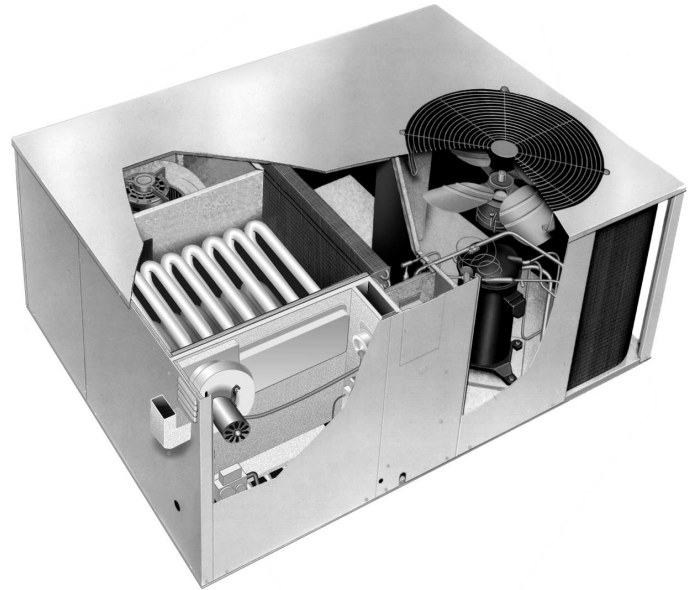


See unit nameplate for manufacturer and address.

504,558M
8/2002
Supersedes 2/2002

USER'S INFORMATION MANUAL

GCS16-024, 030, 036, 048, 060
GCS20-024, 030, 036, 048, 060
GCS20R-024, 030, 036, 042, 048, 060



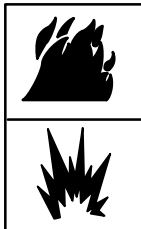
⚠ WARNING

Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life. Installation and service must be performed by a qualified installer, service agency or the gas supplier

**READ ALL INSTRUCTIONS IN THIS MANUAL
AND RETAIN FOR FUTURE REFERENCE**

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FBR113270



⚠ 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, service agency or the gas supplier.

WHAT TO DO IF YOU SMELL GAS:

- Do not try to light any appliance.
- Extinguish any open flames.
- Do not touch any electrical switch; do not use any phone in your building.
- Leave the building immediately.
- 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.

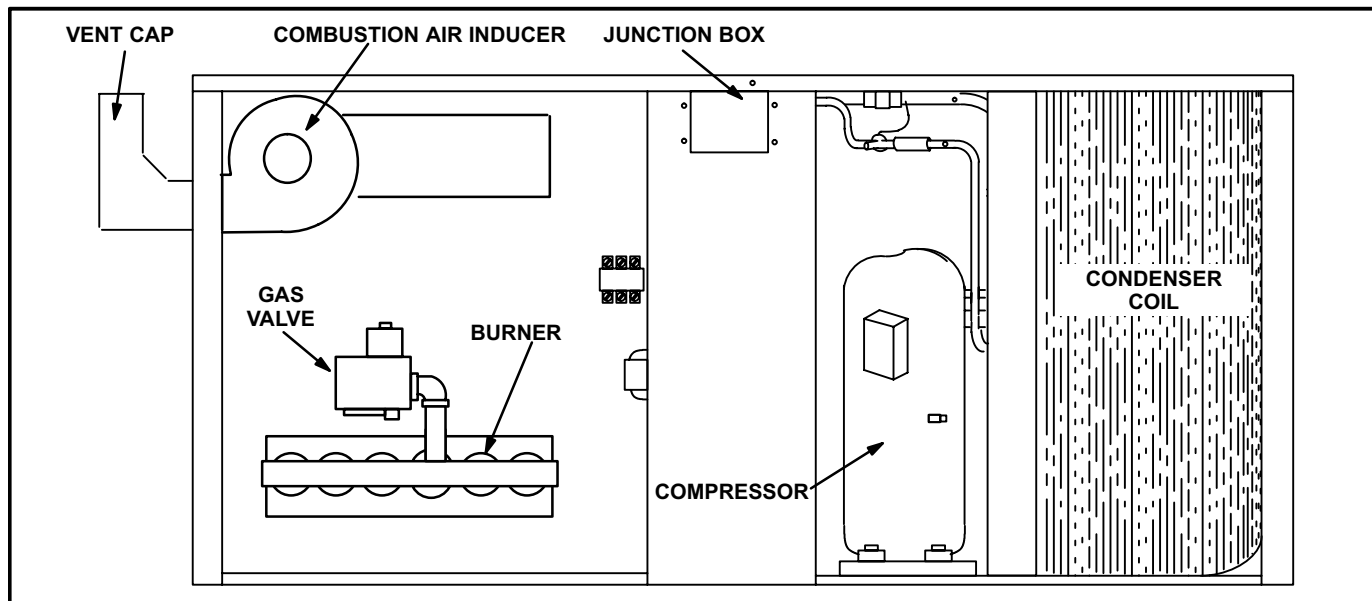
08/02



504,558M



GCS16, 20, and 20R Parts Arrangement



Safety

- 1- Keep unit area clear and free of combustible materials, gasoline and other flammable vapors and liquids.
- 2- Inspect return air duct to ensure duct is sealed to the unit and terminates outside the space containing appliance.

