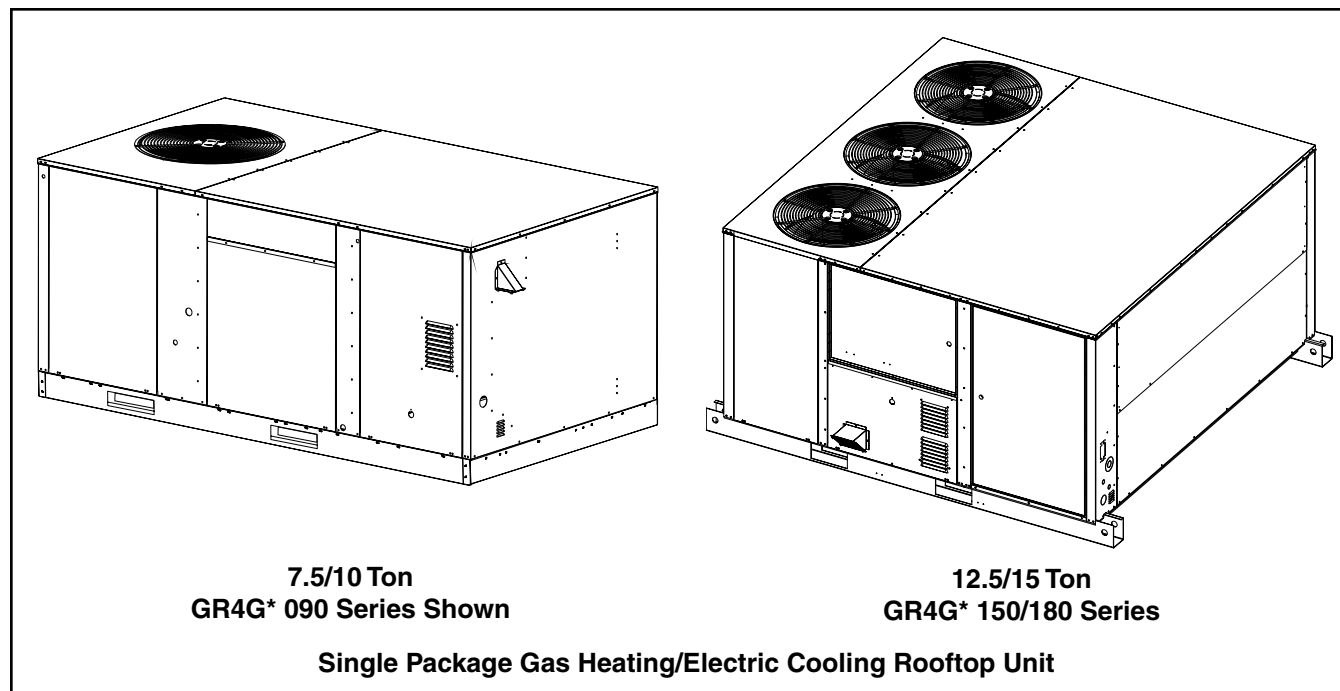


# USER'S INFORMATION MANUAL

**GR4G(\*) Series - 090/120/150/180**

**Single Package Gas Heating /Electric Cooling Rooftop Unit**



## IMPORTANT

Read this owner information thoroughly before attempting to operate or maintain this unit to become familiar with the capabilities and use of your appliance. Keep this literature where you have easy access to it in the future. If a problem occurs, check the instructions and follow recommendations given. If these suggestions don't eliminate your problem, call your NORDYNE Servicing Contractor (Service PRO).

Any additions, changes, or conversions required in order for the appliance to satisfactorily meet the application needs must be made by a qualified installer, service agency, or the gas supplier using factory specified and approved parts.

## ⚠ WARNING:

### FIRE OR EXPLOSION HAZARD

- Failure to follow safety warnings exactly could result in serious injury or property damage.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.
- 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.
- Leave the building immediately.
- Immediately call your gas supplier from a neighbors phone. Follow the gas suppliers instructions.
- If you cannot reach your gas supplier, call the fire department.

**DO NOT DESTROY. PLEASE READ CAREFULLY AND KEEP IN A SAFE PLACE FOR FUTURE REFERENCE.**



## GENERAL INFORMATION

This gas heating/electric cooling unit has been designed and built to provide many years of safe and dependable comfort, providing it is properly installed and maintained. With regular maintenance, this unit will operate satisfactorily year after year. Abuse, improper use, and/or improper maintenance can shorten the life of the appliance and create hazards for you. Please read this manual carefully to familiarize yourself with operation, maintenance, and safety procedures for this unit.

