL CENTER — Each furnace has a blower control center to aid the installer or service technician. The low-voltage terminal board is marked for easy connection of field wiring (Fig. 5).

The main furnace control box includes an adjustable blower timing device. The OFF timing delay can be varied over a range of 80 to 240 seconds by turning the OFF timing adjustment control in the direction indicated on the label attached to the side of the control box. After a change in adjustment, the time-delay circuit must be energized for at least 4 minutes so that the OFF time delay will be the same as during normal furnace operation. The OFF timing adjustment is factory-set for a delay of approximately 240 seconds (Fig. 5).

LEGEND

- 1A Transformer, 120VAC/24VAC
- 2D Relay, Inducer Motor DPST (N.O.)
- 2E Relay, Heating Blower (HFR) DPST (N.C.)
- 2F Relay, Cooling Blower (CFR) DPDT (N.C.)
- 3A Motor, Inducer
- 3D Motor, Blower
- 4A Capacitor, Run
- 5F Valve, Gas (Redundant)
- 6C1 Board, P.C. (Furnace Control)
- 6C2 Board, P.C. (Inducer Control)
- 6C3 Lockout Module
- 6H Switch, Pilot Flame Sensing SPDT (740A)
- 6J Generator, Spark (Solid State)
- 7H1 Switch, Limit SPST (N.C.)
- 7P Pressure Switch, N.O.
- 7V Switch, Flow Sensing SPDT
- 9G Switch, Blower Door Interlock SPST (N.O.)
- 10B1 Connector, Edge (Furnace Control Board)
- 10B2 Connector, Edge (Inducer Control Board — 7 Ckt.)
- 10B3 Connector, Edge (Inducer Control Board — 2 Ckt.)
- 10B4 Connector, Pilot
- 10B5 Connector, Factory Test (Not for Field Use)
- 10B6 Connector, Blower Motor
- 10B7 Connector, Pilot Splice
- 11B Fuse, In Line 2 Amp (when used)
- 11C Link, Fusible (overtemperature)
- 11E Ground, Equipment
- 11L Resistor, Adjustable (off time)
- TP1 Test Point

- Factory Wiring (120VAC)
- Factory Wiring (24VAC)
- Field Wiring (120VAC)
- Conductors on 6C1 (Furnace Control Board)
- Conductors on 6C2 (Inducer Control Board)
- Screw Terminal for Field Wiring
- 1/4-in. Quick Connect Terminals

NOTES:

- T2 internally connected to equipment ground spark generator (6J) mounting screws.
- Relay (2E) contacts are normally closed until 120VAC is applied to furnace.
- If any of the original wire as supplied must be replaced, it must be replaced with AWM (105°C) wire or its equivalent.
- Blower motor (3D) and inducer motor (3A) have a thermal overload switch.
- Blower motor (3D) factory speed selections are for average conditions. See installation instructions for details on optimum speed selection.
- Use copper wire only between the disconnect switch and the unit.
- Symbols are an electrical representation only.
- Pressure switch (7P) is used for propane only.
- Lockout module (6C3) is used for propane or 100% shutoff natural gas.
- 2 amp fuse in secondary of transformer for Canadian units only.