⚠ WARNING

Product contains fiberglass wool.

Disturbing the insulation in this product during installation, maintenance, or repair will expose you to fiberglass wool. Breathing this may cause lung cancer. (Fiberglass wool is known to the State of California to cause cancer.)

Fiberglass wool may also cause respiratory, skin, and eye irritation.

To reduce exposure to this substance or for further information, consult material safety data sheets available from address shown below, or contact your supervisor.

P.O. Box 799900
Dallas, TX 75379-9900

⚠ WARNING

Do not use this furnace if any part has been under water. A flood-damaged furnace is extremely dangerous. Attempts to use the furnace can result in fire or explosion. A qualified service agency should be contacted to inspect the furnace and to replace all gas controls, control system parts, electrical parts that have been wet or the furnace if deemed necessary.

⚠ WARNING



Electric shock hazard. Can cause injury or death. Before attempting to perform any service or maintenance, turn the electrical power to unit OFF at disconnect switch(es). Unit may have multiple power supplies.

⚠ WARNING



Danger of explosion. Can cause injury or product or property damage. Should the gas supply fail to shut off or if overheating occurs, shut off the gas valve to the furnace before shutting off the electrical supply.

⚠ WARNING



Danger of explosion and fire. Failure to follow safety warnings exactly could result in dangerous operation, serious injury, death or property damage.

⚠ CAUTION

Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

⚠ WARNING



Danger of electrical shock, explosion and fire. Improper servicing could result in dangerous operation, serious injury, death or property damage.

Unit Operation

FOR YOUR SAFETY READ BEFORE LIGHTING

BEFORE LIGHTING smell all around the furnace area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, do not try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.

This unit is equipped with an automatic spark ignition system. There is no pilot. In case of a safety shutdown, move thermostat switch to **OFF** and return the thermostat switch to **HEAT**. Electro-mechanical thermostat is shown in figure 1. On logic units and units with electronic temperature controls, shut main disconnect off and back on to re-set ignition control.

Unit Operation - Continued

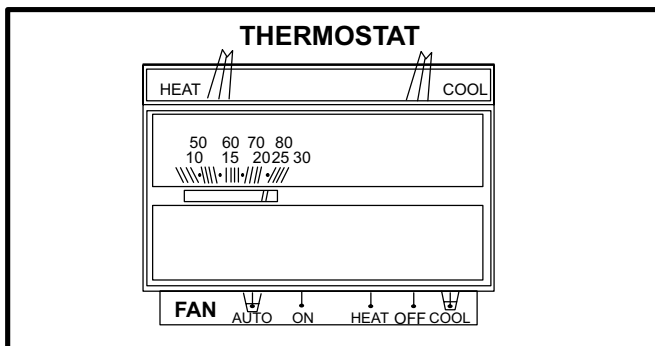


FIGURE 1

A-Placing Unit In Heating Operation



⚠ WARNING



Danger of explosion and fire. Can cause injury or product or property damage. You must follow these instructions exactly.

- 1- If using electro-mechanical thermostat, set to the lowest setting.
- 2- Turn off all electrical power to furnace.
- 3- This furnace is equipped with an ignition device which automatically lights burner. Do **not** try to light burner by hand.


4- Remove heat access panel.

5- *Honeywell VR8205* - Turn knob on gas valve clockwise  until it stops. Depress knob and turn clockwise  to **OFF**.

White Rodgers 36E - Turn knob on gas valve 180° either way to **OFF**.

6- Wait five minutes to clear out any gas. If you then smell gas, STOP! Immediately call your gas supplier from your neighbor's phone. Follow the gas supplier's instructions. If you don't smell gas go to next step.

Gas Valve Operation (Figure 2)

7- *Honeywell VR8205* - Turn knob on gas valve counterclockwise  until it stops. Allow knob to pop up and continue counterclockwise to **ON** position.

White Rodgers 36E - Turn knob on valve 180° either way to **ON**.

8- Replace heat section access panel.

9- Turn on electrical power to unit. If using electro-mechanical thermostat, set to desired setting.

10- The combustion air inducer(s) will start. The burners will light within 40 seconds.

