CMF3 70-PG Convertible (60, & 70 KBTU/H Inputs) Gas Furnace
CMF3 70-PO Convertible (60, & 70 KBTU/H Inputs) Oil Furnace

USER'S MANUAL

For Furnaces Installed in: Manufactured Homes, Modular Homes/Buildings, & Manufactured Buildings

IMPORTANT! Please read all information in this manual thoroughly and become familiar with the capabilities and use of your appliance before attempting to operate or maintain this unit.

Pay attention to all safety warnings and any other special notes highlighted in the manual. Safety markings are used frequently throughout this manual to designate a degree or level of seriousness and should not be ignored. **WARNING** indicates a potentially hazardous situation that if not avoided, could result in personal injury or death.

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 servicing contractor. Do not attempt to service this unit yourself!

Under no circumstances should the appliance owner attempt to install and/or service this equipment. Some local codes require licensed installation / service personnel for this type of equipment. Improper service, adjustment, or maintenance may cause explosion, fire, electrical shock or other hazardous conditions which may result in personal injury or property damage.



⚠ WARNING	⚠ AVERTISSEMENT
FIRE OR EXPLOSION HAZARD **Failure to follow safety warnings exactly could result in serious injury, death or property damage.**	**RISQUE D'INCENDIE OU D'EXPLOSION** **Si les consignes de sécurité ne sont pas suivies à la lettre, cela peut entraîner la mort, de graves blessures ou des dommages matériels.**
– Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance. **WHAT TO DO IF YOU SMELL GAS** **• Do not try to light any appliance.** **• 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 neighbors phone. Follow the gas suppliers instructions.** **• If you cannot reach your gas supplier, call the fire department.** **– Installation and service must be performed by a qualified installer, service agency or the gas supplier.**	**– Ne pas entreposer ni utiliser de l'essence ni d'autres vapeurs ou liquides inflammables dans le voisinage de cet appareil, ni de tout autre appareil.** **QUE FAIRE SI UNE ODEUR DE GAZ EST DÉTECTÉE** **• Ne mettre en marche aucun appareil.** **• Ne toucher aucun interrupteur électrique; ne pas utiliser de téléphone dans le bâtiment.** **• Quitter le bâtiment immédiatement.** **• Appeler immédiatement le fournisseur de gaz en utilisant le téléphone d'un voisin. Suivre les instructions du fournisseur de gaz.** **• Si le fournisseur de gaz n'est pas accessible, appeler le service d'incendie.** **– L'installation et l'entretien doivent être effectués par un installateur ou une entreprise d'entretien qualifié, ou le fournisseur de gaz.**

DO NOT DESTROY THIS MANUAL. READ ALL INSTRUCTIONS IN THIS MANUAL AND KEEP IN A SAFE PLACE FOR FUTURE REFERENCE.
NE PAS DÉTRUIRE. LIRE TOUTES LES INSTRUCTIONS DONNÉE DANS LE MANUEL ET CONSERVER EN UN LIEU SÛR POUR RÉFÉRENCE ULTÉRIEURE.

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IMPORTANT SAFETY INFORMATION

⚠ WARNING:

To avoid possible equipment damage, fire, or personal injury, the following instructions must be observed regarding unit maintenance and operational procedures.

⚠ WARNING:

PROPOSITION 65 WARNING: This product contains chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

- To achieve optimum performance and minimize equipment failure, it is recommended that periodic maintenance be performed on this unit. Please consult your dealer for maintenance information and availability of maintenance contracts.
- The area around the gas furnace (Figure 2, (page 3)) and the vicinity of any other gas 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 clean and 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 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.
- Familiarize yourself with the controls that shut off the gas and electrical power to the unit.

