USER'S INFORMATION MANUAL

GAS HEAT SECTION
40,000-320,000 BTU/HR OUTPUT
50,000-400,000 BTU/HR INPUT

Supersedes: 530.18-O2V (1287) & (1289) ADV.INFO. | 530.18-O2V (290)

035-08741

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 gas supplier.

FOR YOUR SAFETY
WHAT TO DO IF YOU SMELL GAS:

- **Open windows.**
- **Extinguish any open flame.**
- **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.**

WARNING: Should overheating occur, or the gas supply fail to shut off, shut off the manual gas valve to the appliance BEFORE shutting off the electrical supply.

CAUTION: The furnace area must be kept clean and free of combustible materials, gasoline and other flammable vapors and liquids. The flow of combustion and ventilation air must not be obstructed from entering the furnace or outdoor coil. Do not permit overhanging structures or shrubs to obstruct outdoor fan discharge, combustion air inlet or vent outlet.

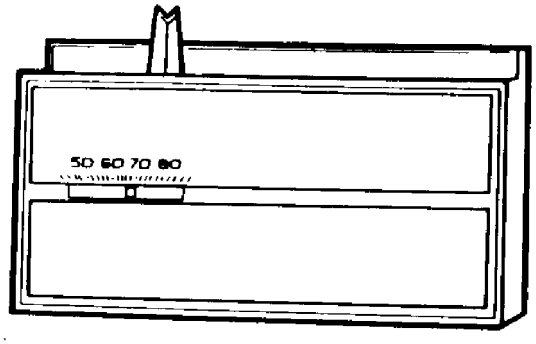
Do not use this furnace if any part has been under water. Immediately call a qualified service technician to inspect the furnace and to replace any part of the control system and any gas control which has been under water.

Your outdoor heating / cooling package unit is a valuable piece of equipment, designed and manufactured by the most modern method. Proper care of your unit should result in many years of service and comfort. Annual check-up of your unit by a qualified service person is recommended.

SYSTEM OPERATION

THERMOSTAT

Set your thermostat for either heating and cooling. Then set it for the desired temperature. DO NOT ADJUST THE THERMOSTAT RAPIDLY ON AND OFF, OR BACK AND FORTH FROM HEAT TO COOL. THIS COULD DAMAGE YOUR EQUIPMENT.



Always allow at least 5 minutes between changes. Find the temperature that is most comfortable to you, and then LEAVE YOUR THERMOSTAT ALONE. (Exception is for night or vacation "set back" to conserve energy.)

Manually moving the thermostat up or down will not speed up temperature changes in your rooms. This only causes the thermostat switch to function at your command rather than responding to room temperature.

Heat generated by devices other than the furnace may interfere with thermostat performance. Therefore, lamps, radios, television sets, etc. should not be place near the thermostat.

INTERMITTENT IGNITION DEVICE

Your unit is equipped with a cycling pilot burner. It has a Pilot Relight control designed to automatically light the pilot burner each time the thermostat "calls" for heat.

*CAUTION: This furnace is equipped with an intermittent pilot and automatic re-ignition system. **Do Not** attempt to manually relight the pilot. Personal injury could result.*

When the thermostat calls for heat, pilot gas is supplied and at the same time, sparking occurs to light the pilot gas. With the pilot lit, the flame sensor rod closes a circuit to the ignitor control which then opens the gas valve to admit main burner gas.

When the room thermostat is satisfied, the electrical circuit to the gas valve is opened, closing off both main burner and pilot gas simultaneously. If the pilot burner should fail to light, contact your heating contractor or gas utility for service to insure that proper operating conditions are rrestored.

INPUT

The correct heat capacity of the furnace is regulated by the burner orifices and the gas pressure. The proper orifices are furnished but the gas pressure regulator must be adjusted by the installer or gas utility service person.

