



User's Information Manual

NOTE TO INSTALLER:

This manual should be left with the equipment owner.

WARNING: If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- WHAT TO DO IF YOU SMELL GAS
 - Do not try to light any appliance.
 - Do not touch any electrical switch; do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - If you cannot reach your gas supplier, call the fire department.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.

▲ WARNING

Improper installation, adjustment, alteration, service or maintenance can cause property damage, serious injury or death. Refer to this manual. For assistance or additional information consult a qualified installer, service agency, or the gas supplier.

▲ WARNING

Before performing recommended maintenance, be sure main power switch to unit is turned off. Electrical shock could cause serious injury or death.

Your rooftop combination heating/cooling unit is equipped with an automatic direct spark ignition and induced-draft combustion blower.

▲ WARNING

Do not attempt to light by hand; serious injury or death may result.

TO LIGHT UNIT

▲ WARNING

1. Do not turn off the electrical power to unit without first turning off the gas supply.
2. Before attempting to start the gas heating section, familiarize yourself with all the procedures that must be followed.

If you do not follow these instructions exactly, a fire or explosion may result. Property damage, injury, or loss of life could occur.

See Fig. 1A and 1B for location of gas valve. Refer to Fig. 2 while proceeding with the following steps.

Step 1 — Set room thermostat to the lowest temperature setting and set SYSTEM switch to HEAT or AUTO. position.

Step 2 — Close the manual gas valve.

Step 3 — Turn off the electrical supply to the unit, tag disconnect.

Step 4 — Remove the compressor access panel.

Step 5 — Move the gas valve switch to the OFF position and wait 5 minutes.

Step 6 — Move the gas valve switch to the ON position.

Step 7 — Replace the compressor access panel.

Step 8 — Turn on the electrical supply to unit.

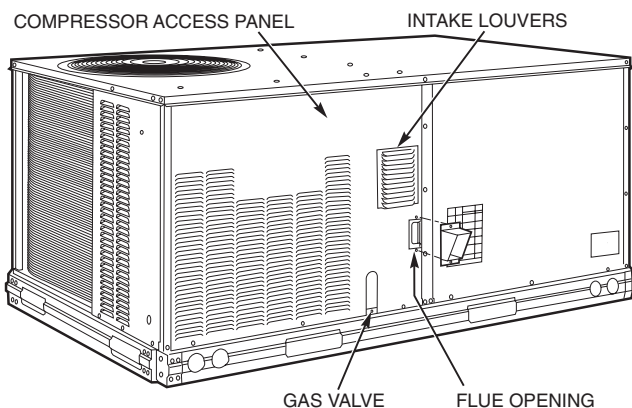
Step 9 — Open the manual gas valve.

Step 10 — Set room thermostat selector slightly above room temperature to start unit. The induced-draft combustion air fan will start. Main gas valve will open and main burners should ignite within 5 seconds. If the burners do not light, there is a 22-second delay before another 5-second try. If the burner still does not light, the time delay is repeated. If the burner does not light within 15 minutes, there is a lockout. To reset the control, break the 24-v power to W1. Repeat Steps 1-10. If burners still do not light, call for service.

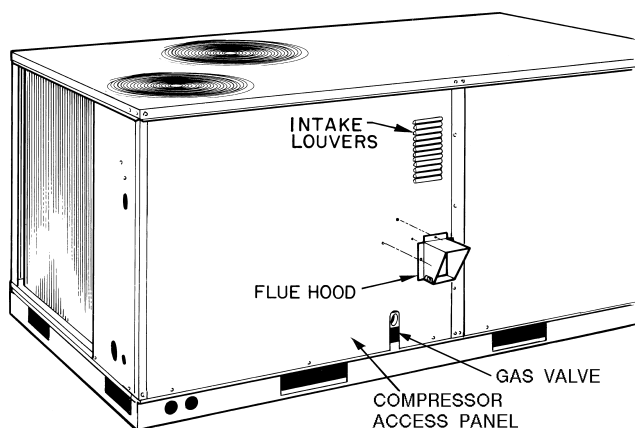
Step 11 — Set the temperature selector on room thermostat to desired setting.

▲ WARNING

If the main burners fail to light, or the blower fails to come on, shut down gas heating section and call your dealer for service. Failure to follow these requirements could result in serious injury or death.