A regular service and maintenance schedule should be established to ensure efficient and safe operation of the unit. Contact your dealer for a periodic unit inspection by a qualified service technician.

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### **WARNING:**

**To avoid possible equipment damage, fire, or death, the following instructions must be observed regarding unit location, combustion air requirements, and operation procedures.**

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**Gas Heating/Electric Cooling Unit Location**—The area around the gas heating/electric cooling unit and the vicinity of any other gas appliances must be kept clear and free of combustible materials, gasoline, and other flammable vapors and liquids. Do not store or use flammable items such as paint, varnish, or strippers in the vicinity of the unit.

Do not use the area around the unit as a storage area. This area must be kept clear and clean. The unit must also be kept clear of loose or exposed insulation materials. Examine the unit's area when it is installed or when insulation is added, since some insulation materials may be combustible.

Do not use this appliance 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 any gas control which has been under water.

Familiarize yourself with the controls that shut off the gas and electrical power to the unit. If the unit is to be shut down for an extended period of time, turn off both the gas and electrical power. For your safety always turn off both the gas and electrical power before performing service or maintenance on the furnace.

**Combustion Air Supply**—The gas heating/electric cooling unit needs an adequate supply of combustion and ventilation air for proper and safe operation. Do not block or obstruct air openings on the unit or air openings supplying the area where it is installed.

If the unit is operated with inadequate combustion air supply, the flame roll-out control switch located above the burners will open, turning off the gas supply to the burners. The flame roll-out control is a manual-reset device. **DO NOT** install a jumper wire across this switch to defeat its function. **DO NOT** reset the control without identifying and correcting the fault condition which caused the control to trip. If this switch must be replaced, use only the factory specified replacement part.

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### **CAUTION:**

**Combustion air must not be drawn from a corrosive atmosphere.**

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To maximize heat exchanger life, the combustion air must be free of chemicals which form corrosive acidic compounds in the combustion gases. Some examples of these chemicals are chlorine, fluorine, and sulphur. Some common sources of these chemicals are detergents, bleaches, aerosol sprays, cleaning solvents, and a wide variety of commercial and household products.

**Ductwork—**

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### **WARNING:**

**Failure to prevent products of combustion from being circulated into the occupied space can create potentially hazardous conditions including carbon monoxide poisoning that could result in personal injury or death.**

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The duct connections must be physically sound and sealed to the unit's casing to prevent products of combustion from entering the occupied space.

The return air and circulating air ductwork must not be connected to any other heat producing device such as a fireplace insert, stove, etc. Doing so may result in fire, explosion, personal injury, carbon monoxide poisoning, or property damage.

## OPERATING INSTRUCTIONS

### **Cooling Operation— 2 Stage**

1. Set the thermostat system switch to COOL and the thermostat fan switch to AUTO. (See Figure 1)
2. Set the thermostat temperature selector to the desired temperature level. The outdoor fans, compressors, and indoor blower will all cycle on and off to maintain the indoor temperature at the desired cooling level.

### Heating Operation — 2 Stage

1. Set the thermostat system switch to HEAT and the thermostat fan switch to AUTO. (See Figure 1)
2. Set the thermostat temperature selector to the desired temperature level. The indoor blower and gas heat module will cycle on and off to maintain the indoor temperature at the desired heating level.

**NOTE:** There is a factory set 3 minute time delay between Stage 1 and Stage 2 heat when Stage 2 heating is required.

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### **WARNING:**

**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.**

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**NOTE:** This unit is equipped with a manual-reset flame roll-out limit switch. This switch acts to verify that the burner flame is being drawn into the heat exchanger tubes. If the flame is not being drawn into the tubes, the flame roll-out switch will open within several seconds. When this switch opens, the gas valve will de-energize to stop the flow of gas. The combustion inducer will stay energized and continue to operate until the thermostat is

satisfied or the switch is closed. **Do not reset** the flame roll-out switch before identifying and correcting the fault condition that caused the switch to open. If the switch will not reset or continues to open, immediately contact a qualified serviceman to identify and repair the problem.

**System Shutdown**—Set the thermostat system switch to OFF and the thermostat fan switch to AUTO. (See Figure 1)

The system will not operate, regardless of the thermostat temperature selector(s) setting.

**To Operate the Indoor Blower Continuously**—Set the thermostat fan switch to ON (may be called CONT on some thermostat models). (See Figure 1)

The indoor blower will start immediately, and will run continually until the fan switch is reset to AUTO.