OPERATING INSTRUCTIONS

TO SHUT DOWN THE FURNACE:

1. Close the main gas shutoff valve(s).
2. Turn off the electric power supply.

TO LIGHT THE FURNACE:

1. Do not attempt to light manually.
2. Open the main gas shutoff valve(s).
3. Adjust the set point of the room thermostat above the temperature in the space.
4. Turn on the electric power supply.
5. The draft fan will operate. After an adequate purge time, the electric spark igniter will light the burners.
6. The burners will extinguish and relight automatically upon the demand of the room thermostat.

VENT SAFETY SYSTEM

This gas furnace is equipped with an automatic reset high temperature sensor or rollout switch which in the unlikely event of a sustained main burner flame rollout will shut off the flow of gas by closing the main gas valve. The ignition modules will also be disabled, preventing the flow of gas to the valves. The switch is located inside the gas heat access panel above the burner inlet. Flame rollout can be caused by blockage of the power vent system, improper gas pressure or adjustment. If this event occurs the furnace will not operate properly, gas supply to the furnace should be shut off and no attempt should be made to place the furnace in operation. The system should be inspected by a qualified service person. Refer to Figure 1 for a typical installation.

100% SHUT OFF

The ignition modules are designed for 100% shut-off. If the furnace fails to ignite within 85 seconds after a call for heat, the flow of gas (including pilot) will be shut off and the ignition module will lock out. The module can be reset by:

A. Turning the system switch on the room thermostat to the "OFF" position and back to the "HEAT" position.

B. Increasing the set point of the room thermostat below the temperature in the conditioned space and returning it to its original setting.

C. Opening and closing the unit's main disconnect switch.

If the furnace continues to lock out, a qualified service man should be called to determine the cause of the problem.

