



# Series Twelve

## POWER VENT GAS WATER HEATER USER'S GUIDE

FOR POTABLE WATER HEATING ONLY  
NOT SUITABLE FOR SPACE HEATING  
NOT FOR USE IN  
MANUFACTURED (MOBILE) HOMES



**WARNING:** If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury or death.

- 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.
  - 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.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.

### Model Numbers

HRN11240P  
HRN31240P  
HRP11240P  
HRP31240P  
HRN11250P  
HRN31250P

HRP11250P  
HRP31250P  
HRN11275P  
HRN31275P  
HRP11275P  
HRP31275P

### For Your Safety

AN ODORANT IS ADDED TO THE GAS USED BY THIS WATER HEATER.



### WARNING

Read and understand instruction manual and safety messages before installing, operating or servicing this water heater.


Failure to follow instructions and safety messages could result in death or serious injury.





Instruction manual must remain with water heater.

# SAFE INSTALLATION, USE AND SERVICE

Your safety and the safety of others is extremely important in the installation, use and servicing of this water heater.

Many safety-related messages and instructions have been provided in this manual and on your own water heater to warn you and others of a potential injury hazard. Read and obey all safety messages and instructions throughout this manual. It is very important that the meaning of each safety message is understood by you and others who install, use or service this water heater.

	This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.
---	--

	<b>DANGER</b> indicates an imminently hazardous situation which, if not avoided, could result in death or injury.
	<b>WARNING</b> indicates a potentially hazardous situation which, if not avoided, could result in death or injury.
	<b>CAUTION</b> indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
	<b>CAUTION</b> used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, could result in property damage.

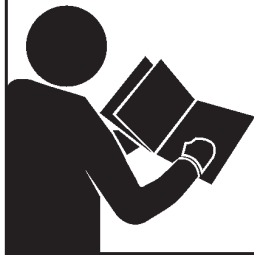
All safety messages will generally tell you about the type of hazard, what can happen if you do not follow the safety message and how to avoid the risk of injury.

## IMPORTANT DEFINITIONS

- **Maytag Customer Service Center:** The Maytag Customer Service Center has the ability equivalent to a licensed tradesman in the fields of plumbing, air supply, venting and gas supply, including a thorough understanding of the requirements of the National Fuel Gas Code as it relates to the installation of gas fired water heaters. The Service Center also has a thorough understanding of this instruction manual, and is able to perform repairs strictly in accordance with the service guidelines provided by the manufacturer.
- **Gas Supplier:** The natural gas or propane utility or service who supplies gas for utilization by the gas burning appliances within this application. The gas supplier typically has responsibility for the inspection and code approval of gas piping up to and including the natural gas meter or propane storage tank of a building. Many gas suppliers also offer service and inspection of appliances within the building.

# SAFETY PRECAUTIONS

**⚠ WARNING**




Read and understand instruction manual and safety messages before installing, operating or servicing this water heater.

Failure to follow instructions and safety messages could result in death or serious injury.

Instruction manual must remain with water heater.

**⚠ WARNING**

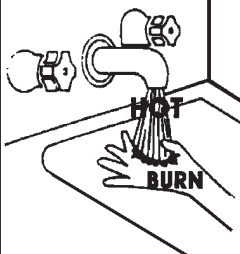
**Fire Hazard**



For continued protection against risk of fire:

- Do not install water heater on carpeted floor.
- Do not operate water heater if flood damaged.

**⚠ DANGER**



Water temperature over 125°F (52°C) can cause severe burns instantly resulting in severe injury or death.

Children, the elderly, and the physically or mentally disabled are at highest risk for scald injury.

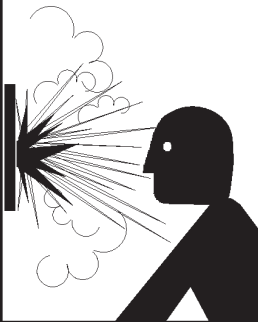
Feel water before bathing or showering.

Temperature limiting valves are available.

Read instruction manual for safe temperature setting.

**⚠ WARNING**

**Explosion Hazard**




- Overheated water can cause water tank explosion.
- Properly sized temperature and pressure relief valve must be installed in opening provided.


**⚠ WARNING**

**Fire or Explosion Hazard**

- Avoid all ignition sources if you smell gas.
- Do not expose water heater control to excessive gas pressure.
- Use only gas shown on rating plate.
- Maintain required clearances to combustibles.
- Keep ignition sources away from faucets after extended period of non-use.




Read instruction manual before installing, using or servicing water heater.



**⚠ WARNING**

**Breathing Hazard - Carbon Monoxide Gas**




- Install vent system in accordance with codes.
- Do not operate water heater if flood damaged.
- High altitude orifice must be installed for operation above 3,300 feet (1,006 m) (or above 5,500 (1,676 m) feet for high altitude models).
- Do not operate if soot buildup.
- Do not obstruct water heater air intake with insulating jacket.
- Do not place chemical vapor emitting products near water heater.
- Gas and carbon monoxide detectors are available.

Breathing carbon monoxide can cause brain damage or death. Always read and understand instruction manual.

**⚠ DANGER**

**Fire or Explosion Hazard**

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



FLAMMABLE

Flammable Vapors

**CAUTION**

**Improper installation and use may result in property damage.**

- Do not operate water heater if flood damaged.
- Inspect and replace anode rod as needed.
- Install in location with drainage.
- Fill tank with water before operation.
- Be alert for thermal expansion.

Refer to instruction manual for installation and service.

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## CUSTOMER RESPONSIBILITIES

**Thank You** for purchasing a Maytag water heater. Properly installed and maintained, it should give you years of trouble free service. It is strongly suggested that this new water heater be professionally installed, **contact Maytag Customer Service (1-800-788-8899) for recommended installers.**

### Abbreviations Found In This Instruction Manual:

- CSA - Canadian Standards Association
- ANSI - American National Standards Institute
- NFPA - National Fire Protection Association
- ASME - American Society of Mechanical Engineers
- GAMA - Gas Appliance Manufacturers Association

This gas-fired water heater is design certified by CSA INTERNATIONAL under American National Standard/CSA Standard for Gas Water Heaters ANSI Z21.10.1 • CSA 4.1 (current edition). The installation must conform with this manual, local codes and with the current edition of the National Fuel Gas Code, ANSIZ223.1 NFPA 54.

- Read the "Safety Precautions" section, page 3 of this manual first and then the entire manual carefully. If you don't follow the safety rules, the water heater will not operate properly. It could cause DEATH, SERIOUS BODILY INJURY AND/OR PROPERTY DAMAGE.

This manual contains instructions for the installation, operation, and maintenance of the gas-fired water heater. It also contains warnings through out the manual that you must read and be aware of. All warnings and all instructions are essential to the proper operation of the water heater and your safety. Since we cannot put everything on the first few pages, **READ THE ENTIRE MANUAL BEFORE ATTEMPTING TO INSTALL OR OPERATE THE WATER HEATER.**

- The installation must conform with these instructions and the local code authority having jurisdiction. In the absence of

local codes, installations shall comply with the following:  
**In the United States:** The National Fuel Gas Code ANSI Z223.1/NFPA 54. This publication is available from the Canadian Standards Association, 8501 East Pleasant Valley Rd., Cleveland Ohio 44131, or The National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269.

- If after reading this manual you have any questions or do not understand any portion of the instructions, **call Maytag Customer Service at 1-800-788-8899 for an authorized servicer.**

- Carefully plan the place where you are going to put the water heater. Correct combustion, vent action, and vent pipe installation are very important in preventing death from possible carbon monoxide poisoning and fires, see figure 1 and 2.

Examine the location to ensure the water heater complies with the *Facts to Consider About the Location* section in this manual.

- For California installation this water heater must be braced, anchored, or strapped to avoid falling or moving during an earthquake. See instructions for correct installation procedures. Instructions may be obtained from your local dealer, wholesaler, public utilities or California Office of the State Architect, 400 P Street, Sacramento, CA 95814.

- Massachusetts Code requires this water heater to be installed in accordance with Massachusetts 248-CMR 2.00: State Plumbing Code and 248-CMR 5.00. In the Commonwealth of Massachusetts, this product must be installed by a licensed plumber or gasfitter.

- Complies with SCAQMD rule #1121 and districts having equivalent NOx requirements.

## PRODUCT SPECIFICATIONS

MODEL NUMBER	TANK CAPACITY IN GALS (LITERS)	TYPE OF GAS	BTU RATE	RECOVERY RATE GALS. PER HOUR @ 90°F RISE	VENT PIPE INCHES (mm)	DIAMETER INCHES (mm)	DIMENSIONS IN INCHES (mm) HEIGHT TOP OF DRAFTHOOD
HRN11240P	40 (151)	NATURAL	40,000	46.0	3" (76)**	20" (508)	71 1/2" (1,816)
*HRN31240P	40 (151)	NATURAL	40,000	46.0	3" (76)**	20" (508)	71 1/2" (1,816)
HRP11240P	40 (151)	PROPANE	40,000	46.0	3" (76)**	20" (508)	71 1/2" (1,816)
*HRP31240P	40 (151)	PROPANE	40,000	46.0	3" (76)**	20" (508)	71 1/2" (1,816)
HRN11250P	50 (189)	NATURAL	40,000	46.0	3" (76)**	22" (559)	71 1/2" (1,816)
HRN31250P	50 (189)	NATURAL	40,000	46.0	3" (76)**	22" (559)	71 1/2" (1,816)
HRP11250P	50 (189)	PROPANE	40,000	46.0	3" (76)**	22" (559)	71 1/2" (1,816)
HRP31250P	50 (189)	PROPANE	40,000	46.0	3" (76)**	22" (559)	71 1/2" (1,816)
HRN11275P	75 (284)	NATURAL	75,000	77.0	3" (76)***	26 1/2" (673)	71 1/2" (1,816)
*HRN31275P	75 (284)	NATURAL	75,000	77.0	3" (76)***	26 1/2" (673)	71 1/2" (1,816)
HRP11275P	75 (284)	PROPANE	70,000	72.0	3" (76)***	26 1/2" (673)	71 1/2" (1,816)
*HRP31275P	75 (284)	PROPANE	70,000	72.0	3" (76)***	26 1/2" (673)	71 1/2" (1,816)

\* High altitude models have a B.T.U./Recovery Rate 10% less than shown.

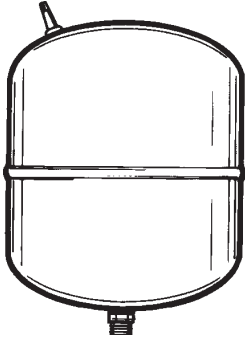
\*\* Limited usage of 2" vent pipe - see pages 19 through 26.

\*\*\* Limited usage of 4" vent pipe - see pages 19 through 26.