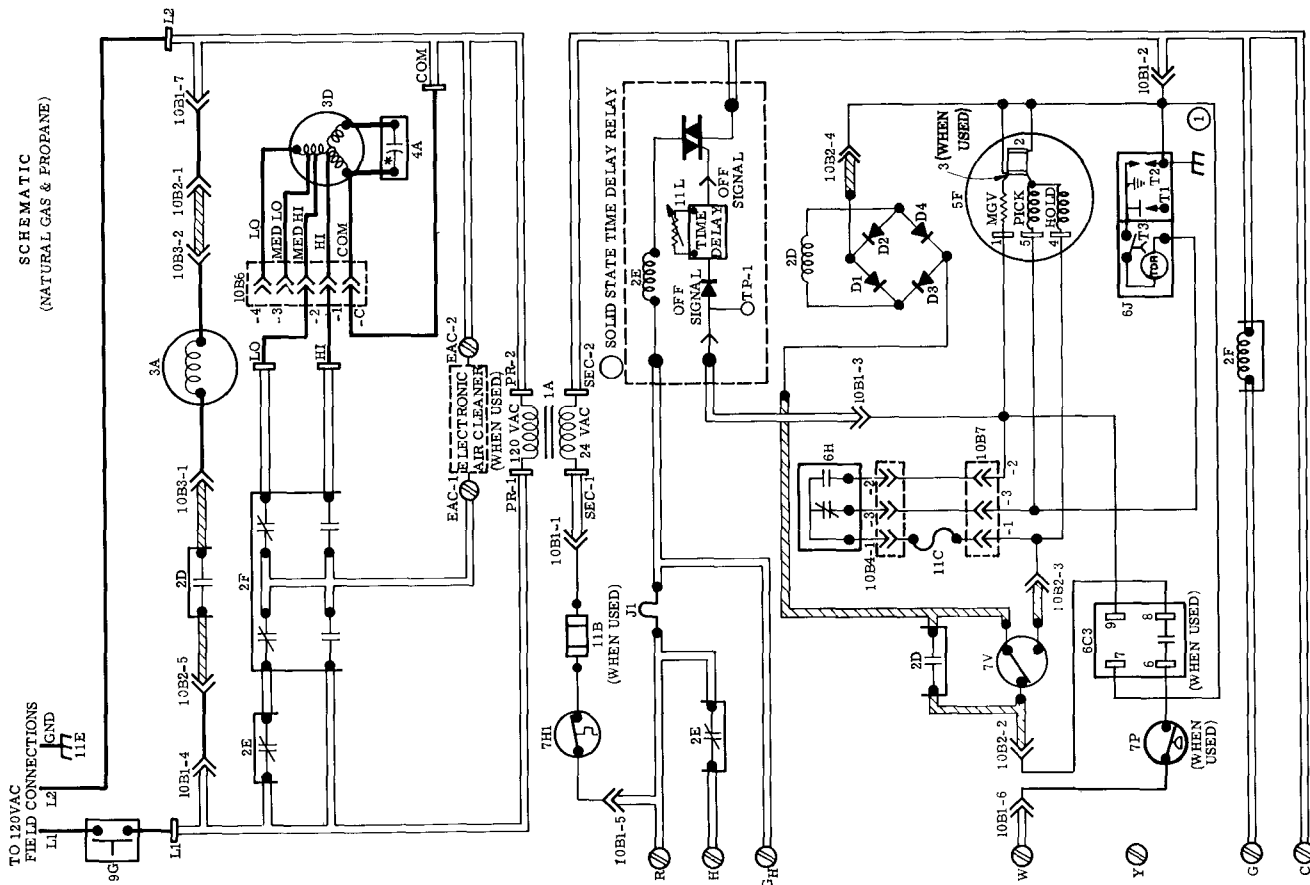


Fig. 6 — Schematic Wiring Diagram

Sequence of Operation

HEATING CYCLE (Fig. 6)

1. When blower door is in place, 115-v current is supplied through blower door interlock switch 9G. Transformer 1A is energized, supplying 24 v to heating blower relay 2E, which opens normally closed blower relay contacts 2E in the low-speed circuit of blower motor 3D.
2. When the wall thermostat calls for heating, R and W circuit closes, supplying power to 24-v safety circuit containing limit switch 7H1.
3. Inducer-motor relay coil 2D is energized and relay contacts 2D in the 115-v circuit close, starting inducer motor 3A. Simultaneously, another set of contacts in inducer-motor relay 2D closes in the 24-v circuit, locking in inducer-motor relay coil 2D. The coil is locked in until the R and W circuit or safety circuit opens.
4. As inducer motor 3A comes up to speed, flow-sensing switch 7V energizes HOLD coil of gas valve 5F. Simultaneously, PICK coil of gas valve 5F and time-delay circuit of spark generator 6J are energized through fusible link 11C.
5. When PICK coil of gas valve 5F is energized, gas flows to pilot. Normally open time-delay circuit closes after a 10-second purge delay, energizing spark generator 6J. The pilot is ignited by spark generator.
6. PICK coil of gas valve 5F and spark generator 6J are de-energized when the normally closed pilot-sensing switch contacts 6H open. The normally open flame-sensing switch contacts 6H close 5 to 20 seconds later, energizing the MG (main operator) of gas valve 5F. Gas valve 5F opens approximately 10 seconds later, allowing gas to flow to the main burners. The pilot flame immediately ignites the gas.
7. Simultaneously, time-delay circuit 11L in the blower control center is energized. Approximately 50 seconds after gas valve 5F opens, heating relay coil 2E is de-energized, which closes the 115-v contacts of heating relay 2E, starting blower motor 3D on heating speed.
8. When the thermostat is satisfied, the circuit between R and W is broken, de-energizing gas valve 5F, inducer-motor relay 2D and solid-state time-delay circuit on the main printed-circuit board. Gas flow to pilot and main burners stops immediately. After approximately 80 to 240 seconds, depending on the blower OFF time adjustment, relay 2E is energized and blower 3D stops.