IMPORTANT NOTE

If the unit needs to be shut down for an extended period of time, turn off both the gas and electrical power. For your safety always turn off both the gas and electrical power before performing service or maintenance on the furnace. If the gas supply to the unit must be shut off, refer to the shut down instructions on page 3**.**

GAS SUPPLY & PIPING

WHAT TO DO IF YOU SMELL GAS

- **Do not try to light any appliance.**
- **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.**

QUE FAIRE S'IL Y A UNE ODEUR DE GAZ

- **Ne pas tenter d'allumer aucun appareil.**
- **Ne toucher à aucun interrupteur électrique; n'utiliser aucun téléphone dans le bâtiment.**
- **Évacuer l'immeuble immédiatement.**
- **Appeler immédiatement le fournisseur de gaz en employant le téléphone d'un voisin. Respecter à la lettre les instructions du fournisseur de gaz.**
- **Si personne ne répond, appeler le service des incendies.**

⚠ WARNING:

All fuel piping and shutoff valves must be installed in compliance with local codes and utility regulations by licensed installers. DO NOT attempt to modify, or tap into existing gas lines yourself. Fire or explosion may result causing property damage, personal injury or loss of life. Failure to follow the safety warnings exactly could result in serious injury, death or property damage.

⚠ WARNING:

The gas furnace was shipped from the factory equipped to operate on natural gas. Conversion to LP/propane gas must be performed by a licensed HVAC technician using a factory supplied conversion kit. Failure to use the proper conversion kit can cause fire, explosion, property damage, carbon monoxide poisoning, personal injury, or death.

This furnace does not have a pilot. It is equipped with an ignition device which automatically lights the burner. **DO NOT** light the burner by hand.

IMPORTANT NOTE:

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!

IMPORTANT SAFETY INFORMATION

COMBUSTION AIR & VENTING SYSTEM

⚠ WARNING:

It is extremely important that the furnace receives an unobstructed flow of clean, fresh air to properly burn the fuel gas. If this flow of air is restricted, the partially burned combustion gases may create dangerous amounts of carbon monoxide - a colorless, odorless gas that is a deadly poison that can cause personal injury or death. This could create the production of excessive amounts of Carbon Monoxide - a colorless, odorless gas that is a deadly poison that could result in serious personal injury or death.

Do not block any openings that are supplying fresh air to the room or closet the furnace is in. Your furnace obtains its air through a chase under the home to the outdoors. Do not allow the inlet of the chase to become blocked.

- For proper and safe operation, this furnace requires unrestricted airflow for combustion and ventilation. Do not block or obstruct air openings on the furnace, air openings around the furnace area or the spacings around the furnace.
- Do not install home skirting that prevents adequate combustion air from reaching the furnace.
- Air openings on the top or front of the furnace and openings in closet doors or walls must never be restricted. If the furnace is operated without adequate air for combustion, the flame roll-out switch will open, turning off the gas supply to the burner. This indicates that a serious problem with the burners has occurred and must be corrected immediately. Only a licensed HVAC technician can reset this switch.
- Your furnace and its venting system should be inspected annually by a licensed HVAC technician. The filter should be inspected at least once a month. See the Maintenance Information on page 6.

CLEARANCES TO COMBUSTIBLES

⚠ WARNING:

Do not place combustible materials on or against the furnace cabinet or vent pipe. The area around the furnace must be kept clear and free of combustible materials, gasoline and other flammable vapors and liquids. A fire or explosion may result causing property damage, personal injury or loss of life. Failure to follow the safety warnings exactly could result in serious injury, death or property damage.

The furnace is designed to have certain clearances to combustible items such as wood, paper, etc. Some types of insulation are combustible. If your furnace is installed in an attic, near unfinished walls, or in other insulated space, keep area surrounding the furnace free of insulating material. See Figure 1, (page 4) below.

FURNACE CLEARANCES		
	CLOSET	ALCOVE
Front	6"	18"
Rear	0"	0"
Sides	0"	0"
Top	17"	17"
Duct w/in 3ft of furnace	1/4"	1/4"
Vent	6”	6”
Plenum	1"	1"
Roof Jack Barrel	0”	0”

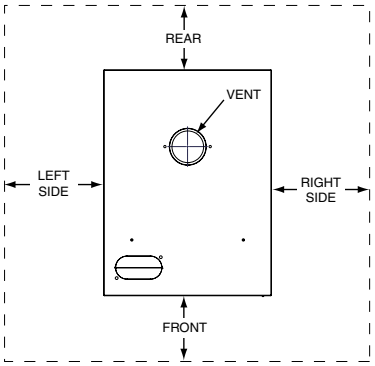


Figure 1. Minimum Clearances

SHUTTING DOWN THE FURNACE

If you need to shut down your furnace for service or maintenance, shut off the fuel valve to the furnace before shutting off the electrical service. Remove the door panel from the front of the furnace and turn the fuel valve OFF. See Figure 2, (page 4). Additional instructions for shutting down the furnace can be found on page 7. If your installation has a manual gas shutoff valve on the fuel supply pipe, shut this off, then shut off the electric to the furnace.