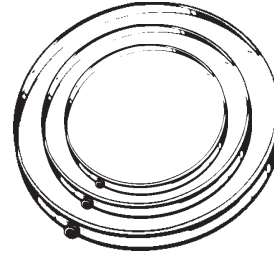
# ACCESSORIES AND TOOLS NEEDED

## Accessories

To simplify the installation Maytag has available the installation parts shown below. You may or may not need all of these accessories depending on your type of installation. **Call Maytag Customer Service at 1-800-788-8899 for an authorized installer.**



EXPANSION TANKS FOR THERMAL EXPANSION CONDITIONS AVAILABLE IN 2 GALLONS (7.6 LITERS), Part No. 66001013 AND 5 GALLONS (18.9 LITERS), Part No. 66001014 CAPACITY.

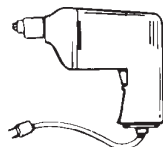


DRAIN PANS AVAILABLE IN 22" (559 mm) DIAMETER (PART NO. 66001011) FOR WATER HEATERS HAVING A DIAMETER 20" (508 mm) OR LESS, 24" (610mm) DIAMETER (PART NO. 66001105) FOR WATER HEATERS HAVING A DIAMETER 22" (559 mm) OR LESS AND 28" (711 mm) DIAMETER (PART NO. 66001012) FOR WATER HEATERS HAVING A DIAMETER 26" (660 mm) OR LESS.

## Tools

You may or may not need all these tools, depending on your type of installation. These tools can be purchased at your local hardware store.

- Pipe Wrenches (2) 14" (356 mm)
- Screwdriver
- Tin Snips
- 6' (1.82 m) Tape or Folding Ruler
- Garden Hose
- Drill
- Pipe Dope or Teflon Tape



DRILL



SLOT-HEAD SCREWDRIVER



PHILLIPS SCREWDRIVER



TIN SNIPS



ROLL OF TEFLON TAPE (USE ONLY ON WATER HEATER CONNECTIONS)



PIPE DOPE (SQUEEZE TUBE) USE FOR WATER AND GAS CONNECTIONS



GARDEN HOSE



6 FOOT TAPE



PIPE WRENCH

## Additional Tools Needed When Sweat Soldering

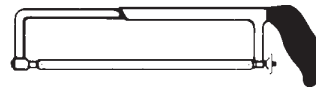
- Tubing Cutters or Hacksaw
- Propane Torch
- Soft Solder
- Solder Flux
- Emery Cloth
- Wire Brushes



TUBING CUTTER



PROPANE TORCH



HACKSAW



ROLL OF EMERY CLOTH



3/4" (19 mm) WIRE BRUSH



1/2" (13 mm) WIRE BRUSH



ROLL OF LEAD-FREE SOFT SOLDER



SOLDER FLUX

# INSTRUCTIONS FOR INSTALLATION

## Removing the Old Water Heater

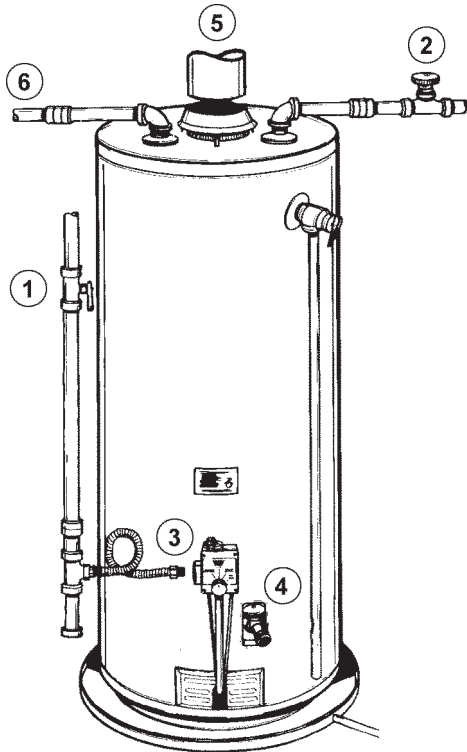


FIGURE 1.

1. Turn "OFF" the gas supply to the water heater.

If the main gas line Shut-off valve serving all gas appliances is used, also shut "OFF" the gas at each appliance. Leave all gas appliances shut "OFF" until the water heater installation is completed, see Figures 1 and 2.

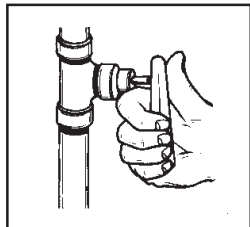


FIGURE 2.

2. Turn "OFF" the water supply to the water heater at the water shut off valve or water meter. Some installations require that the water be turned off to the entire house, see Figures 1 and 3.

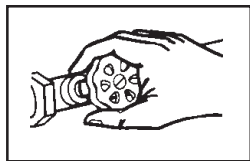


FIGURE 3.

3. Check again to make sure the gas supply is "OFF" to the water heater. Then disconnect the gas supply connection from the gas control valve.

**⚠ DANGER**

**HOT  
BURN**

- Burn hazard
- Hot water discharge.
- Keep hands clear of drain valve discharge.

4. Attach a hose to the water heater drain valve and put the other end in a floor drain or outdoors. Open the water heater drain valve. Open a nearby hot water faucet which will relieve pressure in the water heater and speed draining. The water passing out of the drain valve may be extremely hot. To avoid being scalded, make sure all connections are tight and that the water flow is directed away from any person, see Figures 1 and 4.

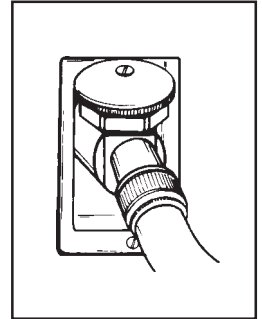


FIGURE 4.

5. Disconnect the vent pipe from the draft hood where they connect to the water heater. In most installations the vent pipe can be lifted off after any screw or other attached devices are removed. Dispose of the draft hood. The new water heater has the draft hood which must be used for proper operation.
6. If you have copper piping to the water heater, the two copper water pipes can be cut with a hacksaw approximately four inches away from where they connect to the water heater. This will avoid cutting off pipes too short. Additional cuts can be made later if necessary. Disconnect the temperature-pressure relief valve drain line. When the water heater is drained, disconnect the hose from the drain valve. Close the drain valve. The water heater is now completely disconnected and ready to be removed, see Figure 5.

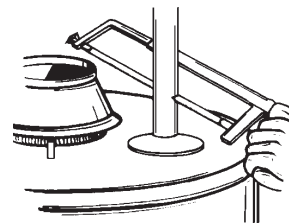


FIGURE 5.

If you have galvanized pipe to the water heater, loosen the two galvanized pipes with a pipe wrench at the union in each line. Also disconnect the piping remaining to the water heater. These pieces should be saved since they may be needed when reconnecting the new water heater. Disconnect the temperature-pressure relief valve drain line. When the water heater is drained, disconnect the hose from the drain valve. Close the drain valve. The water heater is now completely disconnected and ready to be removed. Mineral buildup or sediment may have accumulated in the old water heater. This causes the water heater to be much heavier than normal and this residue, if spilled out, could cause staining, see Figure 6.

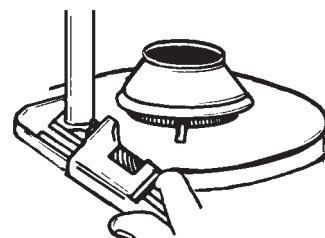


FIGURE 6.

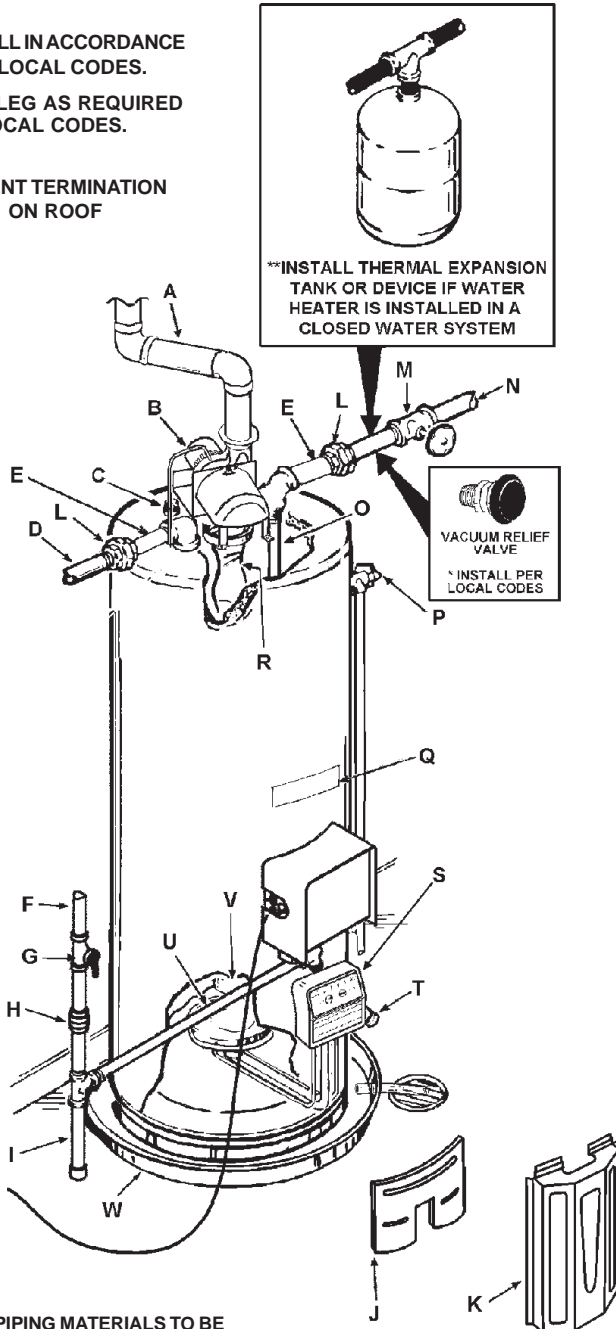
# TYPICAL INSTALLATION

## GET TO KNOW YOUR WATER HEATER - GAS MODELS

- |                             |                                     |                         |
|-----------------------------|-------------------------------------|-------------------------|
| A Vent Pipe                 | I Drip Leg (Sediment Trap)          | Q Rating Plate          |
| B Blower                    | J Inner Door                        | R Flue Baffle           |
| C Anode                     | K Outer door                        | S Thermostat            |
| D Hot Water Outlet          | L Union                             | T Drain Valve           |
| E Standard Pipe Fittings    | M Inlet Water Shut-off Valve        | U Pilot and Main Burner |
| F Gas Supply                | N Cold Water Inlet                  | V Flue                  |
| G Manual Gas Shut-off Valve | O Inlet Dip Tube                    | W Drain Pan             |
| H Ground Joint Union        | P Temperature-Pressure Relief Valve |                         |

\* INSTALL IN ACCORDANCE WITH LOCAL CODES.  
\* DRIP LEG AS REQUIRED BY LOCAL CODES.

TO VENT TERMINATION ON ROOF



\* ALL PIPING MATERIALS TO BE SUPPLIED BY CUSTOMERS.

