USER'S INFORMATION MANUAL

OPERATION — **OIL-FIRED WARM AIR FURNACES** — **MAINTENANCE**

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

ISSUE 9335

FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WARNING

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

FOR PROPER AND SAFE OPERATION OF YOUR FURNACE:

DO NOT

PLACE COMBUSTIBLE MATERIALS, GASOLINE AND/OR OTHER FLAMMABLE VAPORS AND LIQUIDS ON, AGAINST OR NEAR THE FURNACE OR FLUE PIPE.

DO NOT

BLOCK OR OBSTRUCT AIR OPENINGS ON THE FURNACE, AIR OPENINGS COMMUNICATING WITH THE AREA IN WHICH THE FURNACE IS INSTALLED AND THE SPACING AROUND THE FURNACE. THESE PROVIDE AIR FOR COMBUSTION AND VENTILATION.

DO NOT

STORE ANYTHING NEAR OR IN CONTACT WITH THE FURNACE SUCH AS: SPRAY OR AEROSOL CANS, RAGS, BROOMS, DUST MOPS, VACUUM CLEANERS OR OTHER CLEANING TOOLS, SOAP POWDERS, BLEACHES, WAXES OR OTHER CLEANING COMPOUNDS, PLASTIC OR PLASTIC CONTAINERS, GASOLINE, KEROSENE, CIGARETTE LIGHTER FLUID, DRY CLEANING FLUIDS OR PAINTING COMPOUNDS.

WARNING

Turn off all the oil supply and electrical power to furnace before performing any maintenance or service on unit. Failure to take this precaution may result in personal injury due to electrical shock or uncontrolled oil leakage.

CAUTION

The ability to properly perform maintenance on this equipment requires certain mechanical skills and tools. If you are at all uncertain, contact your dealer for qualified maintenance and service.

The operation and care of your unit is simple and easy. By following these operating and maintenance procedures, you can expect to receive better, longer and more reliable service from your new appliance.

HERE ARE A FEW "DO'S AND DON'TS"

* **DO** become familiar with the instructions.

* **DO** use filters. Check them periodically and make sure that they are clean.

* **DO** check to see that your home has adequate insulation, weatherstripping, caulking and storm windows. Elimination of infiltration outside air and drafts can save up to 40% of your fuel bill.

* **DO** consider adding a humidifier to your heating system. Higher indoor humidity slows evaporation of perspiration, making the home seem warmer.

* **DON'T** waste fuel by setting your thermostat too high. Energy conservation experts recommend daytime thermostat setting of 68° F, with a lower setting at night.

* **DON'T** turn off the furnace when you expect to be away for more than a day. Instead, lower the thermostat setting by a few degrees. You can then restore normal comfort level quickly and save fuel too.

* **DON'T** block registers with furniture.

* **DON'T** put a lamp, TV or radio too near your thermostat. This will cause it to give a false reading.

Here's How Your Heating System Works

The furnace operates automatically. It is controlled by a thermostat which you set at the temperature most comfortable to you. When the inside temperature drops below this setting, your thermostat will turn on the heating system.

When the thermostat calls for heat, power from the transformer energizes the fan control board. The fan control energizes the ignition control. The ignition control will light the burner automatically.

The electronic fan control will automatically turn on the blower after 30 seconds. Fan On control is not adjustable. The air moved over the heat exchanger by the blower is warmed and passes through the ducts to the room registers.

When the thermostat is satisfied, the circuit is de-energized and the primary control shuts off the burner. The blower continues to run until the selectable fan off time period has expired.

The heat sensing switch performs as the furnace high temperature limit switch. If the furnace overheats for any reason, the limit switch opens, breaking the circuit to the burner. The blower motor will be energized and as the unit cools the limit switch will close. This will relight the burner and unless the overheating condition is corrected, the furnace will cycle on limit.