GENERAL INFORMATION

ABOUT THE FURNACE

- This furnace has been tested for capacity and efficiency in accordance with AHRI Standards and will 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 unsafe hazards.
- If your furnace is equipped with a fan switch, turn the fan switch to "ON" position. The blower will now circulate air in your home through the duct system.
- The firing rate of your furnace may be convertible using a certified conversion kit installed by a licensed contractor. See your installation instructions for more details.

AIR FILTERS

⚠ WARNING:

Never operate the furnace without an air filter in place. Accumulating dust in the return air can build up on internal components, resulting in loss of efficiency, equipment damage, and possible fire.

- An air filter is supplied with the furnace as shipped from the factory.
- The furnace should always have a clean filter. If the filter becomes dirty, it should be replaced. The filter is installed over the return air grille of the door inside the furnace cabinet.

THERMOSTAT

- This single stage gas furnace is designed to be controlled by a conventional single stage thermostat commonly available at your local building supply store.
- The thermostat's wiring must comply with the current provisions of the NEC (ANSI/NFPA 70) and with applicable local codes having jurisdiction. Thermostat connections should be made according to the instructions supplied with the thermostat and the indoor equipment.
- The thermostat should be mounted about 5 feet above the floor on an inside wall and not on an outside wall or other location where its operation may be adversely affected by radiant heat from fireplaces, sunlight, or lighting fixtures, and convective heat from warm air registers or electrical appliances.
- Thermostat styles vary. Please refer to the thermostat manufacturer's User Manual for detailed programming instructions.

FURNACE IN A SMALL ROOM OR CLOSET

If a furnace is installed in relatively small utility room or closet, the installation needs openings in the walls or door to let return air in. Make sure that these openings remain unobstructed. Do not modify these openings in any way without consulting a licensed HVAC technician.

SOURCES OF CORROSION

It is known that certain common household chemicals can cause heat exchanger corrosion if the vapors are pulled into the furnace's burners The following is a list of chemicals that should not be used or stored near the furnace.

Do not store these chemicals near the furnace:

- Gasoline/Kerosene
- Permanent wave solutions
- Chlorinated waxes and cleaners
- Chlorine based swimming pool chemicals
- Water softening chemicals
- De-icing salts or chemicals
- Carbon tetrachloride
- Halogen type refrigerants
- Cleaning solvents (perchloroethylene)
- Printing inks, paint removers, varnishes, etc.
- Hydrochloric acid
- Cements and glues
- Antistatic fabric softeners
- Masonry acid washing materials

AIR CONDITIONING

Ask your dealer, contractor or distributor about energy-efficient, money saving, self-contained unit designed for use with this furnace that will take care of your total comfort needs. This equipment is UL Listed, and C.S.A. and ARI Certified. All models are protected by a limited warranty which provides one year protection of parts and labor plus an additional four-year protection for the compressor.

WARRANTY INFORMATION

A warranty certificate with full details is included with the equipment. Carefully review these responsibilities with your dealer or service company. The manufacturer will not be responsible for any costs found necessary to correct problems due to improper setup, improper installation, adjustments, improper operating procedure on the part of the user.

⚠ CAUTION:

Operating a gas furnaces in construction environments can cause a variety of problems within the furnace and may significantly reduce the life or the performance of the furnace. Therefore operating the furnace during construction is not permitted and will void the warranty.

Some specific examples of service calls which are not included in the limited warranty are:

- Correcting wiring problems in the electrical circuit supplying the equipment.
- Resetting circuit breakers or other switches.
- Adjusting or calibrating of thermostat.