The continuous indoor blower operation can be obtained with the thermostat system switch set in any position, including OFF.

The continuous indoor blower operation is typically used to circulate the indoor air to equalize a temperature unbalance due to a solar load, cooking, or fireplace operation.

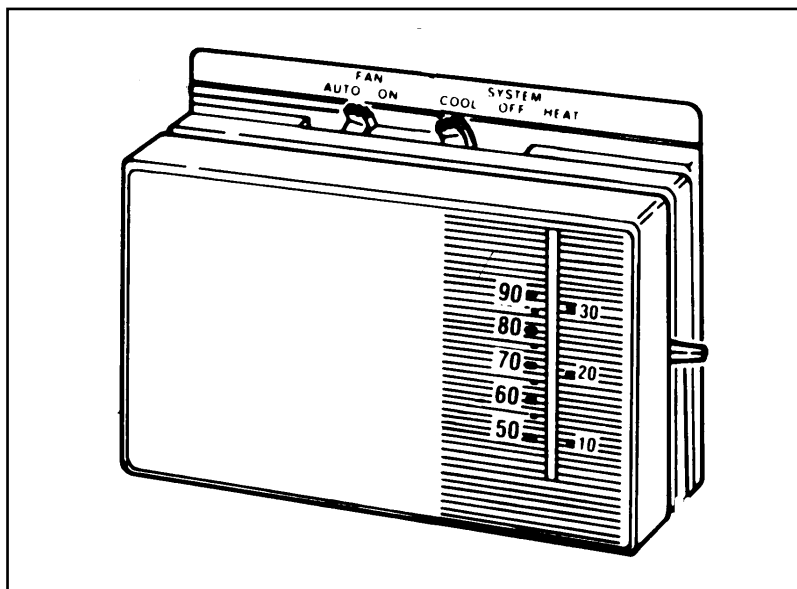


Figure 1. Typical Thermostat

## FOR YOUR SAFETY READ BEFORE OPERATING

**WARNING:** If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury, or loss of life.

- A. This appliance does not have a pilot. It is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
- B. BEFORE OPERATING 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.
- 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.
- C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or move by hand, do not try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

## POUR VOTRE SÉCURITÉ. À LIRE AVANT L'EMPLOI

**ATTENTION!** L'inobservation de ces instructions peut entraîner un incendie ou une explosion pouvant causer des dommages à votre propriété à votre personne, ou la mort.

- A. Cet appareil ménager n'a pas de veilleuse. Il est doté d'un système d'allumage automatique. Ne pas essayer d'allumer le brûleur manuellement.
- B. AVANT L'USAGE. Attention à une possible odeur de gaz surtout au niveau du plancher où les gaz les plus lourds ont la tendance de se concentrer.
- EN CAS D'ODEUR DE GAZ.**
- Ne mettre en marche aucun appareil électrique.
  - Ne toucher à aucun commutateur électrique, ne pas employer le téléphone.
  - Quitter le bâtiment immédiatement et avertir la compagnie du gaz en utilisant le téléphone d'un voisin.
  - A défaut de la compagnie du gaz, avertir le service des pompiers.
- C. Enfoncer ou faire tourner le robinet à gaz à la main seulement. Ne jamais utiliser d'outils. S'il n'est pas possible de faire tourner ou d'enfoncer le robinet à la main, ne pas essayer de le réparer. Faire appel à un spécialiste. Forcer ou tenter de réparer le robinet pourrait être à l'origine d'une explosion ou d'un incendie.
- D. Il est déconseillé d'utiliser cet appareil en contact prolongé avec l'eau. Faire inspecter ou remplacer toute commande par un technicien qualifié si un des systèmes de contrôle du gaz s'est trouvé sous l'eau.

## OPERATING INSTRUCTIONS

1. **STOP!** Read the safety information above on this label.
2. Set the thermostat to the lowest setting.
3. Turn off all electrical power to the appliance.
4. The appliance's ignition device automatically lights the burner. Do not try to light burner by hand.
5. Remove the control access door/panel (upper door if two-door model).
6. Move the gas control switch to the "OFF" position. (See Figure 1)
7. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in above information. If you don't smell gas, go to the next step.
8. Move the gas control switch to the "ON" position. (See Figure 1)
9. Replace the control access door/panel (upper door if two-door model).
10. Turn on all electrical power to the appliance.
11. Turn the thermostat to a desired setting.
12. If the appliance will not operate, follow the instructions "To Turn Off Gas To Appliance" and call your service technician or gas supplier.