\*\* CLOSED WATER SYSTEMS ARE THOSE WITH BACK FLOW PREVENTION DEVICES INSTALLED IN THE INLET SERVICE LINE.

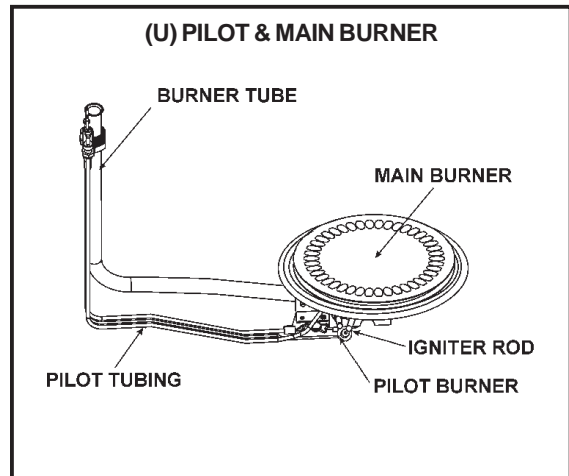
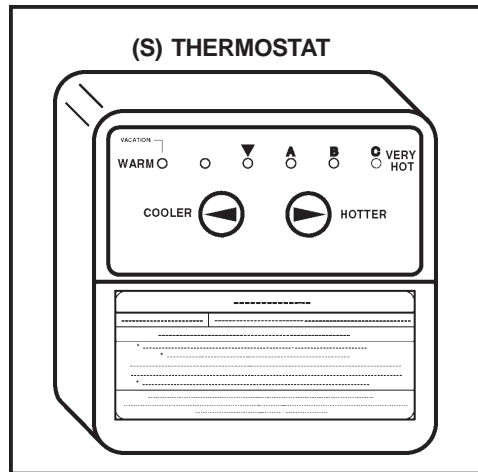


FIGURE 7.



# TYPICAL INSTALLATION

## MIXING VALVE USAGE

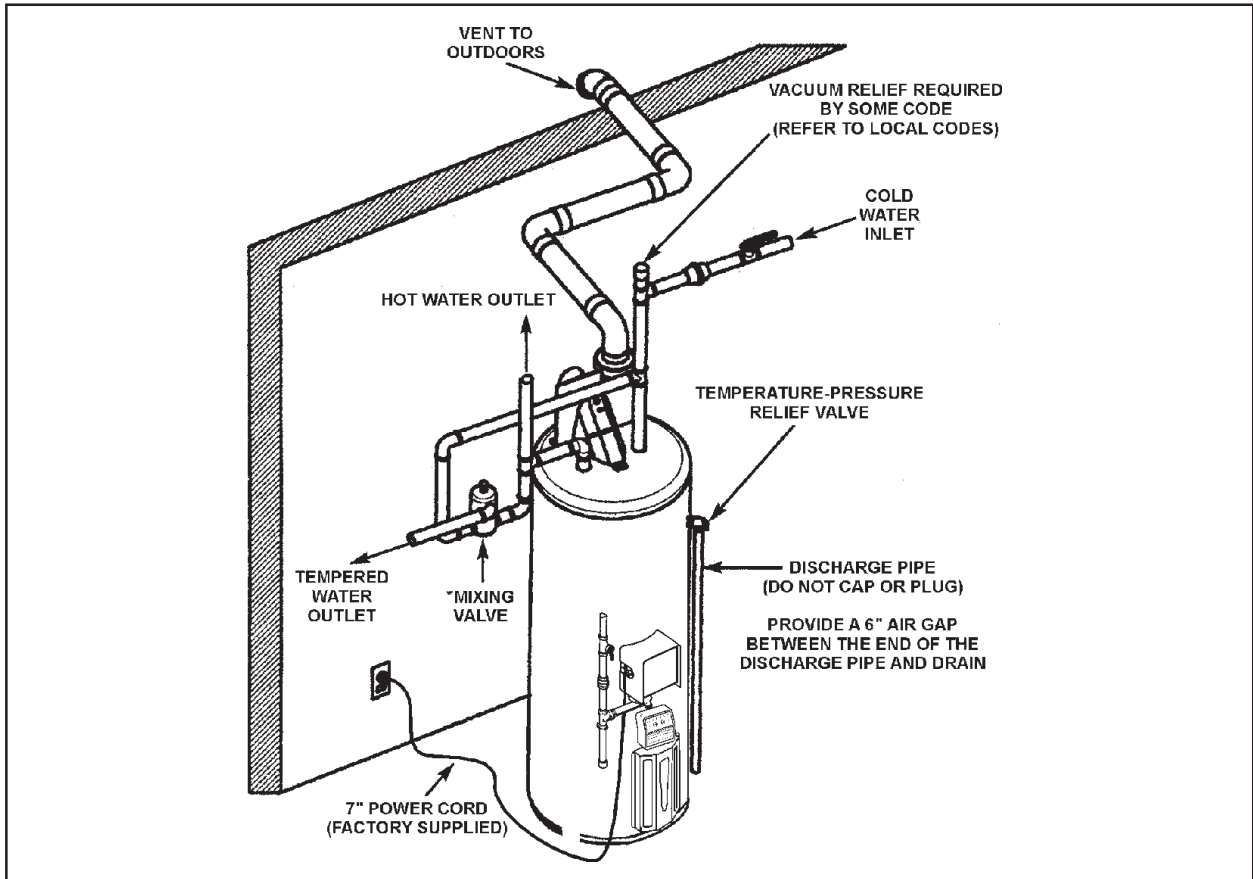


FIGURE 8.

This appliance has been design certified as complying with American National Standard/CSA Standard for water heaters and is considered suitable for:

**Water (Potable) Heating:** All models are considered suitable for water (potable) heating.

	<p><b>⚠ DANGER</b> Water temperature over 125°F (52°C) can cause severe burns instantly resulting in severe injury or death.</p> <p>Children, the elderly, and the physically or mentally disabled are at highest risk for scald injury.</p> <p>Feel water before bathing or showering.</p> <p>Temperature limiting valves are available.</p> <p>Read instruction manual for safe temperature setting.</p>
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### HOTTER WATER CAN SCALD:

Water heaters are intended to produce hot water. Water heated to a temperature which will satisfy space heating, clothes washing, dish washing, and other sanitizing needs can scald and permanently injure you upon contact. Some people are

more likely to be permanently injured by hot water than others. These include the elderly, children, the infirm, or physically/mentally handicapped. If anyone using hot water in your home fits into one of these groups or if there is a local code or state law requiring a certain temperature water at the hot water tap, then you must take special precautions. In addition to using the lowest possible temperature setting that satisfies your hot water needs, a means such as a \*Mixing Valve, shall be used at the hot water taps used by these people or at the water heater. Mixing valves are available at plumbing supply or hardware stores. See Figure 8. Valves for reducing point of use temperature by mixing cold and hot water are also available. **Consult Maytag Customer Service (1-800-788-8899)**. Follow mixing valve manufacturer's instructions for installation of the valves. Before changing the factory setting on the thermostat, read the "Temperature Regulation" section in this manual, see Figure 52 on page 31.

This water heater shall not be connected to any heating system(s) or component(s) previously used with a non-potable water heating appliance.

Toxic chemicals such as used for treatment of boilers or non-potable water heating appliances shall never be introduced into a potable water space heating system.

**NOTE: To protect against untimely corrosion of hot and cold water fittings, it is strongly recommended that di-electric unions or couplings be installed on the water heater when connected to copper pipe.**

# LOCATING THE NEW WATER HEATER

## Facts to Consider About the Location

Carefully choose an indoor location for the new water heater, because the placement is a very important consideration for the safety of the occupants in the building and for the most economical use of the appliance. **This water heater is not for use in manufactured (mobile) homes or outdoor installation.**

Whether replacing an old water heater or putting the water heater in a new location, the following critical points must be observed:

- The location selected should be indoors as close as practical to the vent termination point, and as centralized with the water piping system as possible. The water heater, as all water heaters, will eventually leak. Do not install without adequate drainage provisions where water flow will cause damage.
- 40,000 BTU/HR INPUT MODELS - If vented through an outside wall or through the roof, the 3" vent piping cannot exceed a total of 115 feet (50 feet if optional 2" vent piping is used), including vertical and horizontal runs with one 90° elbow. If more elbows are required, the venting distance must be reduced 5 feet for every 90° elbow, see page 22 for vent chart.
- 70,000 and 75,000 BTU/HR INPUT MODELS - If vented through an outside wall or through the roof, the 3" vent piping cannot exceed a total of 70 feet (110 feet if optional 4" vent piping is used), including vertical and horizontal runs with one 90° elbow. If more elbows are required, the venting distance must be reduced 5 feet for every 90° elbow, see page 22 for vent chart.
- Vent piping cannot slope downward and horizontal runs require 1/8" per five foot rise. All horizontal runs require adequate support at 3 1/2 foot intervals and vertical runs supported at 5 foot intervals.
- The water heater requires its own (separate) venting system. It cannot be connected to an existing vent pipe or chimney. It must terminate to the outdoors. Whenever possible terminate the vent on the leeward side of the building if vented through an outside wall. **NOTE: Condensation may be created, at times, as the combustion gases exit the vent cap and discoloration of surfaces in proximity to the vent cap may occur.**

The power vent water heater requires its own (separate) venting system. It cannot be connected to an existing vent pipe or chimney. It must be terminated to the outdoors. Failure to properly install the venting system can result in asphyxiation, a fire or explosion and can cause DEATH, SERIOUS BODILY INJURY, OR PROPERTY DAMAGE.

- The water heater comes equipped with a 7 foot power cord which can be used to connect to a 110/120 volt power source if (1) local codes allow, and (2) there is a three prong receptacle available. **This unit must have a grounded outlet to operate.**

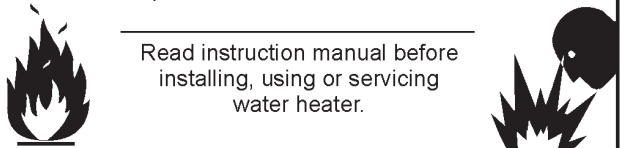
Do not use an extension cord. If there is not a suitable receptacle and/or local codes prohibit use of a power cord, field wiring must be provided.


Installation of the water heater must be accomplished in such a manner that if the tank or any connections should leak, the flow will not cause damage to the structure. For this reason, it is not advisable to install the water heater in an attic or upper floor. When such locations cannot be avoided, a suitable drain pan should be installed under the water heater. Drain pans are available at your local hardware store. Such a drain pan must have a minimum length and width of at least 2 inches (51 mm) greater than the water heater dimensions and must be piped to an adequate drain. The pan must not restrict combustion air flow.

Water heater life depends upon water quality, water pressure and the environment in which the water heater is installed. Water heaters are sometimes installed in locations where leakage may result in property damage, even with the use of a drain pan piped to a drain. However, unanticipated damage can be reduced or prevented by a leak detector or water shut-off device used in conjunction with a piped drain pan. These devices are available from some plumbing supply wholesalers and retailers, and detect and react to leakage in various ways:

- Sensors mounted in the drain pan that trigger an alarm or turn off the incoming water to the water heater when leakage is detected.
- Sensors mounted in the drain pan that turn off the water supply to the entire home when water is detected in the drain pan.
- Water supply shut-off devices that activate based on the water pressure differential between the cold water and hot water pipes connected to the water heater.
- Devices that will turn off the gas supply to a gas water heater while at the same time shutting off its water supply.