NOTE: After a brief interruption of either gas or electric supply, the furnace will not resume operation until the contacts of pilot-flame sensing switch 6H move from the normally open to the normally closed position.

COOLING CYCLE

1. Wall thermostat calls for cooling.
2. R, G, and Y circuits are energized. Simultaneously, R and Y circuit starts outdoor condensing unit, and R and G circuit energizes cooling relay coil 2F. This closes normally open contacts 2F, energizing cooling speed of motor 3D and opening normally closed contacts of cooling relay 2F. The electronic air cleaner

(EAC) terminals are energized with line voltage whenever the blower is operating on either heating or cooling speed.

Filter

FILTER ARRANGEMENT — Filter is supplied in furnace blower compartment. For bottom inlet application, filter should be installed as shown in Fig. 7.

NOTE: Remove and discard bottom closure panel when bottom inlet is used.

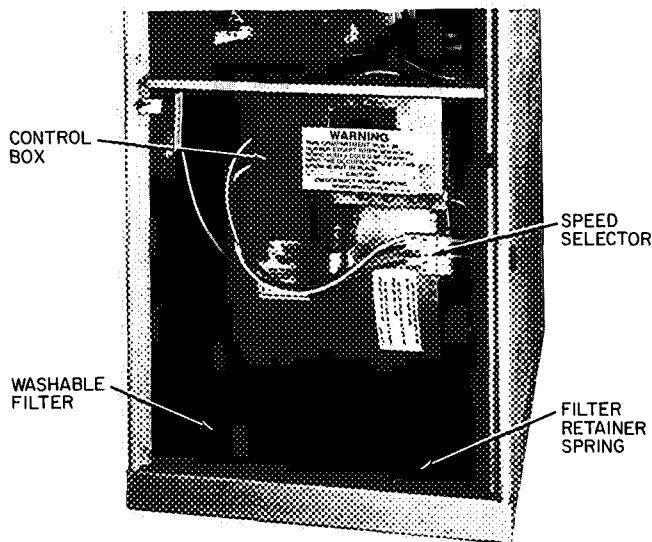


Fig. 7 — Filter Installed for Bottom Inlet

Figure 2 shows opening sizes for side inlet application. Remove filter and retainer spring from bottom opening. Install retainer spring in holes provided — one in blower shelf and another in retainer spring bracket (Fig. 8). Move unused retainer bracket to opposite side, near front of furnace, to support filter.

⚠ CAUTION

Check that filter retainer spring is behind the flange of the casing side.

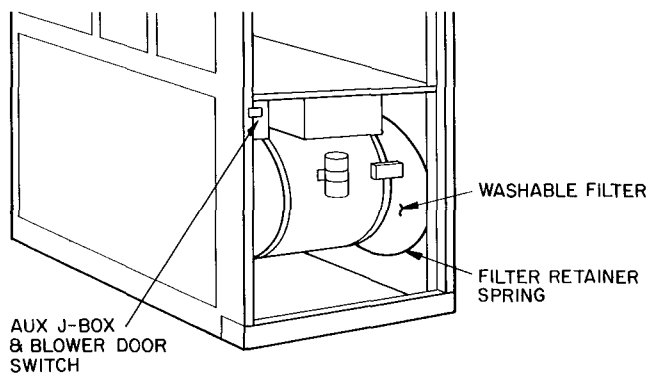


Fig. 8 — Filter Installed for Side Inlet

BOTTOM CLOSURE PANEL (Fig. 9) — When the side inlet is used, the bottom opening must be properly sealed by installing the bottom closure panel shipped under filter in each furnace. To install bottom closure panel, perform following steps:

1. After filter has been installed for side return, remove bottom closure.
2. With furnace either tilted or raised, install panel, insulation up, in opening from bottom of furnace.
3. Apply appropriate material around bottom closure to obtain airtight seal.