This unit is equipped with an interrupted ignition electronic control. If the main burner does not ignite within 15 seconds from the call for heat, the control will go into lockout. The red button on top of the control must be depressed for 3 seconds in order to reset the control. The control cannot be reset from the room thermostat.

HEATING

Preparing Furnace For Operation

Before attempting to put your furnace into operation for the heating season you should perform the following procedures.

⚠ WARNING

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

1. Open all warm air registers and make sure that all return air grills are unobstructed.

2. If a humidifier is installed with your system, open the water supply valve.

3. Set the thermostat to its lowest setting.

4. Turn on electric power to the furnace.

5. Open the oil supply valve.

6. Check all connections to insure there are no leaks.

7. Bleed the air from the oil pump (see installation instructions).

Lighting Your Furnace

CAUTION

This furnace is equipped with an interrupted type electronic ignition system. DO NOT ATTEMPT TO LIGHT WITH A MATCH. DANGER! HIGH VOLTAGE AT IGNITOR.

1. This appliance is equipped with an ignition device which automatically lights the burner. Do **"NOT"** try to light the burner by hand.

2. After preparing the furnace for heating operation (See previous section) and checking for oil, proceed as follows.

3. For a heating/cooling system, set the thermostat system switch to "HEAT" and the fan switch to "AUTO". Set the thermostat to the desired room temperature and **"TURN ON"** the electrical power to the furnace.

4. The burner should light and the system should be controlled by the thermostat.

Turn Off Furnace

Follow these simple procedures to put your furnace into "retirement" for the summer.

1. Set the thermostat to the lowest setting.

2. **"TURN OFF"** all electric power to the appliance.

3. Turn the oil supply **"OFF"**.

4. If applicable, **"TURN OFF"** water supply to humidifier.

5. If furnace blower will be necessary for cooling system, remember to turn electric power back **"ON"** when needed for air conditioning.

MAINTAINING YOUR UNIT

The life of your system depends on the care you give it. Proper care assures good performance; lack of it can damage the unit.

Here are the things you should do, or have your dealer service technician do for you.

NOTE: Before you start, **"TURN OFF"** all electrical power to unit and turn thermostat to **"OFF"**.

Filters

A filter is supplied with the furnace. It is **NECESSARY THAT ALL FURNACES BE EQUIPPED WITH A FILTER.**

If different type filter is used, it must be an equivalent high airflow capacity.

WARNING

Never operate unit without a filter or with filter access door removed. Failure to adhere to this warning could lead to a hazardous condition which could lead to equipment damage and bodily harm.

Keeping Filters Clean

As a homeowner, this is your most important responsibility. A dirty filter reduces the efficiency of your system, causes erratic performance of controls and could result in damage to the motor or heat exchanger.

1. Inspect filters at regular intervals depending upon dirt conditions. For new homes, check filters every week for 4 consecutive weeks. In all cases, inspect your filters at least every 3 to 4 weeks when the system is in constant operation. Replace or clean filter at least at the beginning of each season (heating & cooling) and thereafter as needed.

2. If the permanent filter supplied with the unit becomes dirty, it can be cleaned with cold water and soap.

Be sure that the filter is thoroughly dry before installing back into the furnace.

Lubricating Motors

Direct drive motor and blower assemblies are factory lubricated and normally do not require oiling. If oiling is required lubrication of the blower motor is to be performed only by a qualified service agency.

CAUTION

A furnace that is installed in an insulated space must be kept free and clear of insulating materials. After the furnace is installed, or whenever additional insulation is added, check that all combustion air intakes are free and clear and that all clearance dimensions are maintained. INSULATING MATERIALS MAY BE COMBUSTIBLE.

WARNING

The unit cabinet must have an uninterrupted or unbroken electrical ground to minimize personal injury if an electrical fault should occur. This may consist of electrical wire or approved conduit when installed in accordance with existing electrical codes. Do not use oil piping as an electrical ground. Failure to follow this warning can result in an electrical shock, fire or bodily harm.

