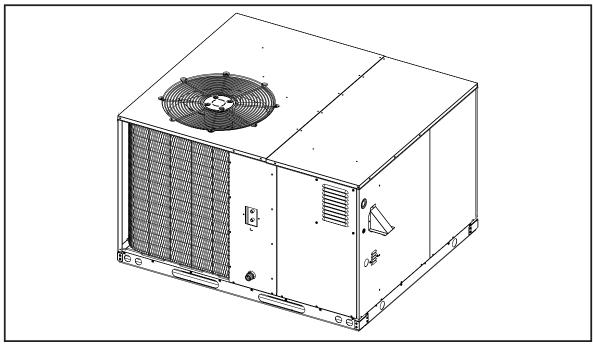
# **User's Information Manual**

Single Package Gas Heating/Electric Cooling Unit



Single Package Gas Heating/Electric Cooling 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.

## FOR YOUR SAFETY:

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.

#### GENERAL INFORMATION

This gas heating/electric cooling unit has been designed and built to provide many years of safe and dependable home 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. See the "system maintenance" section at the end of this manual for proper procedures and schedules.

Be sure that the thermostat is properly installed and is not being affected by drafts or heat from lamps or other appliances.



# ⚠ WARNING:

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

### 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 replacement part specified in the accompanying Replacement Parts List.

All air openings in the door of the unit, warm air registers, and return air grilles must not be restricted.



## **CAUTION:**

Combustion air must not be drawn from a corrosive atmosphere.

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.

#### **OPERATING INSTRUCTIONS**

# $\hat{oldsymbol{\perp}}$ WARNING:

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

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

#### **Cooling Operation**

- 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. Some thermostat models will have two temperature selectors, one marked "C" to set the desired cooling temperature, and a second marked "H" to set the desired heating temperature. The outdoor fan, compressor, and indoor blower will all cycle on and off to maintain the indoor temperature at the desired cooling level.

NOTE: If the thermostat temperature level is readjusted, or the thermostat system switch is repositioned, the outdoor fan and compressor may not start immediately. The unit contains a protective timer circuit which holds the unit off for approximately six minutes following a previous operation or the interruption of the main electrical power.

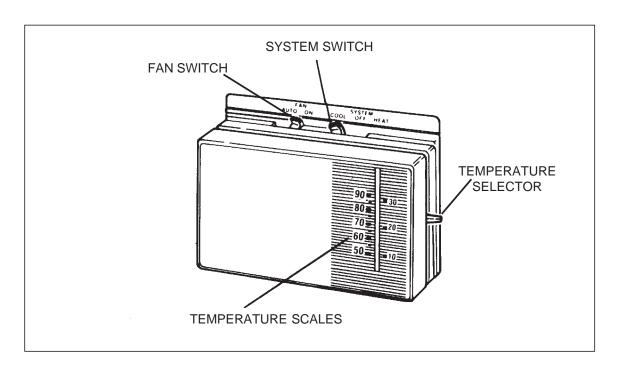


Figure 1. Typical Thermostat

# 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 <u>not</u> 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.
- $\bullet \quad \text{If you cannot reach your gas supplier, call the fire department.} \\$
- 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 dammages 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 brî·leur manuellement.
- B. AVANTL'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 utili sant 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.
- The appliance's ignition device automatically lights the burner. Do not try to light burner by hand.
- Remove the control access door/panel (upper door if two-door model)
- 6. Move the gas control knob clockwise to "OFF". (See Figure 2)
- 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.
- Move the gas control knob counterclockwise to "ON".(See Figure 2)

  Knob (Robinet)
- Replace the control access door/panel (upper door if two-door model).
- 10. Turn on all electrical power to the appliance.
- Turn the thermostat to 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 2

#### MODE D'EMPLOI

- 1. ATTENTION! Lire d'abord la liste des mesures de sécurité cidessus.
- 2. Mettre le thermostat à la position minimale.
- 3. Couper le courant électrique qui mène à l'appareil.
- Cet appareil ménager étant doté d'un système d'allumage automatique ne pas essayer d'allumer le brûleur manuellement.
- Retirer le panneau/volet d'accès de commande (panneau supérieur s'i s'agit d'un modèle à deux panneaux).
- 6. Faire tourner le robinet à gaz dans le sens des aiguilles d'une montre
- 7 pour l'amener sur la position OFF (Arrêt) (Voir Figure 2).
  7. Attendre cinq (5) minutes pour s'assurer de la dissipation du gaz. En cas d'odeur, ARRÊTER LE PROCÉDÉ. Suivre les instructions cidessus (Section B). En l'absence de toute odeur de gaz, avancer à l'étape suivante.
- Faire tourner le robinet à gaz dans le sens inverse des aiguilles d'une montre pour l'amener sur la position ON (Marche) (Voir Figure 2).
- 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.
- Si l'appareil ne fonctionne pas, suivre les "Directives d'arrêt" cidessous et appeler le technicien de service.