⚠ WARNING

Never operate unit without a filter or with blower door removed.

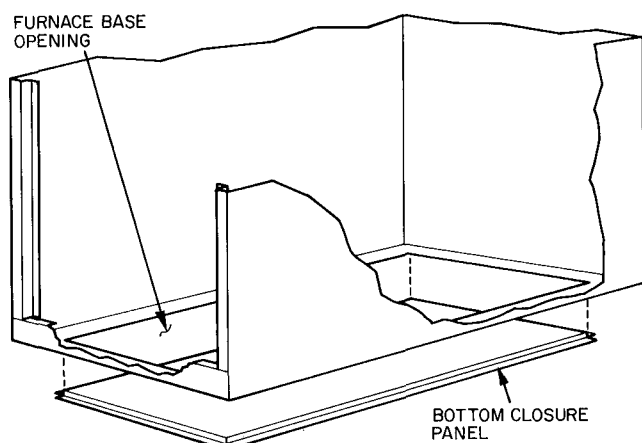


Fig. 9 — Installing Bottom Closure Panel

START-UP AND ADJUSTMENT

In addition to the following information, refer to Procedures for Deluxe Gas-Fired Condensing Furnaces.

NOTE: Furnace blower access panel must be in place to complete 115-v circuit to furnace.

⚠ CAUTION

This furnace is equipped with a fusible link in the burner enclosure. This link will melt if inadequate combustion-air supply or improper venting practices cause over-heating. **DO NOT** jumper this fuse. Correct the condition and replace the fuse with an identical part.

The gas service pressure must not exceed 0.5 psig (14 in. wg) for natural gas.

NOTE. The gas valve regulator has been factory-set at 3.5 in. wg for natural gas. Refer to Procedures for Deluxe Gas-Fired Condensing Furnaces for adjustment instructions when checking input.

Winterize Unit

⚠ CAUTION

Unit must not be installed and operated, and then be turned off and left turned off, in an unoccupied structure during cold weather where the temperature could drop to 32 F or below.

To winterize the unit:

1. Mix at least 20 oz of a solution of equal amounts of ethylene glycol (Prestone II antifreeze coolant or equivalent) and water.
2. Turn off electrical supply to furnace.
3. Remove control access panel.
4. Disconnect drain tube from bottom of inducer housing.
5. Insert funnel in drain tube and pour antifreeze/ water solution into furnace until it is visible at point where condensate enters open drain.
6. Reconnect drain tube to outlet box.
7. Replace control access panel.

Adjustment of Blower Speed

⚠ WARNING

Disconnect and tag electrical power before changing speed tap.

To change motor speed taps, remove motor tap lead (Fig. 7, Table 3) and relocate it on desired terminal on plug-in terminal block/speed selector located on blower.

Table 3 — Speed Selector

SPEED	TAP NO.	COLOR
Common	C	White
Hi	1	Black
Med-Hi	2	Yellow
Med-Low	3	Blue
Low	4	Red

⚠ CAUTION

When adjusting blower speed, check that temperature rise across heat exchanger does not exceed that specified on rating plate.

Automatic Gas Control Valve — These units are equipped with automatic gas control valves. If not already checked when lighting main burner, check proper operation of this valve by moving room thermostat pointer above and below room temperature. Main burners should light when thermostat calls for heat, and should shut off when the pointer is moved below room temperature setting.

NOTE: For ease of adjusting pilot flame, disconnect and tape one power lead at main gas valve. For model 646 gas valves, disconnect terminal no. 1. This prevents main burner ignition and allows time to adjust the pilot. Reconnect the power lead after adjustment. Check flame characteristics after replacing burner enclosure front.

