# **USER'S INFORMATION MANUAL**

### 7<sup>1</sup>/<sub>2</sub> and 10 Ton Series

Single Package Heat Pump 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.

### 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.
- Installation and service must be performed by a qualified installer or service agency.

### **GENERAL INFORMATION**

This single package electric heat pump 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.

# 🕂 WARNING!

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

### **Unit Location**

The area around this single package heat pump unit and the vicinity of any other 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 electrical control system which has been under water.

### **Ductwork**

The duct connections must be physically sound and sealed to the unit's casing.

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

Heat Pump Cooling Operation— 2 Stage 2 individual refrigeration systems

- 1. Set the thermostat system switch to COOL and the thermostat fan switch to AUTO. (See Figure 1)
- 2. Slowly lower the temperature selector to the desired temperature level. The outdoor

fans, compressor(s), and indoor blower will all cycle on and off to maintain the indoor temperature at the desired cooling level.

**NOTE:** Some thermostats may have anti-short cycle protection built in causing a delay in one or both stages. **This unit is equipped with an antishort cycle timer built in to the defrost control board for Stage 1 Heat or Cool.** If the thermostat temperature level is re-adjusted, or if the system switch is repositioned, the compressor(s) may not start immediately. A protective timer circuit could hold the compressor(s) off for up to five minutes following a previous operation or an interruption of the main power.

# Heat Pump Heating Operation — 2 or 3 Stage

- 2 individual refrigerant systems + Electric Heat (Optional)
- 1. Set the thermostat system switch to HEAT and the thermostat fan switch to AUTO. (See Figure 1)
- 2. Slowly raise the temperature selector to the desired temperature level. The outdoor fans, compressor(s), and indoor blower will all cycle on and off to maintain the indoor temperature at the desired heating level.

**NOTE:** If electric heat has been added, Stage 2 compressor will cycle off



Figure 1. Typical Thermostat

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while Stage 3 heater elements are energized.

**NOTE:** Some thermostats may have anti-short cycle protection built in causing a delay in one or both stages. **This unit is equipped with an antishort cycle timer built in to the defrost control board for Stage1 Heat or Cool.** If the thermostat temperature level is re-adjusted, or if the system switch is re-positioned, the compressor(s) may not start immediately. A protective timer circuit could hold the compressor(s) off for up to five minutes following a previous operation or an interruption of the main power.

**Emergency Heat** – Most Heat Pump thermostats will include a system switch position termed EM.HT. or AUX. HT, etc. This is a back-up heating mode to be used only if there is a suspected problem. With the system switch set to EM.HT., etc., the compressor(s) and outdoor fans will be locked off and supplemental heat (electric resistance heating) will be used as a source of heat. Sustained use of electric resistance heat in place of the heat pump will result in an increase in electric utility costs.

**Defrost Mode** – During cold weather heating operation, the outdoor unit will develop a coating of frost and ice on the outdoor heat transfer coil. This is normal and the unit will periodically defrost itself automatically. During the defrost cycle, the outdoor fans will stop while the compressor(s) continue to operate and heat the outdoor coil, causing the frost and ice to melt. During defrost, there may be some steam rise from the outdoor unit as the warm coil causes some melted frost to evaporate.

#### 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)

Theindoorblowerwillstartimmediately, 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.

Thecontinuousindoorbloweroperation is typically used to circulate the indoor air to equalize a temperature unbalance due to a solar load or building equipment.

### **System Maintenance**

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Be certain all electrical power to the unit is disconnected before performing 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 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 returnair connection to ensure that it is physically sound and is still sealed to the casing of the unit.
- Annually inspect the unit and ductwork 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.

### 1. Regular Cleaning:

# A CAUTION:

# Do not strike any of the internal electrical components while 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:

# NARNING!

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.

7½ and 10 ton rooftop package 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. The filter rack is field adjustable to accommodate 1" permanent filters. **DO NOT** use 1" disposable filters in these 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:

# 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 and outdoor fan are pre-lubricated at the factory. No further oiling is required for the life of this product.

### Before Calling A Service Technician:

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

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