# TO TURN OFF GAS TO APPLIANCE

- 1. Set the thermostat to the lowest setting.
- Turn off all electrical power to the appliance if service is to be performed.
- Remove the control access door/panel (upper door if two-door model).
- Move the gas control knob clockwise to "OFF". Do not use force. (See Figure 2)
- 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).
- Faire tourner le robinet à gaz dans le sens des aiguilles d'une montre pour l'amener sur la position OFF (Arrêt) Ne pas forcer (Voir Figure 2).
- Remettre le panneau/volet d'accès de commande en place (panneau supérieur s'il s'agit d'un modèle à deux panneaux).

#### **Heating Operation**

- 1. Set the thermostat system switch to Heat and the thermostat fan switch to AUTO. (See Figure 1)
- Set the thermostat temperature selector to the desired temperature level. Some thermostat models will have two temperature selectors, one marked "C" to set the desired cooling temperature, and a second marked "H" to set the desired heating temperature. The indoor blower and heating module blower will cycle on and off to maintain the indoor temperature at the desired heating level.



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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.

NOTE: This unit is equipped with a manualreset 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, which will stop the flow of gas. Furthermore, both the combustion inducer and the circulating air blower will energize and continue to operate until 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.

#### **System Maintenance**



# **CAUTION:**

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

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 furnace 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 deteriora-

Always replace the doors on the unit after servicing or cleaning/changing the filters. Do not operate the unit without all doors and covers in place.

Avoid operating the unit when windows and doors are open.

Be sure that the thermostat is properly installed and is not being affected by drafts or heat from lamps or other appliances.

Regular Cleaning:

Remove any leaves and grass clippings from the outdoor coil, being careful not to damage the aluminum fins.

Check for any obstructions, such as twigs, sticks, etc.



Do not strike any of the internal electrical components while vacuuming.

Clean the blower compartment monthly during the heating and cooling seasons to remove any dirt and lint that may have accumulated in the compartment or on the blower and motor. Buildup of dirt and lint on the blower and motor can create excessive loads on the motor resulting in higher than normal operating temperatures and possible shortened service life.

Air Filters:



## !\ WARNING:

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.

This unit is not supplied with air filter(s) and has no means for accommodating internal air filter(s). The installer is responsible for installing a filtration system into the return air duct of this system. The filter(s) of this system should be checked at least monthly.

It is very important to replace or clean the filter(s) installed in the return air duct of this system. A clogged filter could cause airflow related problems and reduce the overall efficiency of your unit. Depending upon which type of filter was installed with your unit, clean (permanent) or replace (disposable) filter(s) of your system at the beginning of every heating season, the beginning of every cooling season, and when an accumulation of dust and dirt are visible on the filter. IMPORTANT: Replace disposable filter(s) installed in your system only with the same size dimensional filters that are being replaced. Clean permanent filter(s) as described by the manufacturer of your particular permanent filter.

Motor Lubrication:



# **WARNING:**

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

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.

Burner Maintenance:



# **!** CAUTION:

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

Check the burner flames at the start of every heating season. Set the thermostat to a temperature setting above the room temperature. Remove the control access panel to the unit 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 bends up and to the left at the end of the heat exchanger tube, and the end of the flame will be out of sight around the bend. The flame color should be blue, however some light yellow streaks may occur on the outer portions of the flame.

Refer to Table 1 for complete maintenance schedule.

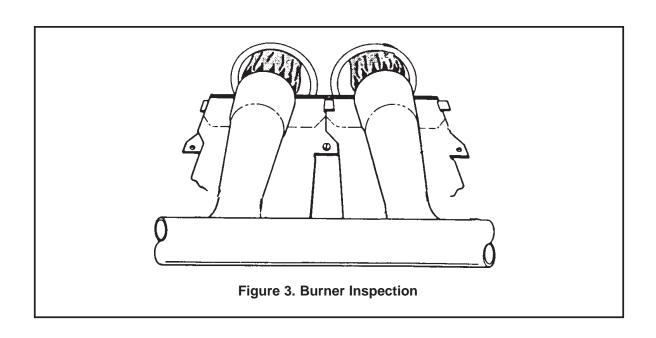
### **Before Calling A Technician:**

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.



MAINTENANCE ITEM	FREQUENCY OF MAINTENANCE		
	BEGINNING OF EACH HEATING SEASON	BEGINNING OF EACH COOLING SEASON	MONTHLY
VERIFY AREA AROUND UNIT IS FREE OF COMBUSTIBLE MATERIALS	x		х
VERIFY COMBUSTION AND VENTILATION AIR ARE NOT RESTRICTED	x	x	х
VERIFY THERE ARE NO SIGNS OF PHYSICAL DETERIORIZATION OF THE UNIT	x	x	x
VERIFY BURNER FLAME	x		
INSPECT UNIT SUPPORT	х	х	
INSPECT RETURN-AIR CONNECTIONS	x	х	
CLEAN OR REPLACE FILTER(S)			х
CLEAN BLOWER COMPARTMENT			х
CLEAN BURNER VESTIBULE	x		_

**Table 1. Maintenance Schedule** 









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