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## OIL FIRED WARM AIR FURNACE

### Homeowner Instructions

#### **WARNING**

Fire, explosion, asphyxiation and electrical shock hazard. Improper installation and operation could result in death or serious injury. Read this manual and understand all requirements before operating furnace.

#### **WARNING**

Keep area clear and free from combustible materials, gasoline and other flammable vapors and liquids.  
Do not stack, box-in, or store items within the required clearance to combustibles.  
DO NOT obstruct air openings to the furnace room.  
Modification, substitution or elimination of factory equipped, supplied or specified components may result in personal injury or loss of life.  
TO THE OWNER - Installation and service of this appliance must be performed by a qualified installer.  
TO THE INSTALLER - Leave all instructions with appliance for future reference.

**Save These Instructions For Reference**

# OIL FIRED WARM AIR FURNACE

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## 1 - Safety Symbols and Warnings

**IMPORTANT: Read the following instructions COMPLETELY before installing!!**

### Safety Symbols & Warnings

The following defined symbols are used throughout this manual to notify the reader of potential hazards of varying risk levels.

#### **DANGER**

Indicates a hazardous situation which, if not avoided, WILL result in death or serious injury

#### **WARNING**

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

#### **CAUTION**

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

#### **NOTICE**

Used to address practices not related to personal injury.

#### **WARNING**

Fire, explosion, asphyxiation and electrical shock hazard.

- Do not use gasoline, crank case oil, or any oil containing gasoline.
- Never burn garbage or paper in heating system, and or leave paper or rags around the appliance.
- Do not tamper with appliance or controls. Contact your service agent.

Failure to follow these instructions could result in death or serious injury.

#### **NOTICE**

Consult a qualified service technician before and after extended periods of appliance in-operation. remodelling, and annual service and maintenance (including air filter replacement).

## 2 - Introduction

All models are CSA listed, (NRTL/C) for use with No. 1 (Stove) and No. 2 (Furnace) oil.

## 3 - Safety Information

1. Do not store combustible materials against or around furnace. Keep furnace area clear and free from all combustible materials such as newspapers, rags, cardboard, clothing, etc. Applies especially to gasoline and other flammable vapors and liquids.
2. Furnace needs adequate amounts of combustion and ventilation air to operate properly. Do not block or obstruct air openings on the furnace, or air openings supplying combustion or ventilation air to area where furnace is installed.

There are many areas from which your furnace could be receiving combustion and ventilation air including from within heated area (inside air), from outdoors, from attic or crawl space.

If renovations are done, verify air supply openings are not inadvertently covered over with insulation, vapor barrier, or similar construction material.

3. All doors and panels must be in place during normal furnace operation. Attempting to operate furnace with missing doors or panels could lead to dangerous and improper operating conditions.
4. If furnace is installed in confined space or if you intend to build furnace room where insulation is present, be aware some insulating materials are combustible. Do not allow building insulating materials to come into contact with furnace.
5. Any additions, alterations or conversions required in order for furnace to properly match application requirements must be done by qualified installation contractor, service agency or oil supplier, using factory specified or approved parts.
6. Familiarize yourself with location of furnace oil supply manual shut-off valve and any electrical switches, fuse or circuit breaker associated with furnace.
7. Should over-heating occur, or if burner fails to shut off, shut off oil supply with furnace manual shut-off valve, then shut off electrical supply to furnace. Call a qualified installation contractor, service contractor, or oil supplier if this happens.
8. If furnace has been subjected to flood conditions, i.e., if any part of furnace has been under water, call qualified installer, service agency or oil supplier for complete inspection. Electronic controls and oil piping components may become unstable and unreliable. Furnace must not be used until furnace has been checked, and any affected parts have been replaced.

9. Familiarize yourself with location of your furnace filter or filters. Blocked air filter will reduce efficiency, increase fuel consumption, raise furnace operating temperature, and shorten life of furnace components.
10. Do not cover return air grills and supply air registers with drapes, curtains, throw rugs, etc.
11. Avoid shutting off supply air registers in interest of saving heat. Furnace requires quantity of air passing over heat exchanger to operate within design temperatures. Reducing number of supply air registers available for air delivery may have consequences of raising furnace operating temperature, reducing furnace efficiency, and shortening life of furnace components.
12. Maintain free air flow through return air registers.

## **WARNING**

Fire, explosion, asphyxiation hazard.  
Do not start burner unless blower access door is secured in place. Failure to follow these instructions could result in death or serious injury.

## **WARNING**

Fire, explosion, asphyxiation hazard.

- Do not attempt to start the burner when excess oil has accumulated, when furnace is full of vapor, or when combustion chamber is very hot.
- Keep oil supply valve shut off if burner is shut down for extended period of time.

Failure to follow these instructions could result in death or serious injury.

### **4 - To Start The Furnace:**

Have a qualified installer, service agency or oil supplier perform proper initial start up upon completion of installation.

1. Set thermostat to lowest setting.
2. Verify all supply air registers and return air grilles are open.
3. Turn off electric power to furnace at service switch, fuse or circuit breaker.
4. Remove burner access door.
5. Verify appliance oil shut-off valve is in "ON" or open position.
6. If you see oil, STOP. Turn appliance oil shut-off valve to "OFF" or closed position. Contact a qualified installer, service agency or oil supplier for oil leak repairs.
7. Replace burner access door, verify it is properly in place.
8. Restore electric power to furnace.
9. Adjust thermostat to desired setting. If thermostat also controls an air conditioning system, verify thermostat system switch is in "HEAT" or "AUTO" mode.