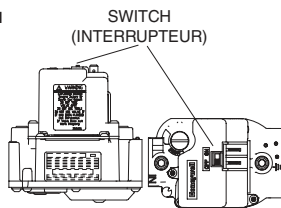


Figure 1

## MODE D'EMPLOI

1. **ATTENTION!** Lire d'abord la liste des mesures de sécurité ci-dessus.
2. Mettre le thermostat à la position minimale.
3. Couper le courant électrique qui mène à l'appareil.
4. Cet appareil ménager étant doté d'un système d'allumage automatique, ne pas essayer d'allumer le brûleur manuellement.
5. Retirer le panneau/volet d'accès de commande (panneau supérieur s'il s'agit d'un modèle à deux panneaux).
6. Réglez l'interrupteur de commande du gaz à la position "OFF". (voir Figure 1).
7. Attendre cinq (5) minutes pour s'assurer de la dissipation du gaz.  
En cas d'odeur, ARRÊTER LE PROCÉDÉ. Suivre les instructions ci-dessus (Section B). En l'absence de toute odeur de gaz, avancer à l'étape suivante.
8. Réglez l'interrupteur de commande du gaz à la position "ON". (voir Figure 1).
9. Remettre le panneau/volet d'accès de commande en place (panneau supérieur s'il s'agit d'un modèle à deux panneaux).
10. Rebrancher l'appareil sur le réseau électrique.
11. Ajuster le thermostat à la position désirée.
12. Si l'appareil ne fonctionne pas, suivre les "Directives d'arrêt" ci-dessous et appeler le technicien de service.

## TO TURN OFF GAS TO APPLIANCE

1. Set the thermostat to the lowest setting.
2. Turn off all electrical power to the appliance if service is to be performed.
3. Remove the control access door/panel (upper door if two-door model).
4. Move the gas control switch to the "OFF" position. Do not use force. (See Figure 1)
5. Replace the control access door/panel (upper door if two-door model).

## DIRECTIVES D'ARRÊT

1. Mettre le thermostat à la position minimale.
2. Débrancher l'appareil en prévision de la réparation.
3. Retirer le panneau/volet d'accès de commande (panneau supérieur s'il s'agit d'un modèle à deux panneaux).
4. Réglez l'interrupteur de commande du gaz à la position "OFF". Ne forcez pas. (voir Figure 1).
5. Remettre le panneau/volet d'accès de commande en place (panneau supérieur s'il s'agit d'un modèle à deux panneaux).

710674-0 (Replaces 7104030) (03/07)

## SYSTEM MAINTENANCE

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### CAUTION:

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**Be certain the electrical power to the unit is disconnected and the gas is shut off before doing the following recommended maintenance.**

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Proper maintenance is most important to achieve the best performance from the appliance and should be performed by a qualified service technician at least once a year. Follow the maintenance schedule and the instructions below for years of safe, trouble free operation.

- **Do not place combustible materials on or against the cabinet.**
- **Do not store gasoline or any other flammable vapors and liquids in the vicinity of the unit.**
- **Annually inspect the physical support of the unit to ensure that it is physically sound without sagging, cracks, gaps, etc., around the base so as to provide a seal between the support and the base.**
- **Annually inspect the return-air connection to ensure that it is physically sound and is still sealed to the casing of the unit.**
- **Annually inspect the unit, ductwork, and vent system for signs of physical deterioration.**
- **Always replace the doors on the unit after servicing. Do not operate the unit without all doors and covers in place.**

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### CAUTION:

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**Do not strike any of the internal electrical components while cleaning.**

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#### 1. Regular Cleaning:

- Remove any debris from the outdoor coil, being careful not to damage the aluminum fins.
- Check for and remove any obstructions to condenser airflow.
- Clean the blower compartment regularly during the heating and cooling seasons to remove any dust that may have accumulated in the compartment or on the blower and motor. Buildup of dust on the blower and motor can create excessive loads on the motor resulting in higher than normal operating temperatures and possible shortened service life.

#### 2. Air Filters:

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### WARNING:

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**Never operate the unit without a filter in the return air system. Dust and lint in the return air can build up on the internal components, resulting in a loss of efficiency, equipment damage, and possible fire risk.**

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GR4G(M,N) units are factory equipped with pleated 2" disposable filters. The filters should be checked periodically and replaced (or cleaned) when necessary with filters of the same dimensional size. Replace using disposable filters with a minimum airflow rating of 500 FPM or permanent filters only. For 7.5 and 10 ton models only: the filter rack is field adjustable to accommodate 1" permanent filters. **DO NOT** use 1" disposable filters in GR4G(M,N)-090/120 units.