<b>CAUTION</b>
<b>Property Damage Hazard</b>
<ul style="list-style-type: none"><li>• All water heaters eventually leak</li><li>• Do not install without adequate drainage.</li></ul>

<b>WARNING</b>
<b>Fire or Explosion Hazard</b>
<ul style="list-style-type: none"><li>• Avoid all ignition sources if you smell gas.</li><li>• Do not expose water heater control to excessive gas pressure.</li><li>• Use only gas shown on rating plate.</li><li>• Maintain required clearances to combustibles.</li><li>• Keep ignition sources away from faucets after extended period of non-use.</li></ul>
 <p>Read instruction manual before installing, using or servicing water heater.</p>

<b>DANGER</b>
<b>Fire or Explosion Hazard</b>
<ul style="list-style-type: none"><li>• Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.</li></ul>
 <p>FLAMMABLE Flammable Vapors</p>

INSTALLATIONS IN AREAS WHERE FLAMMABLE LIQUIDS (VAPORS) ARE LIKELY TO BE PRESENT OR STORED (GARAGES, STORAGE AND UTILITY AREAS, ETC.): Flammable liquids (such as gasoline, solvents, propane [LP or butane, etc.] and other substances such as adhesives, etc.) emit flammable vapors which can be ignited by a gas water heater's pilot light or main burner. The resulting flashback and fire can cause death or serious burns to anyone in the area, as well as property damage. If installation in such areas is your only option, then installation must be accomplished in a way that the pilot flame and main burner flame are elevated from the floor at least 18 inches. While this may reduce the chances of flammable vapors, from a floor spill being ignited, gasoline and other flammable substances should never be stored or used in the same room or area containing a gas water heater or other open flame or spark producing appliance. NOTE: Flammable vapors may be drawn by air currents from other areas of the structure to the appliance.

Also, the water heater must be located and/or protected so it is not subject to physical damage by a moving vehicle.

Propellants of aerosol sprays and volatile compounds, (cleaners, chlorine based chemicals, refrigerants, etc.) in addition to being highly flammable in many cases, will also change to corrosive hydrochloric acid when exposed to the combustion products of the water heater. The results can be hazardous, and also cause product failure.

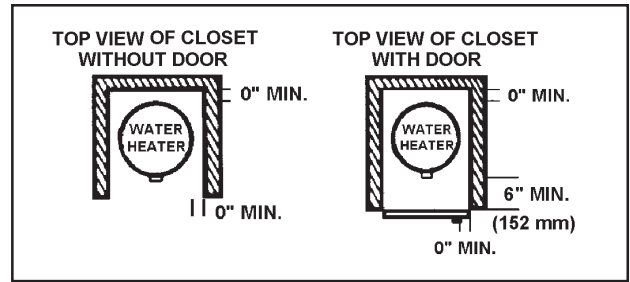



FIGURE 9.

**⚠ WARNING**

**Breathing Hazard - Carbon Monoxide Gas**




- Do not obstruct water heater air intake with insulating blanket.
- Gas and carbon monoxide detectors are available.
- Install water heater in accordance with the instruction manual.

Breathing carbon monoxide can cause brain damage or death. Always read and understand instruction manual.

A gas water heater cannot operate properly without the correct amount of air for combustion. Do not install in a confined area such as a closet, unless you provide air as shown in the *Locating The New Water Heater* section. Never obstruct the flow of ventilation air. If you have any doubts or questions at all, call your gas supplier. Failure to provide the proper amount of combustion air can result in a fire or explosion and cause death, serious bodily injury, or property damage.

**⚠ WARNING**

**Fire Hazard**



For continued protection against risk of fire:

- Do not install water heater on carpeted floor.
- Do not operate water heater if flood damaged.

This water heater must not be installed directly on carpeting. Carpeting must be protected by metal or wood panel beneath the appliance extending beyond the full width and depth of the appliance by at least 3 inches (76.2 mm) in any direction, or if the appliance is installed in an alcove or closet, the entire floor must be covered by the panel. Failure to heed this warning may result in a fire hazard.

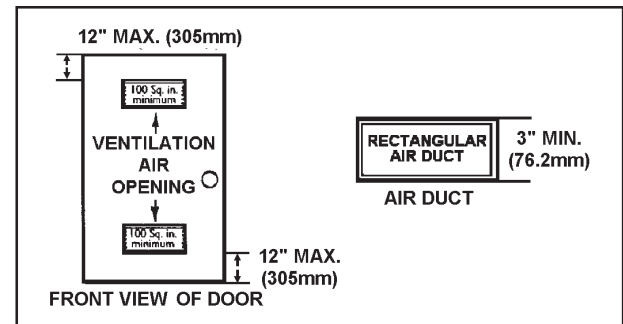


FIGURE 10.

If this water heater will be used in beauty shops, barber shops, cleaning establishments, or self-service laundries with dry cleaning equipment, it is imperative that the water heater or water heaters be installed so that combustion and ventilation air be taken from outside these areas.

### Combustion Air and Ventilation

When determining the installation location for a power vent water heater, snow accumulation and drifting should be considered in areas where applicable.

#### VENTING CLEARANCES

- 0" clearance for 3" (and optional 2" and 4") PVC, ABS or CPVC Schedule 40 vent piping from combustible surfaces.

**⚠ WARNING**

**Fire or Explosion Hazard**



Read instruction manual before installing, using or servicing water heater.

- Improper use may result in fire or explosion.
- Maintain required clearances to combustibles.



Minimum clearances between the water heater and combustible construction are 0 inch at the sides and rear, 6 inches (152 mm) at the front, and 0 inches from the vent pipe. Clearance from the top of the jacket is 14 inches (356 mm) on most models. Note that a lesser dimension may be allowed on some models, refer to the label attached adjacent to the gas control valve on the water heater, see Figure 9.

- 12" minimum from the ground, 9" ceiling overhangs, see Figure 11.

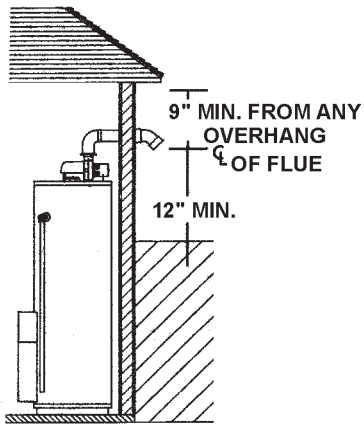


FIGURE 11.

- The Power Vent outlet terminal shall terminate at least 36" above any forced air inlet into the building located within 10 feet, see Figure 12.
- The Power Vent outlet terminal shall terminate at least 4 feet below, 4 feet horizontally from or 1 foot above any door, window or gravity air inlet into the building, see Figure 12.

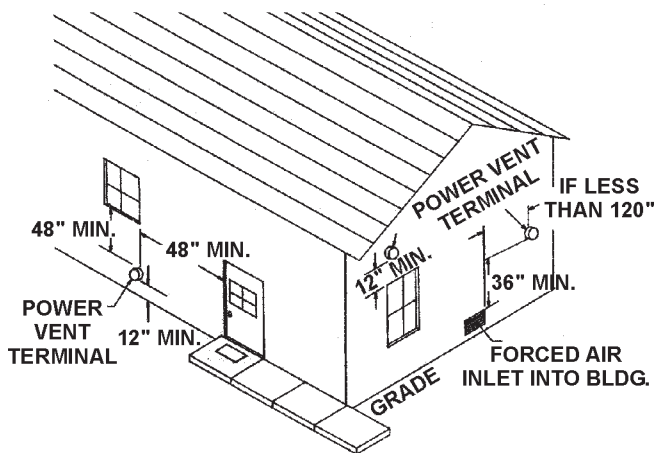


FIGURE 12.

- 18" minimum from other natural draft (gravity) direct vent, power vent or power direct vent appliance inlet and/or outlet vent(s) when directly above or 135° to either side of the center line, see Figure 13.

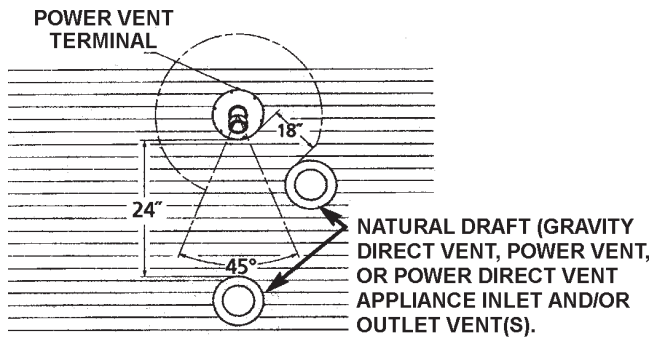


FIGURE 13.

- 24" minimum from any appliance inlet and/or outlet vents when directly below or 45° to either side of center line, see Figure 13.
- 18" minimum in all directions from any obstruction that may interfere, see Figure 14.

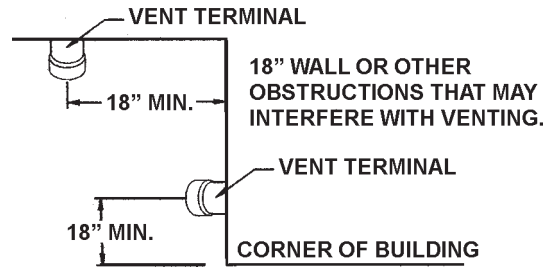


FIGURE 14.

- The location selection must provide clearances for servicing and proper operation of the water heater, see Figure 15.

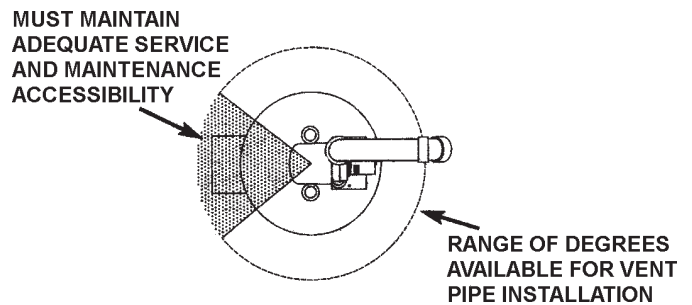


FIGURE 15.

Vent termination must not be within 4 feet of any items such as gas meters, gas valves or other gas regulating equipment.

- The venting system must be installed in a manner which allows inspection of the installation of the venting pipes and joints as well as periodic inspection after installation as required by ANSI Standards.

Vent termination must not be within 4 feet of any items such as gas meters, gas valves or other gas regulating equipment.

Failure to have required clearances between water heater and combustible material will result in a fire hazard.