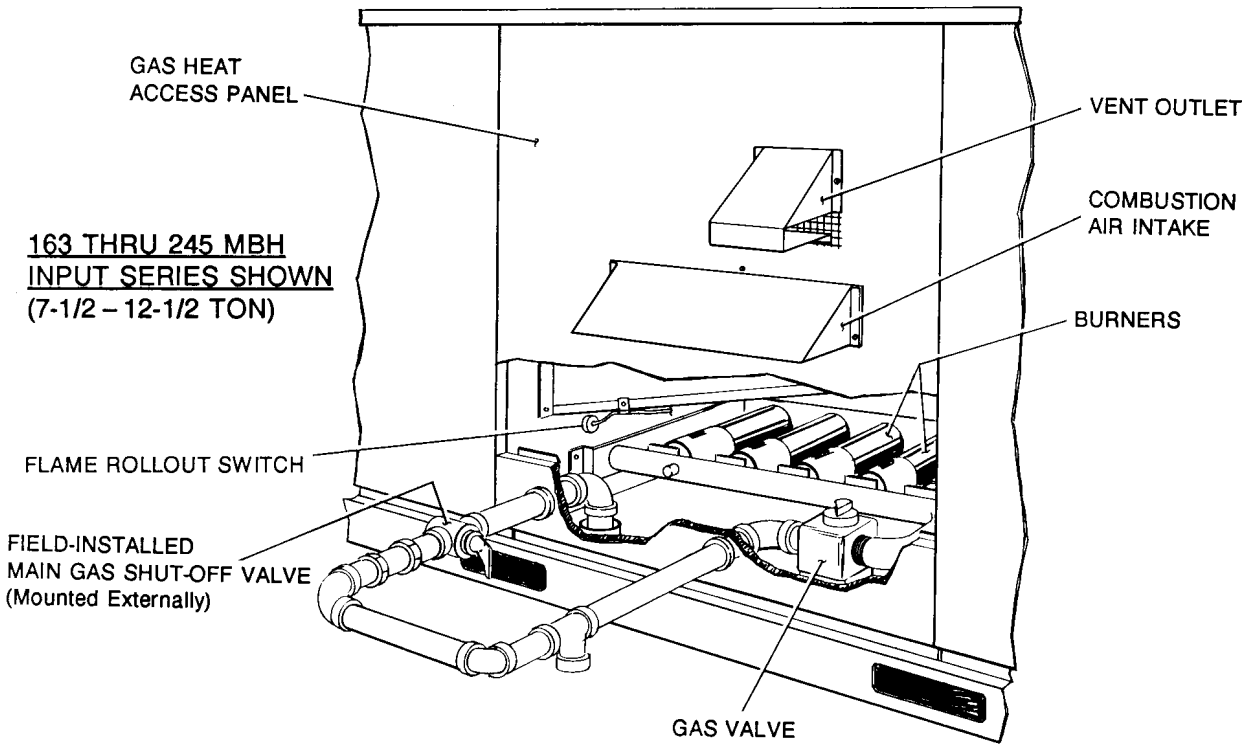


FIG. 1 - TYPICAL INSTALLATION

MAINTENANCE

GENERAL

In order to insure long and trouble free service from your system, we recommend periodic inspection, cleaning, lubrication and adjustment by your installing Dealer/Contractor. Be sure to ask about this service. For those who prefer to do-it-yourself, please follow the instructions listed below to care for your system.

Snow or debris should not be allowed to accumulate in or around the unit. Do not permit overhanging structures or shrubs to obstruct outdoor air discharge, combustion air inlets or vent air outlets on your unit. These provide air for combustion and ventilation. Adequate air is important to the safe and proper operation of the unit.

WARNING: Prior to any of the following maintenance procedures, shut off all power to the unit.

HEATING SYSTEM INSPECTION

It is the owner's responsibility to insure that an annual inspection of the entire heating portion of the unit is made by a qualified service agency. This should include inspection of the burner, heating element and flue for any corrosion or soot accumulation which may require cleaning and also checking of burner and controls for proper operation.

In addition, at least once during the heating season, the owner shall make a visual inspection of the flue outlet for evidence of black soot or blockage of flue outlet by leaves or other debris. If any soot is found, it is recommended a qualified service agency be called immediately, also clear any blockage found.

Check for obvious signs of deterioration of the unit. Check that the return and supply ducts attached to the unit are sound and air tight. Check that the unit's physical support, concrete slab or roof curb, is sound and not in need of repair. Make sure there are no gaps between the roof curb and the unit where rain could leak.

Start the furnace. The vent motor should start, the pilot spark and ignite the pilot flame. After a short delay the main burner should ignite. If it does not, contact a qualified service person for assistance. Check the appearance of the main burner flame. Adjust burner shutters so no yellow flame is observed in the heat exchanger tubes. (See Figure 2.) If flame adjustment cannot be made, obtain the assistance of a qualified service person and refer to the PILOT CHECKOUT and BURNER AIR SHUTTER ADJUSTMENT sections in the UNIT INSTALLATION INSTRUCTION.

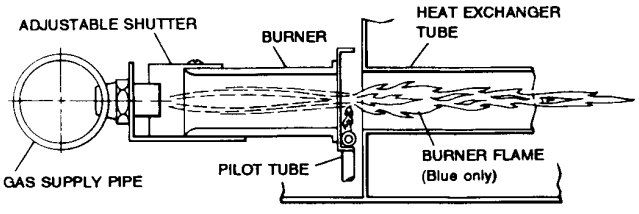


FIG. 2 - TYPICAL FLAME APPEARANCE

AIR FILTERS

Units up through 125 MBH input (3-6 Ton) are shipped with 1" throwaway type air filters. All other units contain 2" filters. The filter racks on 3 - 12-1/2 ton units will receive 1" or 2" filters. Filters can also be installed in the building at a suitable return air location if an economizer or outside air accessory is not used. Filters must always be used. They should be inspected once a month and thoroughly cleaned or replaced if it appears they are beginning to accumulate excessive dirt. Filter sizes and quantities are shown in the following table.

THROWAWAY FILTER SIZES (Inches)	QUANTITY PER UNIT (Nom. Tons)						
	3 - 6	7-1/2 & 8-1/2	10	12-1/2	15	20	25
14 x 20	2	-	-	-	-	-	3
14 x 25	1	-	-	-	-	-	-
12 x 24	-	2	-	-	-	-	-
16 x 20	-	-	-	-	-	4	2
16 x 24	-	2	2	3	-	-	-
16 x 25	-	-	-	-	-	4	4
18 x 24	-	-	2	2	5	-	-

To install the filters, remove the filter access panel located to the left of the condensate drain connection as shown in Figure 3.