**NOTE:** Filters must be ULC approved or equivalent for use in Canada.

**Always replace the filter access panels after changing or cleaning the filters. Do not operate unit without the filter access panels in place.**

#### 3. Motor Lubrication:

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### WARNING:

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**Lubrication of the motors in this unit is not required. Do not lubricate any motor in this product.**

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The motors for the circulating air blower, outdoor fan, and combustion blower are pre-lubricated at the factory. No further oiling is required for the life of this product.

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### CAUTION:

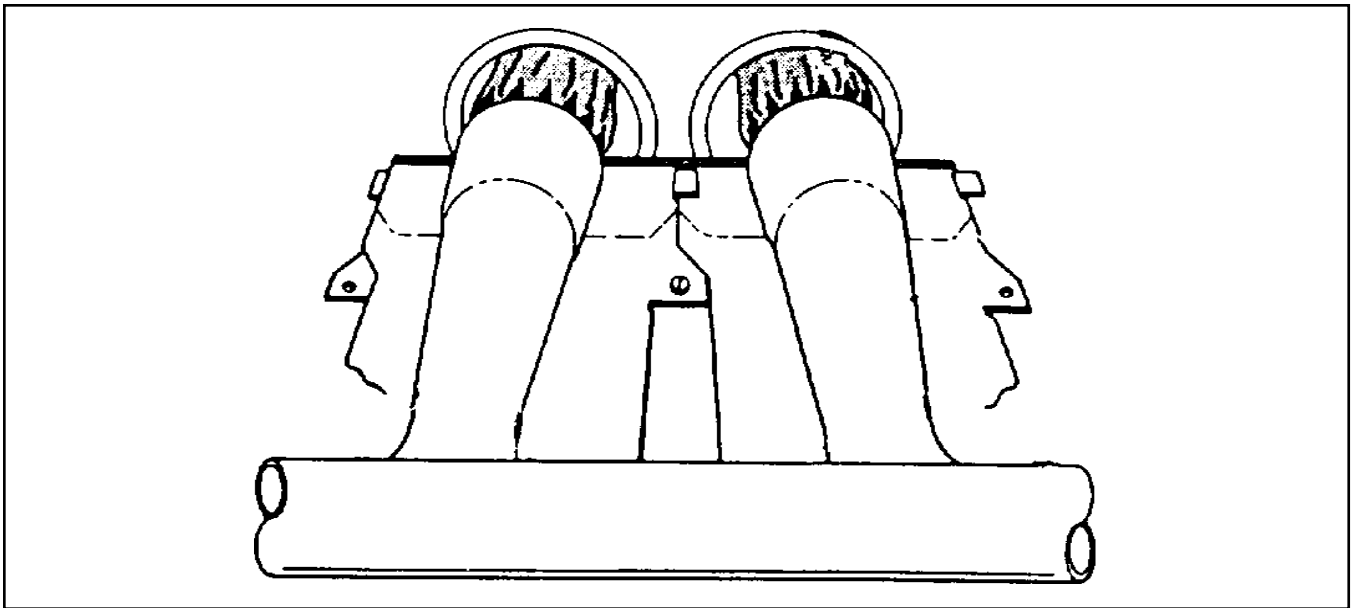
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**Some components in the burner vestibule are at high temperatures while the burners are operating. Use caution to avoid personal injury.**

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#### 4. Burner Maintenance:

Check the burner flames at the start of every heating season. Set the thermostat to a temperature setting above the room temperature. With the louvered service panel in place, rotate the burner observation port to the open position and visually inspect the burner assembly to make sure that the flame is drawn directly into the center of the heat exchanger tube (See Figure 3). In a properly adjusted burner assembly the flame color should be blue, however, some light yellow streaks may occur on the outer portions of the flame.



**Figure 3. Burner Inspection**

**Before Calling A Technician:**

If the unit fails to operate in cooling, be certain of the following:

1. The thermostat is operating properly. Refer to "Cooling Operation."
2. The electrical power to the unit is turned on.
3. The filters are not dirty.

If the unit fails to operate in heating, be certain of the following:

1. The thermostat is operating properly. Refer to "Heating Operation."
2. The electrical power to the unit is turned on.
3. The gas is turned on.
4. The filters are not dirty.