Here's A Handy Checklist

If your furnace fails to operate properly, first check the following. It may save you the cost of a service call:

1. Is your room thermostat set correctly? On heating/cooling systems, the thermostat system switch should be turned to "HEAT", the fan switch to "AUTO" or "CONT" (continuous fan operation).

2. Are the power and oil supply both "ON"?

3. Are the filters clean?

If the answer to these questions is "YES" and the furnace still doesn't operate properly, call your authorized dealer for service.

WARNING

Return air must not be taken from the room in which the appliance is installed. All duct connections to the furnace must be airtight to avoid a "negative" pressure condition within the room. Incorrect ductwork termination and sealing will create a hazardous condition which could lead to bodily harm.

WARNING

Do not use this furnace if any part has been under water. Immediately call a qualified service technician to inspect the furnace and to replace any part of the control system and any oil control which has been under water. Failure to comply with this warning could lead to equipment failure, electrical shock and a hazardous condition which may lead to bodily harm.

USER'S INFORMATION

Here's How Your Heating System Works

The furnace operates automatically. It is controlled by a thermostat which you set at the temperature most comfortable to you. When the inside temperature drops below this setting, your thermostat will turn on the heating system.

When the thermostat calls for heat, power from the transformer energizes the fan control board. The fan control energizes the ignition control. The ignition control will light the burner automatically.

The electronic fan control will automatically turn on the blower after 30 seconds. Fan "ON" control is not adjustable. The air moved over the heat exchanger by the blower is warmed and passes through the ducts to the room registers.

When the thermostat is satisfied, the circuit is de-energized and the primary control shuts off the burner. The blower continues to run until the selectable fan off time period has expired.

The heat sensing switch performs as the furnace high temperature limit switch. If the furnace overheats for any reason, the limit switch opens, breaking the circuit to the burner. The blower motor will be energized and as the unit cools the limit switch will close. This will relight the burner and unless the overheating condition is corrected, the furnace will cycle on limit.

This unit is equipped with an interrupted ignition electronic control. If the main burner does not ignite within 15 seconds from the call for heat, the control will go into lockout. The red button on top of the control must be depressed for 3 seconds in order to reset the control. The control can not be reset from the room thermostat.

HEATING

Preparing Furnace For Operation

Before attempting to put your furnace into operation for the heating season you should perform the following procedures.

WARNING

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

1. Open all warm air registers and make sure that all return air grills are unobstructed.
2. If a humidifier is installed with your system, open the water supply valve.
3. Set the thermostat to its lowest setting.
4. Turn "ON" the electric power to the furnace.
5. Open the oil supply valve.
6. Check all connections to insure there are no leaks.

Lighting Your Furnace

CAUTION

This furnace is equipped with an interrupted type electronic ignition system. DO NOT ATTEMPT TO LIGHT WITH A MATCH. **DANGER!** HIGH VOLTAGE AT IGNITOR.

1. This appliance is equipped with an ignition device which automatically lights the burner. Do **not** try to light the burner by hand.
2. After preparing the furnace for heating operation (See previous section) and checking for oil, proceed as follows.
3. For heating/cooling system, set the thermostat system switch to "HEAT" and the fan switch to "AUTO". Set the thermostat to the desired room temperature and turn on the electrical power to the furnace.
4. The burner should light and the system should be controlled by the thermostat.

Turn Off Furnace

Follow these simple procedures to put your furnace into "retirement" for the summer.

1. Set the thermostat to the lowest setting
2. Turn "OFF" all electric power to the appliance.
3. Turn the oil supply "OFF".
4. If applicable, turn "OFF" water supply to humidifier.
5. If furnace blower will be necessary for cooling system, remember to turn electric power back on when needed for air conditioning.

FOR SERVICE CALL

NAME:_____

ADDRESS:_____

TELEPHONE:_____

Issue 9413
20142901 1818