### VENTING THROUGH ROOF - CLEARANCES

- 0" clearances for 3" (or optional 2" and 4") PVC, ABS, or CPVC Schedule 40 piping from combustible surfaces.
- The Power Vent outlet terminal shall terminate at least 18" above the roof surface, see Figure 16.
- The location selection must provide clearances for servicing and proper operation of the water heater, see Figure 15.
- The venting system must be installed in a manner which allows inspection of the installation of the venting pipes and joints as well as periodic inspection after the installation as required by ANSI Standards.

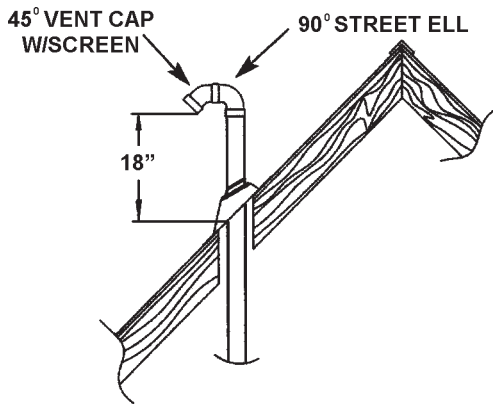


FIGURE 16.

## Insulation Blankets

<b>⚠ WARNING</b>	
<b>Breathing Hazard - Carbon Monoxide Gas</b>	
	<ul style="list-style-type: none"> <li>• Install water heater in accordance with the instruction manual and NFPA 54.</li> <li>• To avoid injury, combustion and ventilation air must be taken from outdoors.</li> <li>• Do not place chemical vapor emitting products near water heater.</li> </ul>
<p>Breathing carbon monoxide can cause brain damage or death. Always read and understand instruction manual.</p>	

Insulation blankets available to the general public for external use on gas water heaters are not necessary with Maytag products. The purpose of an insulation blanket is to reduce the standby heat loss encountered with storage tank heaters. Your Maytag water heater meets or exceeds the National Appliance Energy Conservation Act standards with respect to insulation and standby loss requirements, making an insulation blanket unnecessary.

Should you choose to apply an insulation blanket to this heater, you should follow these instructions (See Figure 7 for identification of components mentioned below). Failure to follow these instructions can restrict the air flow required for proper combustion, potentially resulting in fire, asphyxiation, serious personal injury or death.

- **Do not** apply insulation to the top of the water heater, as this will interfere with safe operation of the draft hood.
- **Do not** cover the outer door, thermostat or temperature & pressure relief valve.
- **Do not** allow insulation to come within 2" (50.8 mm) of the floor to prevent blockage of combustion air flow to the burner.
- **Do not** cover the instruction manual. Keep it on the side of the water heater or nearby for future reference.
- **Do** obtain new warning and instruction labels from Maytag for placement on the blanket directly over the existing labels.

- **Do** inspect the insulation blanket frequently to make certain it does not sag, thereby obstructing combustion air flow.

## Combustion Air and Ventilation for Appliances Located in Unconfined Spaces

**UNCONFINED SPACE** is space whose volume is not less than 50 cubic feet per 1,000 Btu per hour (4.8 m<sup>3</sup> per kW) of the aggregate input rating of all appliances installed in that space. Rooms communicating directly with the space in which the appliances are installed, through openings not furnished with doors, are considered a part of the unconfined space.

In unconfined spaces in buildings, infiltration may be adequate to provide air for combustion, ventilation and dilution of flue gases. However, in buildings of tight construction (for example, weather stripping, heavily insulated, caulked, vapor barrier, etc.), additional air may need to be provided using the methods described in *Combustion Air and Ventilation for Appliances Located in Confined Spaces*.

## Combustion Air and Ventilation for Appliances Located in Confined Spaces

**CONFINED SPACE** is a space whose volume is less than 50 cubic feet per 1,000 Btu per hour (4.8 m<sup>3</sup> per kW) of the aggregate input rating of all appliances installed in that space.

### A. ALL AIR FROM INSIDE BUILDINGS:

(See Figure 9 and 10 on page 11 and Figure 17 below)

The confined space shall be provided with two permanent openings communicating directly with an additional room(s) of sufficient volume so that the combined volume of all spaces meets the criteria for an unconfined space. The total input of all gas utilization equipment installed in the combined space shall be considered in making this determination. Each opening shall have a minimum free area of one square inch per 1,000 Btu per hour (22 cm<sup>2</sup>/kW) of the total input rating of all gas utilization equipment in the confined space, but not less than 100 square inches (645 cm<sup>2</sup>). One opening shall commence within 12 inches (30 cm) of the top and one commencing within 12 inches (30 cm) of the bottom of the enclosures.

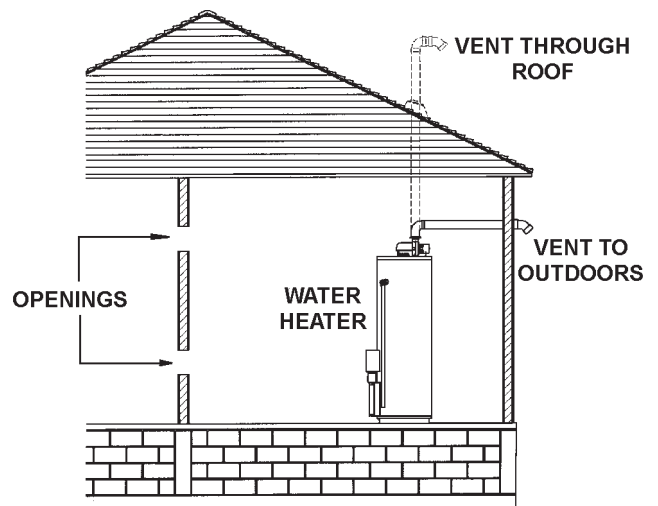
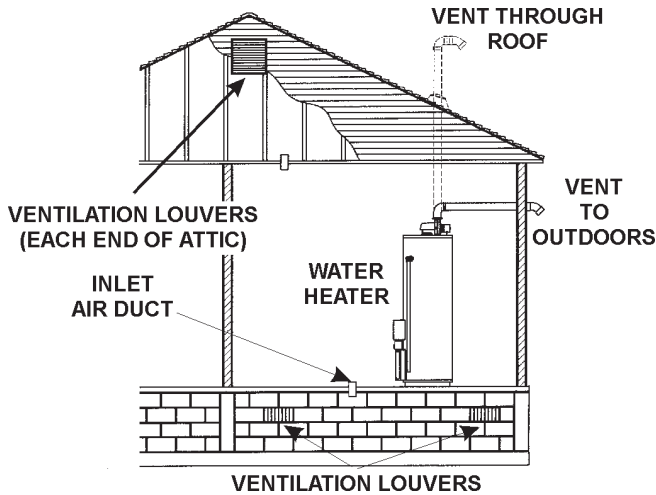


FIGURE 17.

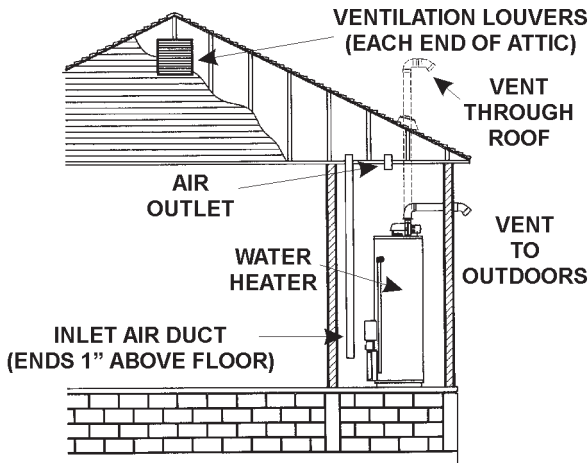
**B. ALL AIR FROM OUTDOORS:** (See Figures 18, 19 and 20)

The confined space shall be provided with two permanent openings, one commencing within 12 inches (30 cm) of the top and one commencing within 12 inches (30 cm) from the bottom of the enclosure. The openings shall communicate directly, or by ducts, with the outdoors or spaces (crawl or attic) that freely communicate with the outdoors.



**FIGURE 18.**

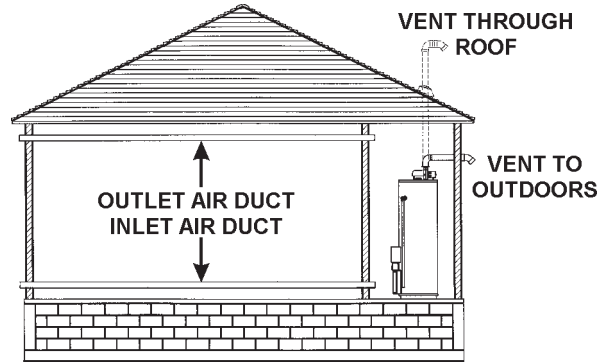
- When directly communicating with the outdoors, each opening shall have a minimum free area of 1 square inch per 4,000 Btu per hour (5.5 cm<sup>2</sup>/kW) of total input rating of all equipment in the enclosure, see Figure 18.
- When communicating with the outdoors through vertical ducts, each opening shall have a minimum free area of 1 square inch per 4,000 BTU per hour (5.5 cm<sup>2</sup>/kW) of total input rating of all equipment in the enclosure, see Figure 19.



**FIGURE 19.**

- When communicating with the outdoors through horizontal ducts, each opening shall have a minimum free area of 1 square inch per 2,000 BTU per hour (11 cm<sup>2</sup>/kW) of total input rating of all equipment in the enclosure, see Figure 20.
- When ducts are used, they shall be of the same cross-sectional area as the free area of the openings to which

they connect. The minimum short side dimension of rectangular air ducts shall not be less than 3 inches (76.2 mm), see Figure 20.



**FIGURE 20.**

- Louvers and Grilles: In calculating free area, consideration shall be given to the blocking effect of louvers, grilles or screens protecting openings. Screens used shall not be smaller than 1/4 inch (6.4 mm) mesh. If the free area through a design of louver or grille is known, it should be used in calculating the size opening required to provide the free area specified. If the design and free area is not known, it may be assumed that wood louvers will be 20-25 percent free area and metal louvers and grilles will have 60-75 percent free area. Louvers and grilles shall be fixed in the open position or interlocked with the equipment so that they are opened automatically during equipment operation.
- Special Conditions Created by Mechanical Exhausting or Fireplaces: operation of exhaust fans, ventilation systems, clothes dryers or fireplaces may create conditions requiring special attention to avoid unsatisfactory operation of installed gas utilization equipment.