If this is first time furnace has undergone trial for ignition since installation, or if there has been work done on oil lines, furnace might not light because of air trapped in oil supply line or lock out situation.

## **NOTICE**

If lock out condition occurs, do not attempt to reset control. Contact qualified installer, service agency or oil supplier to bleed air from oil line or investigate cause of lock out condition.

### **5 - Furnace Shut-Down Procedure:**

1. Set thermostat to lowest setting.
2. Shut off electric power to furnace.
3. Turn appliance oil shut-off valve to "OFF" or closed position.

If you intend to be away from home for lengthy periods of time during non-heating season, follow furnace shut down procedure.

## **WARNING**

Electrical shock hazard. Disconnect electrical power to furnace before attempting any maintenance. Failure to follow these instructions could result in death or serious injury.

### **6 - Air Filter**

- Do not operate your furnace or air conditioner for extended periods of time without an air filter.
- Dust entrained in air may temporarily lodge in air duct runs and supply registers. Recirculated dust particles may be heated and charred by coming into contact with heat exchanger. Residue will soil ceilings, walls, drapes, carpets, furniture, and other household articles.
- Follow air filter manufacturer's instructions for removal, replacement and cleaning filter. If washable filter is used, allow filter to dry thoroughly before reinstallation and never operate blower fan with wet filter. Consult your installation contractor or service technician if you have any questions on filters.
- If cleaning rather than replacing filter, unless filter is thoroughly washed and dried, be sure filter is re-installed with airflow direction identical to its previous use. Reversing filter will cause dust trapped within filter to break free and recirculate within duct system.

### **7 - Lubrication**

Lubrication is not required for your furnace. Blower motors have sealed bearings. Bearings contain permanent special purpose lubricants. Attempting to force common oil into blower motor bearings will deteriorate original lubricant and shorten bearing life.

### **8 - Routine Examination**

We recommend that your furnace and vents be checked by a qualified service technician once a year.

It is good practice to give quick inspection of your furnace each time you inspect or clean air filter.

Things to check:

- Check furnace for obvious signs of deterioration.
- Check venting and combustion air piping to ensure it is fastened to furnace. It should not sag, and should have a ¼" to foot slope upwards to chimney or outlet terminal.
- All duct work should be secured to the furnace, and all duct work should be solidly supported throughout heating system.

## **WARNING**

Fire, explosion, asphyxiation and electrical shock hazard.  
Do not clean oil burner area while burners are operating.  
Disconnect electrical supply to furnace before removing burner compartment access door.  
Failure to follow these instructions could result in death or serious injury.

### **9 - Furnace Appearance**

Furnace exterior finish is durable automotive like coating. It may be washed with mild soap if necessary. Galvanized metal surfaces require no maintenance.

### **10 - Cleaning**

- It is advisable to keep dust build-up on warm surfaces to minimum, since dust, in some cases, can be combustible.
- Dust build-up in circulating fan can impair blower performance, reduce efficiency. We recommend major cleaning be left to your qualified service technician.
- Oil burner area should be inspected and cleaned periodically. Verify while cleaning area, burner air settings are not accidentally altered or wiring is not pulled on. If this occurs, contact qualified service technician.

Operate furnace with all panels in place. Be sure burner compartment access door is properly in place before attempting to restart furnace.

Your furnace should be cleaned and inspected annually by trained and qualified service technician. Your service technician has the knowledge and test equipment to determine the condition of your furnace.

### **11 - Air And Oil Pressure Adjustment**

Have trained, qualified service technician adjust oil burner air settings and oil pressure adjustments. Your service technician has the knowledge and test equipment to accurately perform these adjustments.

Consult your furnace Installation, Operation and Maintenance manual before any oil pressure adjustments or oil burner air settings are altered.

### 12 - Oil Filter Or Strainer Maintenance

Have a trained, qualified service technician service your oil filter or strainer. Your service technician has the knowledge and equipment to properly perform this maintenance.

To ensure proper operation of this appliance oil filter or oil strainer should be cleaned or replaced annually.

### 13 - Sequence Of Operation

1. Thermostat calls for heat in response to cool room.
2. Oil burner air blower begins.
3. 15 second pre-purge, with igniter energized.
4. Oil solenoid valve opens and burners ignite.
5. There is a fan on time delay before circulating fan is energized. Main blower starts on heating speed.
6. System remains in this state until room air temperature rises causing thermostat to terminate its call for heat.
7. Oil solenoid valve shuts off; burners extinguish.
8. Some oil burners may have post-purge period, after which oil burner stops. Main blower continues to run.
9. Approximately 2 minutes after burners extinguish, main blower stops. Elapse time varies.
10. Furnace remains idle until next call for heat.

### 14 - Variations

If your system includes air conditioning, your thermostat, installer supplied, has two switches.

- First switch is system switch. Switch settings usually include HEAT, COOL, and OFF.

Some thermostats have system switches which include HEAT, COOL, AUTO, and OFF. System switch must be in HEAT or AUTO position for furnace to run.

- Second switch is fan switch. It has settings of ON and AUTO. Fan switch may be in either position when using furnace. If fan switch is set to ON, main blower runs continuously, and blower delays mentioned in points 5 and 9 of Sequence of Operation are ignored.



HOMEOWNER'S REFERENCE TABLE
Model No.
Serial No.
Date Installed
Contractor
Contact
Address
Postal Code/Zip Code
Telephone No.
After Hours No.
<b>If different from Installation Contractor:</b>
Service Tech.
Telephone No.
After Hours No.
<b>Fuel Supplier:</b>
Gas Supplier
Contact
Telephone No.
After Hours No.



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