MAINTENANCE INFORMATION

Proper maintenance is important to achieve optimum performance from the furnace. This equipment should be inspected annually by a licensed HVAC technician. Table 1, (page 6) contains suggested inspections and frequency of maintenance. Routine maintenance should include the following:

BLOWER & FILTER

- Never operate the furnace without a filter in place. Dust and lint can build up on internal components, resulting in loss of efficiency, equipment damage, and possible fire.
- Keep air filters cleaned. Filters should be changed or cleaned monthly during the heating/cooling season. Clean or replace filter to maintain proper airflow and achieve maximum efficiency. Filters designed to remove smaller particles such as pollen, may require additional maintenance.
- It is recommended that the blower compartment be cleaned of dirt or lint that may have accumulated in the compartment or on the blower and motor as part of the annual inspection.

FURNACE & AIR DUCTS

- Homeowners should perform frequent visual inspections of the furnace for obvious signs of deterioration. The furnace should be sound without sagging, cracks, gaps, etc around the base. Any signs of damage or loose connections should be repaired by a qualified HVAC technician.
- Furniture and drapery should be arranged so that the supply air registers and return grilles are not obstructed.

VENTING SYSTEM

- For proper and safe operation, the furnace needs air for combustion and ventilation. **Do Not** block or obstruct air openings on the furnace, or any air openings where the furnace may be installed, including any surrounding spaces.
- Direct vent furnaces pull combustion air from the outdoors and vent combustion products back outside. Combustion air coming from the outside needs to be clean of chemicals that can cause corrosion, such as pool chlorinating products.
- Vent pipe must slope upwards and be physically sound without holes or corrosion. Any corroded section of vent pipe must be replaced, and any obstruction or blockage must be removed by a licensed HVAC technician.
- Flue passageways, the vent system, and the burners should be inspected and cleaned (if required) by a licensed HVAC technician annually to ensure continued safe operation.

OIL FURNACE

The following should be performed by a qualified service contractor at least once each season.

- Replace oil nozzle with type specified for furnace.
- Clean, adjust and replace, if necessary, the spark electrodes.
- The nozzle/drawer assembly must be reset to factory specifications.
- Clean the inside of the furnace heat exchanger and replace combustion liner if necessary.
- Clean / replace oil filter element.
- Adjust burner for top efficiency and check to make sure all fittings are tight without leaks.

TROUBLESHOOTING

If the furnace fails to operate check the following:

1. Is the thermostat setting correct?
2. Is the On / OFF switch (inside the blower compartment) turned on? See Figure 3, (page 6).
3. Is the circuit breaker tripped?
4. Is the gas turned on at the manual shutoff?
5. Is the filter dirty or clogged?
6. Is there excessive ice build up at the flue termination?

If the furnace still doesn't operate, contact a licensed HVAC technician.

MAINTENANCE ITEM	FREQUENCY OF MAINTENANCE		
	BEGINNING OF EACH HEATING SEASON	END OF EACH HEATING SEASON	MONTHLY
Verify furnace area is free of combustible materials.	X	X	X
Verify combustion and ventilation air is not restricted.	X	X	X
Verify no signs of physical deterioration of the furnace.	X	X	X
Verify no obstructions or restrictions in vent or chimney.	X	X	
Verify no holes or cracks in vent pipe.	X	X	
Verify no corrosion in vent pipe.	X	X	
Verify the horizontal vent pipes slope upwards away from the furnace.	X	X	
Clean or replace filter(s).			X
MAINTENANCE ITEMS BELOW SHOULD BE PERFOMED BY QUALIFIED SERVICE PERSON.			
Verify burner flame.	X		
Clean blower compartment.	X		
Clean burner assembly.	X		
Clean condensate collection & disposal system (if applicable).	X		

Table 1. Maintenance Table

STARTUP & SHUTDOWN

STARTING THE GAS FURNACE

1. Make sure the filter is clean and properly installed.
2. Make sure the vent system is properly installed.
3. Set the thermostat to the lowest setting.
4. Close the manual gas valve outside the furnace.
5. Turn off all electric to the furnace.
6. Remove the door from the burner compartment.
7. Set the gas valve ON/OFF knob / switch to the OFF position. See Figure 2 for gas valve type and knob / switch location.
8. Wait 5 minutes. If there is any smell of gas, see WHAT TO DO IF YOU SMELL GAS on page 7.
9. Set the gas valve ON/OFF knob to the ON position.
10. Turn on all electric to the furnace, including the ON/OFF switch.
11. Open the manual gas valve.
12. Turn the thermostat back up to force ignition.
13. Observe operation, including burners. If burners fail to ignite, call a licensed HVAC technician.
14. Replace the door on the burner compartment.