**Water Piping**

	<p><b>⚠ DANGER</b></p> <p>Water temperature over 125°F (52°C) can cause severe burns instantly resulting in severe injury or death.</p> <p>Children, elderly, and the physically or mentally disabled are at highest risk for scald injury.</p> <p>Feel water before bathing or showering.</p> <p>Temperature limiting valves are available.</p> <p>Read instruction manual for safe temperature setting.</p>
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**HOTTER WATER CAN SCALD:**

Water heaters are intended to produce hot water. Water heated to a temperature which will satisfy space heating, clothes washing, dish washing, cleaning and other sanitizing needs can scald and permanently injure you upon contact. Some people are more likely to be permanently injured by hot water than others. These include the elderly, children, the infirm, or physically/mentally handicapped. If anyone using hot water in your home fits into one of these groups or if there is a local code or state law requiring a certain temperature water at the hot water tap, then you must take special precautions. In

addition to using the lowest possible temperature setting that satisfies your hot water needs, a means such as a \*mixing valve, shall be used at the hot water taps used by these people or at the water heater. Mixing valves are available at plumbing supply or hardware stores, see Figure 8 on page 9 and Figure 21 below. Valves for reducing point of use temperature by mixing cold and hot water are also available. **Consult Maytag Customer Service (1-800-788-8899).** Follow manufacturer's instructions for installation of the valves. Before changing the factory setting on the thermostat, read the *Temperature Regulation* section in this manual.

See Figure 21 for mixing valve usage.

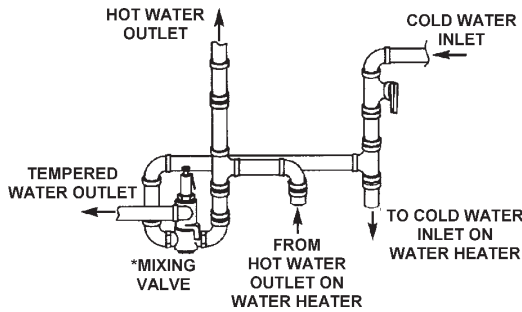


FIGURE 21.

<b>⚠ WARNING</b>
<b>Toxic Chemical Hazard</b>
<ul style="list-style-type: none"> <li>• Do not connect to non-potable water system.</li> </ul>

This water heater shall not be connected to any heating systems or component(s) used with a non-potable water heating appliance.

If a water heater installed in a closed water supply system; such as one having a back-flow preventer, check valve, water meter with a check valve, etc. . . in the cold water supply; means shall be provided to control thermal expansion. Contact the local utility or **call Maytag Customer Service Center at 1-800-788-8899 for an authorized installer on how to control this situation.**

<b>CAUTION</b>
<b>Property Damage Hazard</b>
<ul style="list-style-type: none"> <li>• Avoid water heater damage.</li> <li>• Install thermal expansion tank if necessary.</li> <li>• Do not apply heat to cold water inlet.</li> <li>• Contact qualified installer or Maytag Service Center.</li> </ul>

**NOTE: To protect against untimely corrosion of hot and cold water fittings, it is strongly recommended that di-electric unions or couplings be installed on this water heater when connected to copper pipe.**

Figure 22 shows the typical attachment of the water piping to the water heater. The water heater is equipped with 3/4" NPT water connections for 40,000 Btuh models and 1 inch water connections for 70,000 and 75,000 Btuh models.

**NOTE: If using copper tubing, solder tubing to an adapter before attaching the adapter to the cold water inlet connection. Do not solder the cold water supply line directly to the cold water inlet. It will harm the dip tube and damage the tank.**

- Look at the top cover of the water heater. The water outlet is marked "HOT". Connect the hot water pipe to the hot water outlet on the water heater.
- Look at the top of the water heater. The cold water inlet is marked "COLD". Connect the cold water pipe to the cold water inlet of the water heater.

**NOTE: This water heater is super insulated to minimize heat loss from the tank. Further reduction in heat loss can be accomplished by insulating the hot water lines from the water heater.**

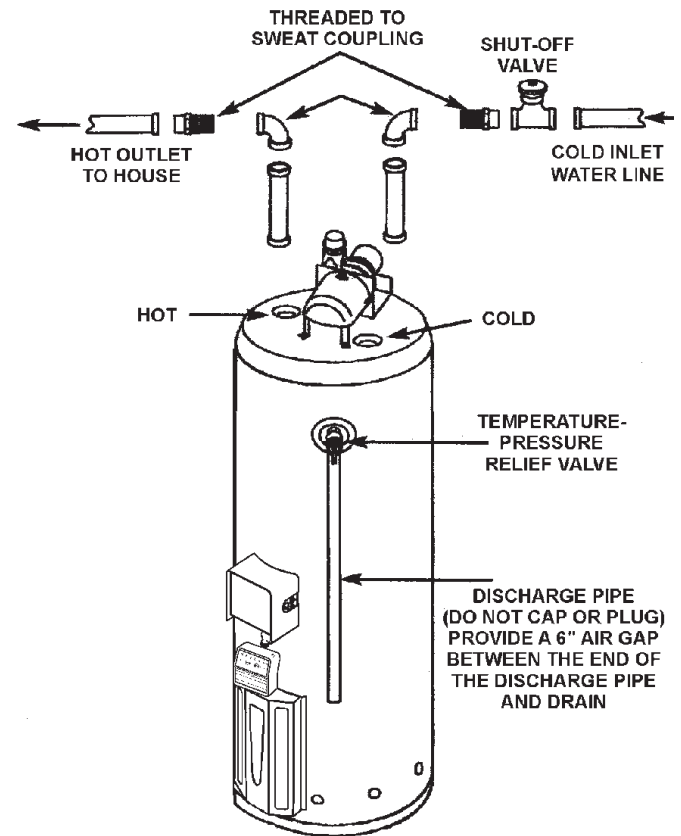


FIGURE 22.

### T & P Valve and Pipe Insulation

Remove insulation for T & P valve and pipe connections from carton.

Fit pipe insulation over the incoming cold water line and the hot water line. Make sure that the insulation is against the top cover of the heater.

Fit T & P valve insulation over valve. Make sure that the insulation does not interfere with the lever of the T & P valve.

Secure all insulation using tape.

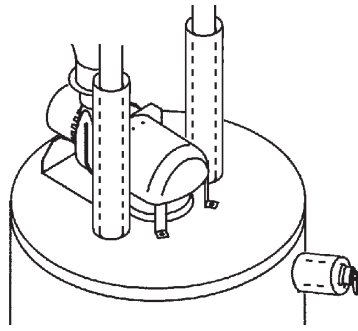


FIGURE 23.

## Temperature-Pressure Relief Valve

	<h1>⚠ WARNING</h1>
	<h2>Explosion Hazard</h2>
	<ul style="list-style-type: none"> <li>• Temperature-pressure relief valve must comply with ANSI Z21.22 and ASME code.</li> <li>• Properly sized temperature-relief valve must be installed in opening provided.</li> <li>• Can result in overheating and excessive tank pressure.</li> <li>• Can cause serious injury or death.</li> </ul>

This heater is provided with a properly certified combination temperature - pressure relief valve by the manufacturer.

The valve is certified by a nationally recognized testing laboratory that maintains periodic inspection of production of listed equipment of materials as meeting the requirements for Relief Valves and Automatic Gas Shut-off Devices for Hot Water Supply Systems, ANSI Z21.22 and the code requirements of ASME.

If replaced, the valve must meet the requirements of local codes, but not less than a combination temperature and pressure relief valve certified as indicated in the above paragraph.

The valve must be marked with a maximum set pressure not to exceed the marked hydrostatic working pressure of the water heater (150 psi = 1,035 kPa) and a discharge capacity not less than the water heater input rate as shown on the model rating plate.

For safe operation of the water heater, the relief valve must not be removed from its designated opening nor plugged.

The temperature-pressure relief valve must be installed directly into the fitting of the water heater designed for the relief valve. Position the valve downward and provide tubing so that any discharge will exit only within 6 inches (153 mm) above, or at any distance below the structural floor. Be certain that no contact is made with any live electrical part. The discharge opening

must not be blocked or reduced in size under any circumstances. Excessive length, over 30 feet (9.14 m), or use of more than four elbows can cause restriction and reduce the discharge capacity of the valve, see Figure 24.

No valve or other obstruction is to be placed between the relief valve and the tank. Do not connect tubing directly to discharge drain unless a 6 inch air gap is provided. To prevent bodily injury, hazard to life, or property damage, the relief valve must be allowed to discharge water in quantities should circumstances demand. If the discharge pipe is not connected to a drain or other suitable means, the water flow may cause property damage.

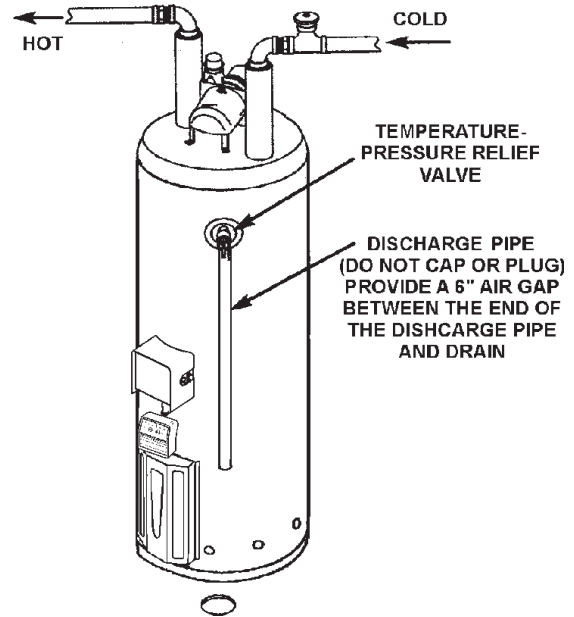


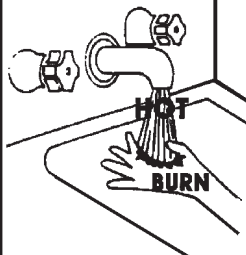
FIGURE 24.

<h1>CAUTION</h1>
<h2>Water Damage Hazard</h2>
<ul style="list-style-type: none"> <li>• Temperature-pressure relief valve discharge pipe must terminate at adequate drain.</li> </ul>

The Discharge Pipe:

- Shall not be smaller in size than the outlet pipe size of the valve, or have any reducing couplings or other restrictions.
- Shall not be plugged or blocked.
- Shall be of material listed for hot water distribution.
- Shall be installed so as to allow complete drainage of both the temperature-pressure relief valve, and the discharge pipe.
- Shall terminate at an adequate drain.
- Shall not have any valve between the relief valve and tank.



	<p><b>⚠ DANGER</b> Water temperature over 125°F (52°C) can cause severe burns instantly resulting in severe injury or death.</p> <p>Children, the elderly, and the physically or mentally disabled are at highest risk for scald injury.</p> <p>Feel water before bathing or showering.</p> <p>Temperature limiting valves are available.</p> <p>Read instruction manual for safe temperature setting.</p>

The temperature-pressure relief valve must be manually operated at least once a year. Caution should be taken to ensure that (1) no one is in front of or around the outlet of the temperature-pressure relief valve discharge line, and (2) the water manually discharged will not cause any bodily injury or property damage because the water may be extremely hot.

If after manually operating the valve, it fails to completely reset and continues to release water, immediately close the cold water inlet to the water heater, follow the draining instructions, and replace the temperature-pressure relief valve with a new one.