NOTE: Filters must be installed with "Air Flow" arrows pointing inward - toward the indoor coil. In the event the spacers in the filter section are removed, they must be reinstalled in their original position.

Slide filters all the way into the filter racks provided. When more than one filter in a filter rack is required, they must butt each other when sliding into position. Replace the filter access panel.

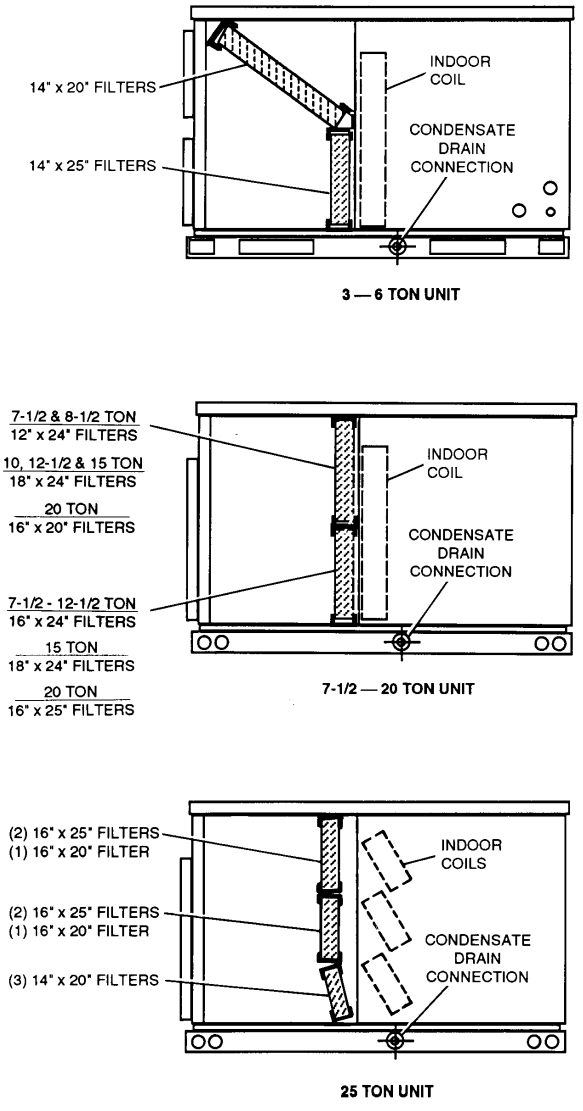


FIG. 3 - END VIEW LESS FILTER ACCESS PANEL

CONDENSER COIL

An annual check and cleaning, if necessary, of the outdoor coil should be done. Clean any debris and dirt from the outside coil face with a brush being careful not to damage the fins. If extremely dirty, a hose can be used to wash the coil from the inside out while brushing a soapy solution on the outside. On multi-row coils, separate the end sheets and clean coils individually.

BLOWER ASSEMBLY

Even with good filters properly in place, blower wheels and motors will become dust laden after long months of operation. The entire blower assembly should be inspected annually. If the motor and wheel are heavily coated with dust, they can be brushed and cleaned with a vacuum cleaner.

LUBRICATION

Indoor, outdoor fan and venter motors are permanently lubricated and require no maintenance.

REGISTERS

Supply and return air registers must be open when the unit is in operation. Obstructions must not be allowed to block airflow in or out of the registers.

BEFORE CALLING A SERVICE PERSON:

A. Check thermostat setting and insure thermostat is calling for heat or cooling.

B. Check thermostat for lint, etc.

C. Check fuses or circuit breakers.

D. Check filters for excessive dust accumulation.

OWNER please have your installer fill in the following information immediately after unit has been installed and properly operating.

Installed by_____

Installer's Address _____

Installation Date _____

Owner's Name _____

Owner's Address _____

Equipment installed at (address) _____

Model Number _____ Serial Number _____

Distributor from whom the equipment was purchased_____

The owner should keep this information in a place where it can be found if needed for warranty purposes.

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