**Fig. 1A — Gas Valve Location
(48HJ004-007)**



**Fig. 1B — Gas Valve Location
(48HJ008-014)**

TO SHUT UNIT OFF

⚠ WARNING

1. Do not turn off the electrical power to unit without first turning off the gas supply.
2. Never attempt to manually light the main burners on unit with a match, lighter, or any other flame. If the electric sparking device fails to light the main burners, refer to the following shutdown procedures. Call your dealer as soon as possible.

Failure to follow these procedures can result in fire, serious injury or death.

Refer to Fig. 3 while proceeding with the following steps.

Step 1 — Set room thermostat to lowest temperature setting and set SYSTEM switch to OFF.

Step 2 — Close the external manual gas valve.

Step 3 — Turn off the electrical power supply to unit; install lockout tag.

Step 4 — Remove the compressor access panel.

Step 5 — Move the gas valve switch to the OFF position.

Step 6 — Replace compressor access panel.

Step 7 — If unit is being shut down because of a malfunction, call your dealer as soon as possible.

If unit is being shut down because the heating season has ended, restore electrical power to the unit and set thermostat to the COOL position to ensure operation of the cooling system during the cooling season.

Should overheating occur, or the gas supply fail to shut off, shut off the manual gas valve to the unit before shutting off the electrical supply.

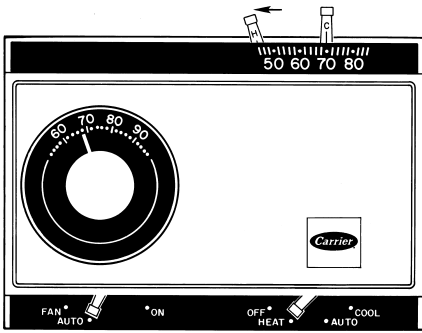
Do not use this unit if any part has been under water. Immediately call a qualified service technician to inspect the unit and to replace any part of the control system and gas control that has been under water.

MAINTAINING YOUR UNIT

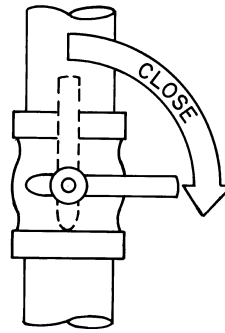
All maintenance should be handled by skilled, experienced personnel. Your Carrier service technician can help you set up a maintenance schedule.

For your safety, keep the area around the unit clear and free of combustible materials, gasoline, and other flammable liquids and vapors.

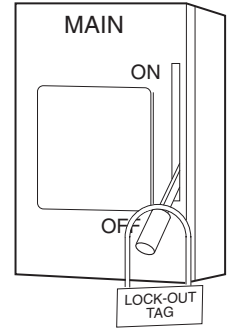
To ensure proper functioning of the unit, flow of combustion and ventilating air must not be obstructed from reaching the unit. Clearance of at least 3 ft on flue and condenser sides and 6 in. on all other sides is required.



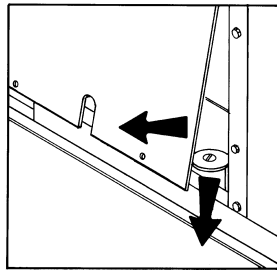
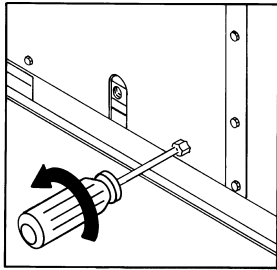
STEP 1