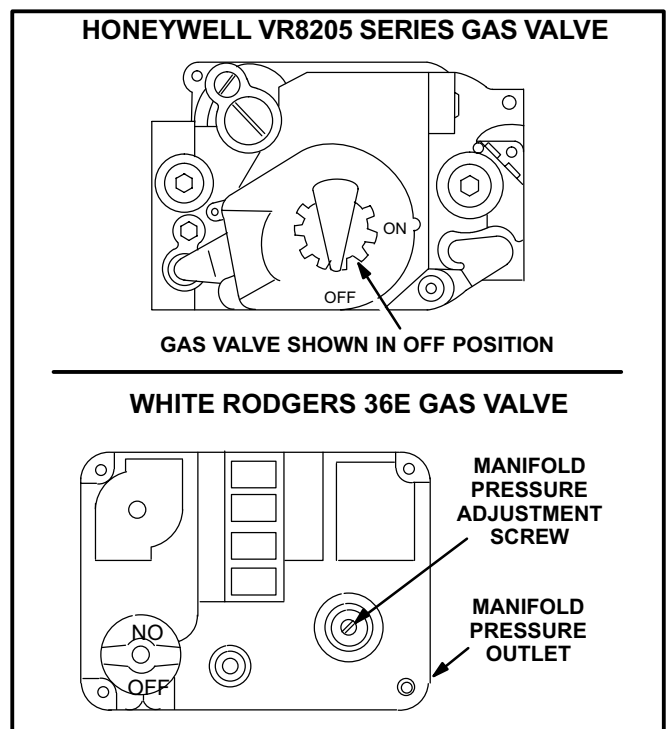




FIGURE 2

11- If unit does not light first time (gas line not fully purged) it will attempt up to two more ignitions before locking out.

12- If lockout occurs, repeat steps 1 through 10.

13- If the furnace will not operate, follow the instructions "To Turn Off Gas To Unit" and call your service technician or gas supplier.

B-To Turn Off Gas To Unit

- 1- If using electro-mechanical thermostat, set to the lowest setting.
- 2- Turn off all electrical power to unit if service is to be performed.
- 3- Remove heat section access panel.
- 4- Turn knob on Honeywell gas valve clockwise  until it stops. Depress knob and turn clockwise  to **OFF**. Turn knob on White Rodgers 180° either way to off. Do not force.
- 5- Replace heat section access panel.

WARNING



Danger of explosion. Can cause injury or death. Do not attempt to light manually. Unit has a direct spark ignition system.

Flue Passage and Vent Inspection

Annually, before heating season, inspect combustion air louvers, vent cap, heat exchanger, burners and combustion air inducer for corrosion, deterioration or deposits of debris. Remove any obstructions or blockage.

Burner Flame

WARNING



Danger of explosion and fire. Can cause injury or product or property damage. Periodically inspect burner flame to ensure proper unit operation.

Repair Parts Listing

The following repair parts are available. When ordering parts, include the complete model number and serial number listed on the unit rating plate - e.g. GCS20-024-50-1P

HEATING PARTS

Heat Exchanger
Combustion Air Inducer Assembly
Burner Sub-Assembly
Combustion Air Orifice
Gas Orifices
Ignition Electrode Assembly
Flame Sensor
Burner Gasket
Gas Valve
Limit Control
Flue Cap
Vent Cap Gasket
Secondary Limit
Roll-Out Switch
Combustion Air Inducer Gaskets

COOLING PARTS

Compressor
Compressor Run Capacitor
Expansion Valve
Condenser Fan Motor
Condenser Fan Blade
Condenser Fan Run Capacitor
Condenser Fan Motor Mounting Bracket
Fan Grille
Grille Retaining Nut
Indoor Blower Motor
Blower Motor Run Capacitor
Blower Wheel
Strainer
Distributor
Time Delay

ELECTRICAL PARTS

Compressor Contactor (K1)
Blower Relay (K3)
Blower Limit Relay (K20)
Combustion Air Inducer Relay (K13)
Control Transformer
Ignition Control
Blower Delay Relay (K25)

The primary air is permanently set for normal operation. The flame will be basically blue with some clear yellow streaking in the end of the flame. Inspect burner flame periodically during heating season using inspection port provided on the burner access panel.

Service

To maintain efficiency and longevity, your equipment must be serviced yearly by a qualified service technician. Failure to provide proof of proper service can void the warranty.

A-Servicing Filter

Filters must be installed in the return air system. Filters should be checked monthly and replaced when necessary. Take note of air flow direction marking on filter frame when reinstalling filters.

NOTE-Filters must be U.L.C. approved or equivalent for use in Canada.

B-Lubrication

All motors are lubricated at the factory. No further lubrication is required.

Service Reminder

Call a qualified service technician if the unit is inoperative. Before calling, always check the following to be sure service is required:

- 1- Be sure electrical disconnect switches are ON.
- 2- Check room thermostat for proper setting.
- 3- Replace any blown fuses or reset circuit breakers.
- 4- Gas valve should be ON.
- 5- Air filters should not be plugged, limiting air flow.
- 6- Make sure all access panels are in place.