CARE AND MAINTENANCE

⚠ CAUTION

To prevent both possible damage to the equipment and personal injury, maintenance should be performed only by qualified personnel.

⚠ WARNING

Never store items such as the following on, near, or in contact with the furnace:

1. Spray or aerosol cans, rags, brooms, dust mops, vacuum cleaners, or other cleaning tools.
2. Soap powders, bleaches, waxes or other cleaning compounds; plastic items or containers; gasoline, kerosene, cigarette lighter fluid, dry-cleaning fluids, or other volatile fluids.
3. Paint thinners and other painting compounds.
4. Paper bags or other paper products.

For continuing high performance, and to minimize equipment failure, it is essential that periodic maintenance be performed on this equipment. Consult your local dealer as to the proper frequency of maintenance and for information about maintenance contracts.

The ability to perform maintenance on this equipment properly requires certain mechanical skills and tools. If you do not possess these skills and tools, contact your dealer for maintenance.

⚠ WARNING

Turn off and tag gas and electrical supplies to the unit before performing any maintenance or service on the unit. Follow the relighting instructions attached to the furnace.

Minimum Maintenance Requirements

1. Check and clean or replace air filter each month or as required.
2. Check blower motor and wheel for cleanliness and lubrication each heating and cooling season. Clean and lubricate as necessary.
3. Check electrical connections for tightness, and controls for proper operation, each heating season. Service as necessary.
4. Check for proper condensate drainage.
5. Check for blockages of combustion-air and vent pipes.

⚠ WARNING

As with any mechanical equipment, personal injury can result from contact with sharp metal edges and other objects. Be careful to avoid such contact when removing or replacing parts.

Air Filter — Disconnect and tag electrical power before removing access panels. To clean or replace air filter:

1. Remove blower access panel.

2. Release filter retainer spring from behind flange of furnace casing.
3. Slide out filter.
4. Clean filter with tap water. Spray in direction opposite that of airflow.
5. Rinse and let dry. DO NOT oil or coat filter.
6. Place filter in furnace with cross-sectional binding facing blower.

Blower Motor and Wheel — For long life, economy and high efficiency, clean accumulated dirt and grease from blower wheel and motor annually.

Lubricate motor every 5 years if motor is used on intermittent operation (thermostat FAN switch in AUTO. position) or every 2 years if motor is in continuous operation (thermostat FAN switch in ON position).

⚠ CAUTION

Disconnect and tag electrical supply before removing access panels.

Clean and lubricate as follows:

1. Remove access panels.
2. Remove control box from bottom side of blower shelf and position out of the way.
3. Remove electrical leads from numbered side of blower speed selector (Fig. 7, Table 3). Note location of wires to aid reassembly.
4. Using second wrench to hold line in place, disconnect drain pipe at coupling in blower compartment.
5. Loosen hose clamps and remove 7/8-in. diameter drain hose.
6. Loosen hose clamp and disconnect 5/8-in. diameter drain hose at bottom of inducer housing located under blower shelf.
7. Remove screws securing drain trap assembly.
8. Remove screws securing blower assembly to blower shelf and slide blower assembly out of furnace.
9. Squeeze side tabs of blower speed selector and pull from blower housing bracket.
10. Loosen screw in strap holding motor capacitor to blower housing, and slide capacitor from strap.
11. Mark blower wheel, motor and motor support in relation to blower housing before disassembly to ensure proper reassembly.
12. Loosen setscrew holding blower wheel on motor shaft.
13. Remove bolts holding motor mount to blower housing and slide motor and mount from housing. Disconnect ground wire attached to blower housing before removing motor.
14. Lubricate motor.
 - a. Remove dust caps or plugs from oil ports located at each end of motor.
 - b. Using a good grade of SAE 20 nondetergent motor oil, add one teaspoon (5 ml, 3/16 oz or 16 to 25 drops) to each oil port. Use of other types or grades of oil could damage motor.