STEP 2

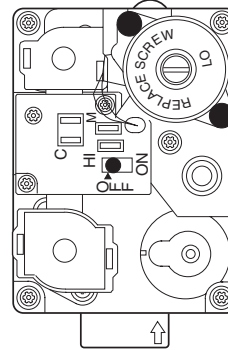


STEP 3

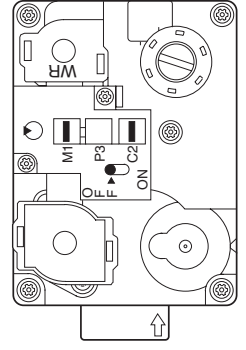


STEP 4

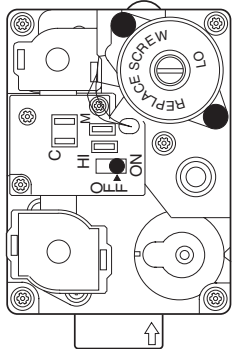
2-STAGE GAS VALVE



SINGLE-STAGE GAS VALVE

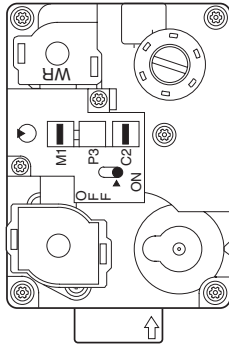


2-STAGE GAS VALVE



- 48HJD005,006*
- 48HJE004-006†
- 48HJF004-006*
- 48HJD007-014
- 48HJE007-014
- 48HJF007-014

SINGLE-STAGE GAS VALVE



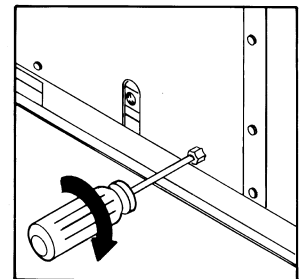
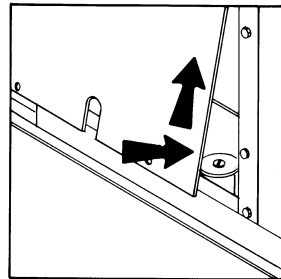
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- 48HJF004-006†
- 48HJG005,006
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- 48HJK004-006
- 48HJL005,006
- 48HJM004-006
- 48HJN004-006

STEP 6

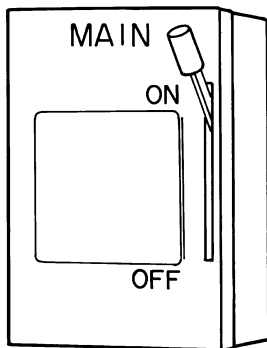
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- 48HJE004-006†
- 48HJF004-006*
- 48HJD007-014
- 48HJE007-014
- 48HJF007-014

- 48HJD005,006†
- 48HJE004-006†
- 48HJF004-006†
- 48HJG005,006
- 48HJH004-006
- 48HJK004-006
- 48HJL005,006
- 48HJM004-006
- 48HJN004-006

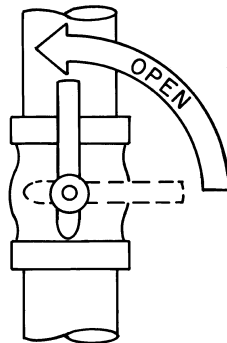
STEP 5



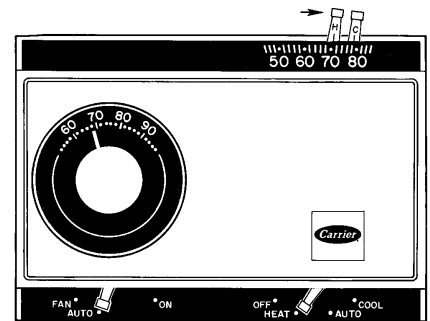
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STEP 8



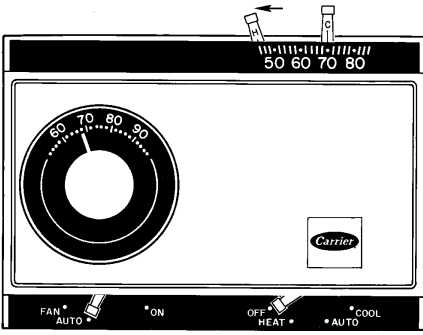
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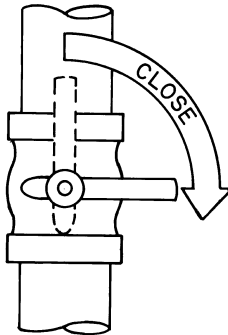
STEP 10

*3-phase units only.
†Single-phase units only.

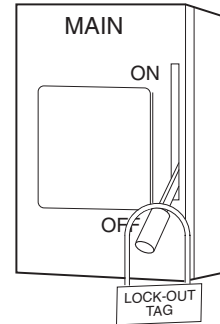
Fig. 2 — To Light Unit



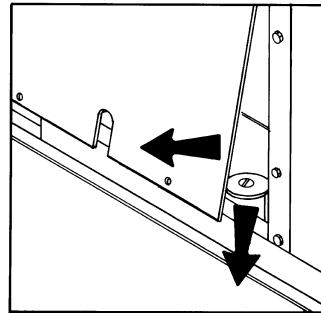
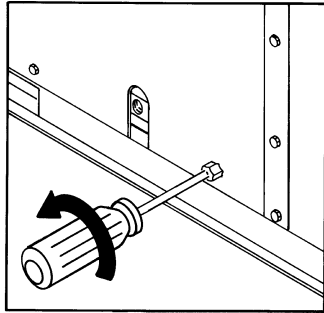
STEP 1