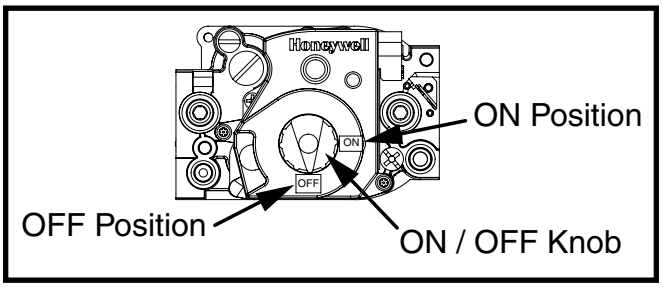


Figure 2. Gas Valve

SHUTTING DOWN THE GAS FURNACE

If you need to shut down your furnace for service or maintenance, follow these steps:

1. Set the thermostat to the lowest setting.
2. Close the manual gas valve outside the furnace.
3. Turn electric to the furnace off.
4. Open the door to the burner compartment.
5. Set the gas valve ON/OFF knob / switch to the OFF position. See Figure 2 for gas valve type and knob / switch location.
6. Set the ON / OFF switch to off.
7. Replace the door on the burner Compartment.

FURNACE COMPONENTS

The furnace components shown in Figure 3 will help identify and locate various parts of the furnace. The component you need to familiarize yourself with is the gas valve. You will use this to turn the furnace on and off. There are no user serviceable parts. All repairs must be done by a licensed HVAC technician.

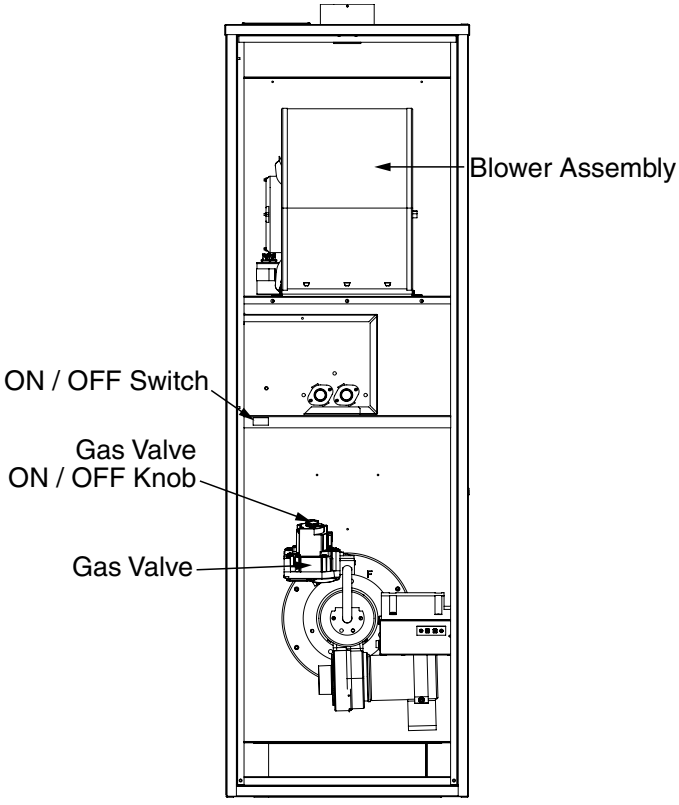


Figure 3. CMF3 Gas Furnace Components

We Encourage Professionalism

Through Technician Certification by NATE

Specifications & illustrations subject to change without notice or incurring obligations (03/25).
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