- c. Allow time for total quantity of oil to be absorbed by each bearing.
- d. After oiling motor, wipe excess oil from motor housing.
- e. Replace dust caps or plugs on oil ports.
15. Remove blower wheel from housing.
 - a. Mark blower wheel orientation and cutoff location to ensure proper reassembly.
 - b. Remove screws securing cutoff plate and remove cutoff plate from housing.
 - c. Lift blower wheel from housing through opening.
16. Use vacuum with soft brush attachment to clean blower wheel and motor. DO NOT disturb balance weights (clips) on blower wheel vanes. DO NOT drop or bend wheel because balance will be affected.
17. Reassemble blower by reversing steps 15a through 15c. Wheel must be repositioned properly, with motor oilers pointing up, when motor is installed.
18. Reassemble motor and blower by reversing steps 9 through 13. If motor has ground wire, it must be reconnected. Wheel must be centered in blower housing. Spin blower wheel to check clearance.
19. Reinstall blower assembly in furnace.
20. Inspect drain trap and hoses to ensure that they are not blocked or restricted. Replace drain trap and hoses. Tighten hose clamps.
21. Use second wrench to hold assembly while attaching drain pipe and tightening compression coupling.
22. Connect electrical leads to blower speed selector. Note that connections are polarized for correct assembly — *DO NOT force*.
23. Reinstall control box on bottom side of blower shelf.
24. Turn on electrical power and check for proper rotation and speed changes between heating and cooling cycles. Operate unit for 5 minutes and check for condensate leaks.
25. Loosen hose clamps at vent pipe connection; disconnect vent pipe and position out of way.
26. Disconnect edge connector from inducer control box.
27. Disconnect edge connector from main control box at blower shelf.
28. Remove screws securing main control box to blower shelf and position control box out of way.
29. Loosen hose clamp and remove drain tube from inducer housing located on bottom side of blower shelf.
30. Remove mounting screws securing inducer assembly to collector box; remove inducer assembly.
31. Loosen hose clamp and remove drain tube from inducer outlet box.
32. Remove screws securing coupling box to cell panel and remove box from furnace.
33. Remove choke plate (if used)
34. Loosen hose clamp and remove 7/8-in. drain tube from trap.
35. Place bucket under 7/8-in. drain tube in blower compartment.
36. Using garden hose, flush each cell of the condensing heat exchanger with water. Use care not to spray water onto interior surfaces of control compartment. Dry all surfaces.
37. Using field-provided small wire brush, steel snake cable, reversible electric drill and vacuum cleaner, clean primary heat exchanger cells.
38. Connect 7/8-in. drain tube to trap and tighten hose clamp.

Cleaning Heat Exchangers — If it becomes necessary to clean the heat exchangers, proceed as follows:

1. Turn off and tag gas and electrical supplies to furnace.
2. Remove control and blower access panels.
3. Loosen hose clamps on combustion-air pipe and move air pipe aside.
4. Use second wrench to hold assembly in place while disconnecting gas supply at ground joint union. Remove gas pipe from valve.
5. Disconnect pilot leads at 3-circuit connector outside of burner enclosure.
6. Disconnect high-voltage lead at spark generator.
7. Disconnect electrical wires from gas valve.
8. Disconnect pressure tubing from right side of burner enclosure and from bottom of gas valve.
9. Remove burner enclosure front.
10. Remove diffuser from inside top of burner enclosure. Remove screws that secure burner enclosure to cell panel. These screws are located inside the burner enclosure.
11. Remove gas control assembly from furnace carefully, so that cell inlet panel gasket is not damaged.
12. Install choke plate (if used).
13. Apply sealant-releasing agent (Pam or silicone lubricant) to flange of coupling box inside screw holes and mating area of cell panel.
14. Apply a generous bead (3/16-in. diam) of G.E. RTV 162 sealant or Dow-Corning RTV 738 sealant (NO SUBSTITUTE IS PERMISSIBLE) to flange of coupling box over releasing agent. G.E. RTV 162 and Dow-Corning RTV 738 are available from distributors.
15. Being careful not to smear sealant, position coupling box so that slot in insulation is on left-hand side, and install coupling box.
16. Place small round gasket(s) over hole in blower shelf.
17. Using stainless steel screws, install inducer assembly on collector box and support bracket to coupling box.
18. Connect drain tube from collector box to inducer outlet box.
19. Connect small drain tube from top of trap to fitting on bottom of inducer housing.
20. Reconnect edge connector to inducer control box.
21. Reinstall main control box on blower shelf.
22. Reconnect edge connector at main control box on blower shelf.
23. Reconnect vent pipe. Check that clamps are tight.