STEP 2

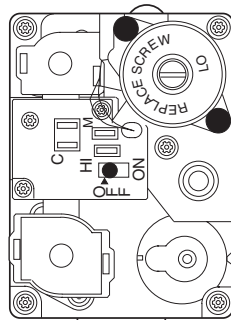


STEP 3



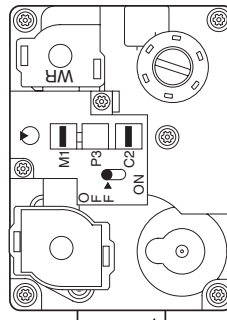
STEP 4

2-STAGE GAS VALVE



- 48HJD005,006*
- 48HJE004-006*
- 48HJF004-006*
- 48HJD007-014
- 48HJE007-014
- 48HJF007-014

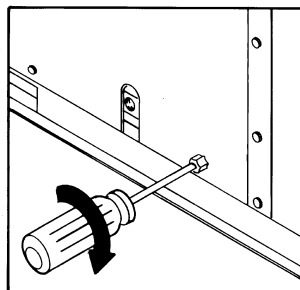
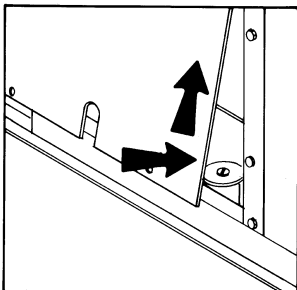
SINGLE-STAGE GAS VALVE



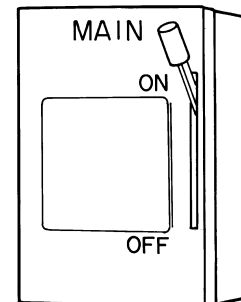
- 48HJD005,006†
- 48HJE004-006†
- 48HJF004-006†
- 48HJG005,006
- 48HJH004-006
- 48HJK004-006
- 48HJL005,006
- 48HJM004-006
- 48HJN004-006

*3-phase units only.
†Single-phase units only.

STEP 5



STEP 6



STEP 7

Fig. 3 — To Shut Unit Off

ROUTINE MAINTENANCE AND CARE FOR THE EQUIPMENT OWNER

Consider the following information before maintaining or servicing equipment:

⚠ WARNING

1. TURN OFF GAS SUPPLY AND THEN ELECTRICAL POWER TO YOUR UNIT AND INSTALL LOCKOUT TAG BEFORE SERVICING OR PERFORMING MAINTENANCE.
2. Do not turn off electrical power to this unit without first turning off the gas supply.
3. When removing access panels or performing maintenance functions inside your unit, be aware of sharp sheet metal parts and screws. Although special care has been taken to reduce sharp edges inside the unit, be extremely careful when handling parts or reaching into the unit.
4. Failure to follow these instructions could result in serious injury or death.

Air Filter(s) — Air filter(s) should be checked at least every 3 or 4 weeks and changed or cleaned when necessary. Table 1 indicates the correct filter size for your unit. See Fig. 4 for filter access panel location.

1. Lift up and remove filter access panel.
2. While holding filter, tilt upper filter rack.
3. Remove filters by pulling up and out toward you from the track.
4. Inspect or replace filters.
5. Return filters to filter tracks. Note direction of airflow arrows on filter frame.
6. Reinstall filter access panel.

If you have difficulty in locating your air filter or if you have questions concerning proper filter maintenance, contact your dealer for instructions. When replacing your unit filters, always use the same size and type of filter that was originally supplied by the installer.

Units with outdoor air capability have a cleanable filter for the outdoor air. This filter should be checked semi-annually and cleaned as necessary with steam or hot water and a mild detergent. Do not use throwaway filters in place of cleanable filters.