## Filling the Water Heater

<p><b>CAUTION</b></p> <p><b>Property Damage Hazard</b></p> <ul style="list-style-type: none"> <li>• Avoid water heater damage.</li> <li>• Fill tank with water before operating.</li> </ul>
---

Never use this water heater unless it is completely full of water. To prevent damage to the tank, the tank must be filled with water. Water must flow from the hot water faucet before turning "ON" gas to the water heater.

To fill the water heater with water:

- Close the water heater drain valve by turning the handle to the right (clockwise). The drain valve is on the lower front of the water heater.
- Open the cold water supply valve to the water heater.

**NOTE: The cold water supply valve must be left open when the water heater is in use.**

- To insure complete filling of the tank, allow air to exit by opening the nearest hot water faucet. Allow water to run until a constant flow is obtained. This will let air out of the water heater and the piping.
- Check all water piping and connections for leaks. Repair as needed.

## Wiring

### USE WITH POWER CORD

The water heater comes equipped with a 7 foot power cord which can be used to connect to a 110/120 volt power source if, (1) local codes allow, and (2) there is a three prong grounded receptacle available. **This unit must have a grounded outlet to operate.**

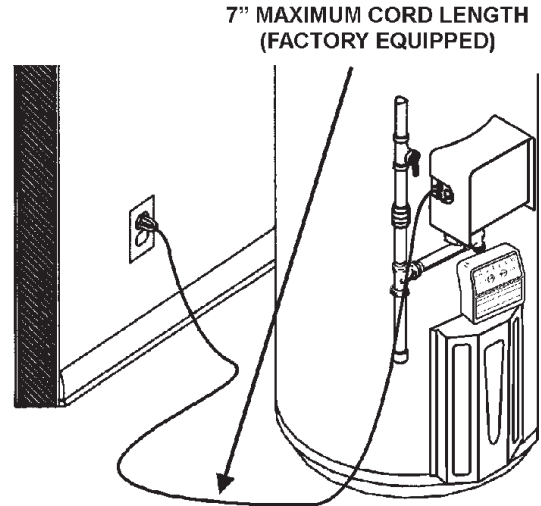




FIGURE 25.

You must provide all wiring, (1) to a receptacle or, (2) between the water heater and junction box when power cord is not used.

Do not use an extension cord. If there is not a suitable receptacle and/or local codes prohibit use of a power cord, field wiring must be provided.

If you are not familiar with electric codes and practices, or if you have any doubt in your ability to connect the wiring to this water heater, obtain the service of a competent electrician or contact your local electric utility.

<p><b>⚠ WARNING</b></p>	
	<p><b>Fire Hazard and Electric Shock Hazard</b></p> <ul style="list-style-type: none"> <li>• Do not use this water heater with any voltage other than shown on the model rating plate.</li> <li>• Failure to use the correct voltage shown on the model rating plate could result in death, serious bodily injury, or property damage.</li> </ul>
	

If wiring from the fuse box or circuit breaker box was aluminum for the old water heater, replace it with copper wire. If you wish to reuse the existing aluminum wire, have the connection at the water heater made by competent electrician. Contact a local electrical contractor and/or the local electric utility.

## USE WITHOUT POWER CORD

If power cord cannot be used, then follow these wiring instructions.

- Provide a way to easily shut off the electric power when working on the water heater. This could be with a circuit breaker or fuse block in the entrance box or a separate disconnect switch.
- Install and connect a circuit directly from the main fuse or circuit breaker box. This circuit must be the right size and have its own fuse or circuit breaker.

A standard 1/2" conduit opening has been made in the water heater junction box for the conduit connection.

- Use wire nuts and connect the power supply wiring to the wires inside the water heater's junction box.
- The water heater must be electrically "grounded" by the installer. The unit will not operate unless it is properly grounded. A green ground screw has been provided on the water heater's junction box. Connect ground wire to this location. For complete grounding details and all allowable exceptions, refer to the current edition of the National Electrical Code, ANSI/NFPA 70.

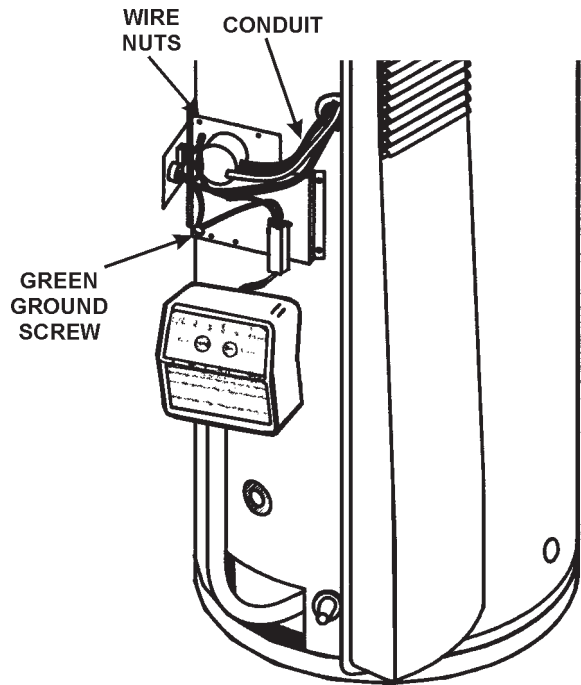


FIGURE 26.

## Wiring Diagram

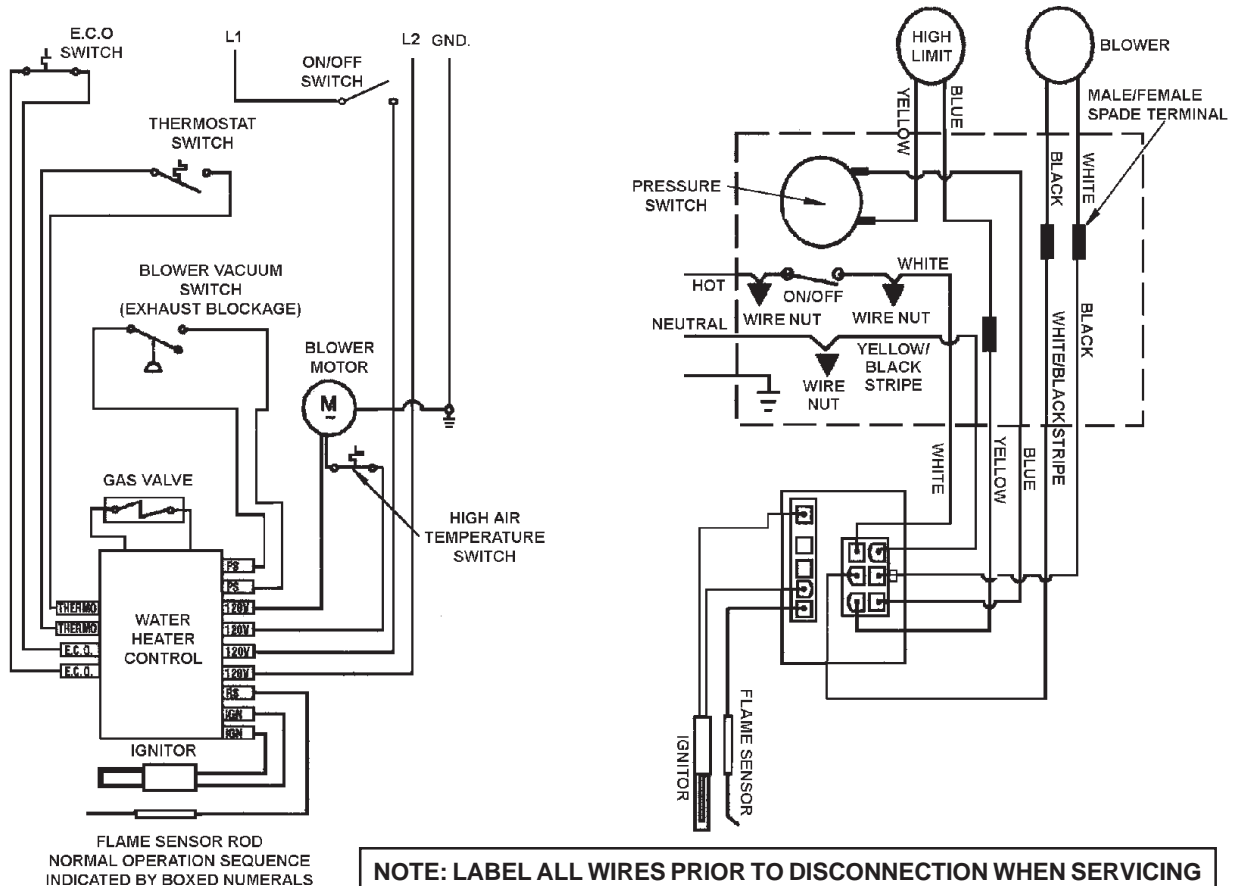



FIGURE 27.

## Venting

To insure proper venting of this gas-fired water heater, the correct vent pipe diameter must be utilized. Do not install other gas appliances on the same vent with this water heater as this will adversely affect the operation on the water heater.

The combustion and ventilation air flow must not be obstructed.

<b>⚠ WARNING</b>	
<b>Carbon Monoxide and Fire Hazard</b>	
	<ul style="list-style-type: none"> <li>• Flue gases may escape if vent pipe is not connected.</li> <li>• Be alert for obstructed, sooted or deteriorated vent system to avoid serious injury or death.</li> <li>• Do not store corrosive chemicals in vicinity of water heater.</li> <li>• Chemical corrosion of flue and vent system can cause serious injury or death.</li> <li>• Improper clearances between water heater and combustible material will result in a fire hazard.</li> </ul>
<p>Breathing carbon monoxide can cause brain damage or death. Always read and understand instruction manual.</p>	

The power vent water heater requires its own (separate) venting system. It cannot be connected to an existing vent pipe or chimney. It must be terminated to the outdoors. Failure to properly install the venting system can result in asphyxiation, a fire or explosion and cause DEATH, SERIOUS BODILY INJURY, OR PROPERTY DAMAGE.

The vent pipe from the water heater must slope upward 1/8" per five feet for any horizontal run.

All vent gases must be completely vented to the outdoors of the structure (dwelling).

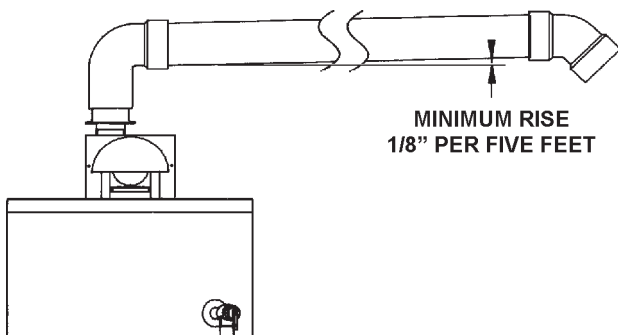


FIGURE 28.

Chemical vapor corrosion of the flue and vent system may occur. If air for combustion contains certain chemical vapors. Spray can propellants, cleaning solvents, refrigerator and air conditioner refrigerants, swimming pool chemicals, calcium and sodium chloride, waxes, bleach and process chemicals are typical compounds which are potentially corrosive.