Reassemble Furnace

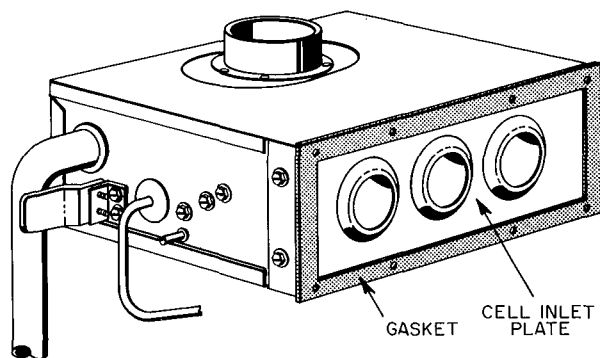


Fig. 10 — Burner Enclosure

13. Check condition of gasket on cell inlet panel of burner enclosure. Replace gasket if necessary (Fig. 10).
14. Install control assembly in furnace.
15. Install burner enclosure front.
16. Reconnect pilot leads at 3-circuit connector.
17. Reconnect high-voltage lead to spark generator.
18. Refer to furnace wiring diagram and connect wires to gas valve.
19. Reconnect pressure tubes to gas valve and burner enclosure.
20. Use a second wrench to hold assembly in place while installing gas pipe in gas valve.
21. Reconnect gas pipe at ground joint union.
22. Reconnect combustion-air pipe. Tighten hose clamps.
23. Turn on gas and electrical supplies.

⚠ WARNING

Never use matches, candles, flame or other sources of ignition to check for gas leakage. Use a soap and water solution

24. Check for gas leaks.
25. Check furnace operation through 2 complete operating cycles.

26. Check pilot tube and gas valve manifold connection for gas leaks while furnace is in operation.
27. After condensate starts to drain, check for condensate leaks.
28. Replace control and blower access panels.

Pilot — Check the pilot and clean if necessary at the beginning of each heating season. The pilot flame should be high enough for proper impingement of the safety element and to light the burners. Remove any accumulation of soot and carbon from the safety element. Check spark electrode gap (Fig. 11).

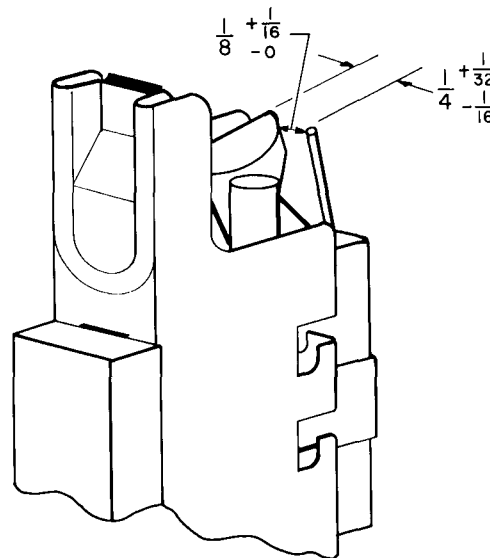


Fig. 11 — Position of Electrode to Pilot (in.)

Electrical Controls and Wiring

NOTE: Unit may have more than one electrical supply.

With power disconnected to unit, check all electrical connections for tightness, and tighten screws as necessary. If any connections are smoky or burned, disassemble the connection, clean all parts, strip wire, and reassemble properly and securely. Electrical controls are difficult to check without proper instrumentation; therefore, reconnect electrical power to unit and observe unit through 2 complete operating cycles. If discrepancies in the operating cycle occur, contact your dealer and request service.



58SX Deluxe Gas-Fired Condensing Furnaces

Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations.

Book 1 4
Tab 6a 8a

PC 101

Catalog No 535-844

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Form 58SX-5SI

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7-85

Replaces: New

For replacement items use Carrier Specified Parts