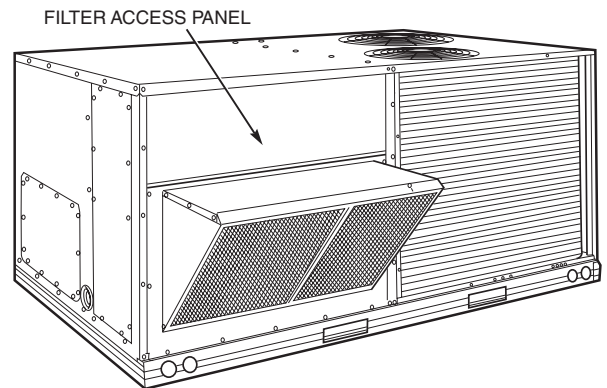
⚠ WARNING

Never operate your unit without filters in place. Failure to heed this warning may result in damage to the blower motor, compressor and/or evaporator coil. An accumulation of dust and lint on internal parts of your unit can cause loss of efficiency and, in some cases, fire that could result in serious injury or death.

Table 1 — Indoor-Air Filter Data for 48HJ

UNIT SIZE 48HJ	INDOOR-AIR FILTERS (Throwaway Fiberglass)	
	Quantity	Size (in.)
004-007	2	16 x 25 x 2
008,009	4	16 x 25 x 2
012,014	4	20 x 20 x 2

NOTE: Replacement filters should be UL (Underwriters' Laboratories) certified or equivalent.



**Fig. 4 — Typical Filter Access Panel Location
(48HJ008-014 Shown)**

Heat Exchanger

NOTE: To ensure dependable and efficient heating operation, the heat exchanger should be checked by a qualified maintenance person before each heating season, and cleaned when necessary.

⚠ CAUTION

This checkout should not be attempted by anyone not having the required expertise and equipment to do the job properly.

Checking and/or cleaning the heat exchanger involves removing the gas controls assembly and the flue collector box cover. When finished, the gas controls must be reinstalled for proper operation. Also, the flue collector box cover must be replaced correctly so that a proper seal is maintained. Contact your dealer for the required periodic maintenance. At the beginning of each cooling/heating season and as conditions require.

Fans and Belts, and Fan Motor — Periodically check the condition of fan wheels and housings, belt tension and fan motor shaft bearings. No lubrication of condenser or evaporator fan bearings or motors is required or recommended.

Evaporator and Condenser Coils — Cleaning of the coils should be done by qualified service personnel. Contact your dealer for the required annual maintenance.

Condensate Drain — The drain pan and condensate drain line should be checked and cleaned at the same time the cooling coils are checked by your dealer.

Compressor — All compressors are factory supplied with a normal charge of the correct type refrigeration-grade oil in them and should not require additional oil.

Condenser Fan

⚠ WARNING

Do not poke sticks, screwdrivers, or any other object into revolving fan blades. Severe bodily injury could result.

The fan must be kept free of all obstructions to ensure proper cooling. Contact your dealer for any required service.

Electrical Controls and Wiring — Ensure wires do not contact refrigerant tubing or sharp edges. Electrical controls are difficult to check without proper instrumentation. If inadequate cooling is suspected, contact your qualified local dealer for service.

Combustion Area and Vent System — The combustion area and vent system should be visually inspected before each heating season. The normal accumulation of dirt, soot, rust, and scale can result in loss of efficiency and improper performance if allowed to build up.

⚠ WARNING

If your unit makes any unusual or especially loud noises during heating, shut down the heating section and call your qualified Carrier service technician.

See Fig. 1A, 1B, and 5 and proceed as follows to inspect the combustion area and power-venting system of your unit.

1. Turn off gas supply to your unit.
2. Turn off electrical power to your unit; install lockout tag.
3. Remove compressor access panel.
4. Using a flashlight, carefully inspect the burner areas for dirt, soot, or scale.

⚠ CAUTION

If dirt, soot, rust or scale accumulations are found, call your dealer and do not operate your heating section.

5. When you have completed your inspection, follow the start-up procedures in this manual to restore your unit to operation.
6. Observe unit heating operation.

⚠ WARNING

Components in heat section may be hot after unit has been started up. When observing flame, be careful not to get close to or touch heating components. Serious injury could result.

Watch the burner flame to see if it is bright blue. If you observe a suspected malfunction or that the burner flame is not bright blue, call your dealer.

7. Replace compressor access panel.

Unit Panels — After performing any maintenance or service on the unit, be sure all panels are securely fastened in place to prevent rain from entering unit cabinet and to prevent disruption of the correct unit airflow pattern.

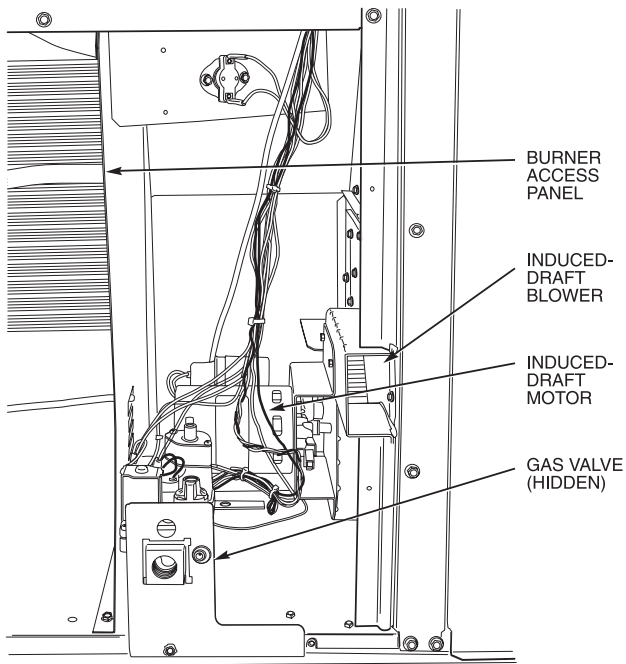


Fig. 5 — Typical Heat Section Detail

REGULAR DEALER MAINTENANCE

In addition to the type of routine maintenance you might be willing to perform, your unit should be inspected regularly by a properly trained and qualified Carrier service technician. An inspection (preferably each heating/cooling season, but at least every year) should include the following:

1. Inspection of all flue product passages — including the burners, heat exchanger, and flue collector box.

2. Inspection of all combustion- and ventilation-air passages and openings.
3. Close inspection of all gas pipes leading to and inside your unit.
4. Inspection and if required, cleaning of the condenser and evaporator coils.
5. Inspection, and if required, cleaning of the condensate drain pan.
6. Inspection and cleaning of blower wheel housing and motor.
7. Inspection of all supply- and return-air ducts for leaks, obstructions, and insulation integrity. Any problems found should be resolved at the time of inspection.
8. Inspection of the unit base for cracks, gaps, etc., which may cause a hazardous condition.
9. Inspection of the unit casing for signs of deterioration.
10. Inspection of all electrical wiring and components to ensure proper connection.
11. Inspection for leaks in the refrigerant circuit. Pressure-check to determine appropriate refrigerant charge
12. Inspection of fan wheels and housings, belt tension, and fan motor shaft bearings.
13. Operational check of the unit to determine working conditions. Repair or adjustment should be made at the time of inspection.

Your servicing dealer may offer an economical service contract that covers seasonal inspections. Ask for further details.

Complete service instructions can be found in the unit Installation, Start-Up and Service Instructions.

BEFORE YOU CALL FOR SERVICE, CHECK FOR PROBLEMS THAT CAN BE EASILY SOLVED

If insufficient heating or cooling is suspected:

() Check for sufficient airflow. Check the air filter for dirt. Check for blocked return- or supply-air grilles. Be sure they are open and unobstructed. If these checks do not reveal the cause, call your servicing dealer.

If your unit is not operating at all, check the following list for easy solutions:

() Check to be sure that your thermostat temperature selector is set above the indoor temperature during the heating season, or below the indoor temperature during the cooling season. Be sure the SYSTEM switch in the proper HEAT or COOL position and not in the OFF position.

() Is the electrical supply switch ON? Are any fuses blown, or has the circuit breaker tripped?

() During the heating season, check the external manual shutoff valve. Is this lever parallel with the pipe, indicating that the valve is open? Or is the lever at the right angle, indicating that the valve is closed? If closed, has the gas been shut off for safety reasons? Otherwise, you may open the valve and follow the start-up procedures listed in this manual.

NOTE: Before proceeding with the next check, turn OFF the electrical power supply to the unit. Remove the control access door.

() During the heating season, check the control switch on the gas valve. Is it in the ON position? If it is not, be sure it has not been turned off for the purpose of safety. If no safety hazards are present, follow the start-up procedures in this manual.

() If your unit still fails to operate, call your servicing dealer for troubleshooting and repairs. Specify the model and serial numbers of your unit. (Record them in this manual in the space provided.) If the dealer knows exactly which unit you have, he may be able to offer suggestions over the phone, or save valuable time through knowledgeable preparation for the service call.

IN CASE OF TROUBLE

If, after performing the above checks, unit performance is unsatisfactory, shut off the unit and call your dealer.

Dealer's Name _____

Telephone No. _____

Unit Model _____

Unit Serial Number _____