Horizontal runs must be securely supported at 3 1/2" foot intervals and vertical runs supported at 5 foot intervals.

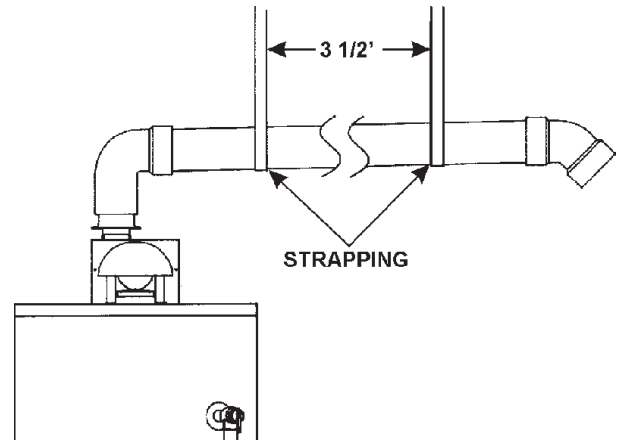


FIGURE 29.

### VENTING THROUGH AN OUTSIDE WALL: 75 GALLON 70,000 AND 75,000 BTU/HR MODELS ONLY (See rating plate for BTU/HR rating)

#### 3" PVC, ABS or CPVC Schedule 40 vent piping:

- A 3" PVC Schedule 40-45° vent cap with wire screen is supplied with the water heater.
- A 3" PVC, ABS or CPVC Schedule 40-90° street ell; used to connect the vent pipe to the water heater when the vent pipe is to be turned horizontally directly off the blower (supplied locally).
- 3" PVC, ABS or CPVC Schedule 40 pipe (must be supplied locally).

#### 3" PVC, ABS OR CPVC SCHEDULE 40 - 90° STREET ELBOW

#### VENT CAP WITH SCREEN

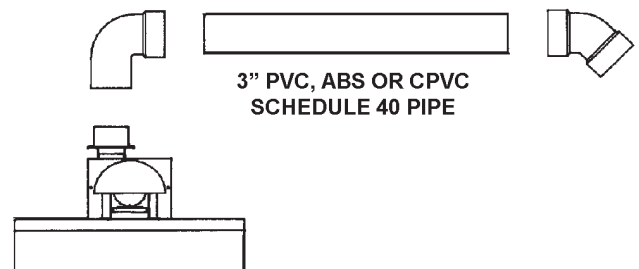


FIGURE 30.

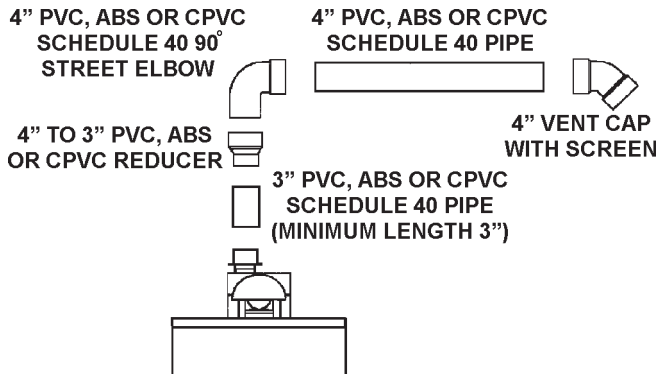
### 75 GALLON 70,000 AND 75,000 BTU/HR MODELS ONLY

- The water heater requires its own (separate) venting system.
- 3" PVC, ABS or CPVC Schedule 40 piping and fittings are acceptable materials for the vent system on all 75 gallon 70,000 and 75,000 BTU/HR models.
- It cannot be connected to existing vent piping or chimney.
- It must terminate horizontally to the outdoors.

**75 GALLON 70,000 AND 75,000 BTU/HR MODELS ONLY - OPTIONAL 4" VENT PIPING**

**4" PVC, ABS or CPVC Schedule 40 vent piping:**

- A wire screen to fit a 4" PCV, ABS or CPVC Schedule 40 - 45° vent cap is supplied with the water heater.
- A 4" PVC, ABS or CPVC Schedule 40 - 45° vent cap (must be supplied locally).
- A 3" PVC, ABS or CPVC Schedule 40 pipe, minimum length of 3" (must be supplied locally), to make vent connection at the blower outlet.
- A 4" to 3" PVC, ABS or CPVC Schedule 40 reducer (must be supplied locally).
- A 4" PVC, ABS or CPVC Schedule 40 - 90° street ell; used to connect the vent pipe to the reducer when the vent pipe is to be turned horizontally off the blower (supplied locally).
- 4" PVC, ABS or CPVC Schedule 40 pipe (must be supplied locally).



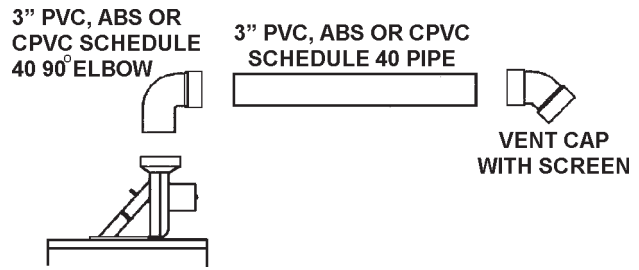
**FIGURE 31.**

- The water heater requires its own (separate) venting system.
- 4" and 3" PVC, ABS or CPVC Schedule 40 piping and fittings are acceptable materials for the vent system on all 75 gallon 70,000 and 75,000 BTU/HR models.
- It cannot be connected to existing vent piping or chimney.
- It must terminate horizontally to the outdoors.

**ALL 40 AND 50 GALLON 40,000 BTU/HR MODELS ONLY**

**3" PVC, ABS or CPVC Schedule 40 vent piping:**

- A 3" PVC Schedule 40 - 45° vent cap with wire screen is supplied with the water heater.
- A 3" PVC, ABS or CPVC Schedule 40 - 90° street ell; used to connect the vent pipe to the water heater when the vent pipe is to be turned horizontally directly off the blower (supplied locally).
- 3" PVC, ABS or CPVC Schedule 40 pipe (must be supplied locally).



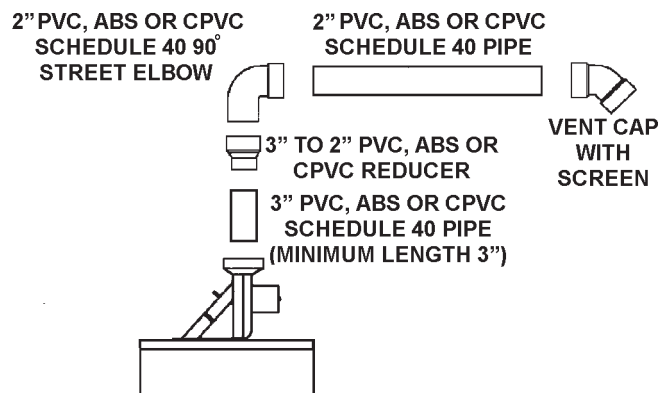
**FIGURE 32.**

- The water heater requires its own (separate) venting system.
- 3" PVC, ABS or CPVC Schedule 40 piping and fittings are acceptable materials for the vent system on all 40 and 50 gallon 40,000 BTU/HR models.
- It cannot be connected to existing vent piping or chimney.
- It must terminate horizontally to the outdoors.

**ALL 40 AND 50 GALLON 40,000 BTU/HR MODELS - OPTIONAL 2" VENT PIPING**

**2" PVC, ABS or CPVC Schedule 40 vent piping:**

- A wire screen to fit a 2" PCV, ABS or CPVC Schedule 40 - 45° vent cap is supplied with the water heater.
- A 2" PVC, ABS or CPVC Schedule 40 - 45° vent cap (elbow) (must be supplied locally).
- A 3" PVC, ABS or CPVC Schedule 40 pipe, minimum length of 3" (must be supplied locally), to make vent connection at the blower outlet.
- A 3" to 2" PVC, ABS or CPVC Schedule 40 reducer (must be supplied locally).
- A 2" PVC, ABS or CPVC Schedule 40 - 90° street ell; used to connect the vent pipe to the reducer when the vent pipe is to be turned horizontally off the blower (supplied locally).
- 2" PVC, ABS or CPVC Schedule 40 pipe (must be supplied locally).



**FIGURE 33.**

- The water heater requires its own (separate) venting system.
- 2" and 3" PVC, ABS or CPVC Schedule 40 piping and fittings are acceptable materials for the vent system on all 40 and 50 gallon 40,000 BTU/HR models.
- It cannot be connected to existing vent piping or chimney.
- It must terminate horizontally to the outdoors.

**NOTE:** See pages 24 and 25 for vertical venting through the roof.

**VENTING SYSTEM EXAMPLE INSTALLATIONS FOR ALL MODELS**

The vent piping **cannot** under any circumstances be run down hill.

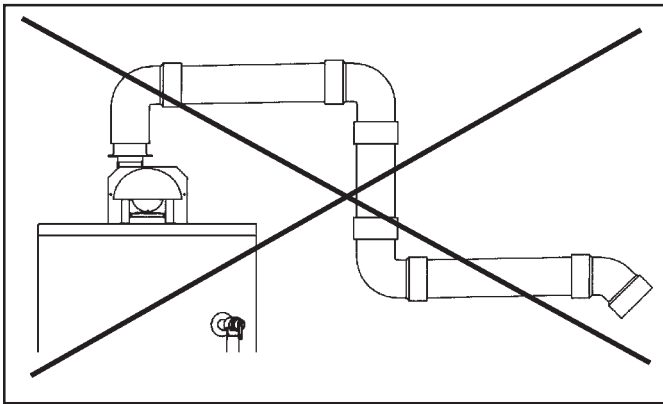


FIGURE 34.

The vent piping may be installed as follows:

- Horizontal runs require a minimum 1/8" rise per five feet

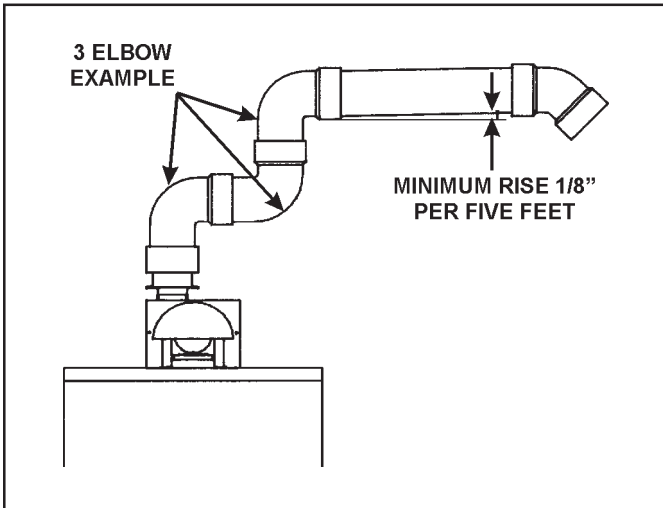


FIGURE 35.

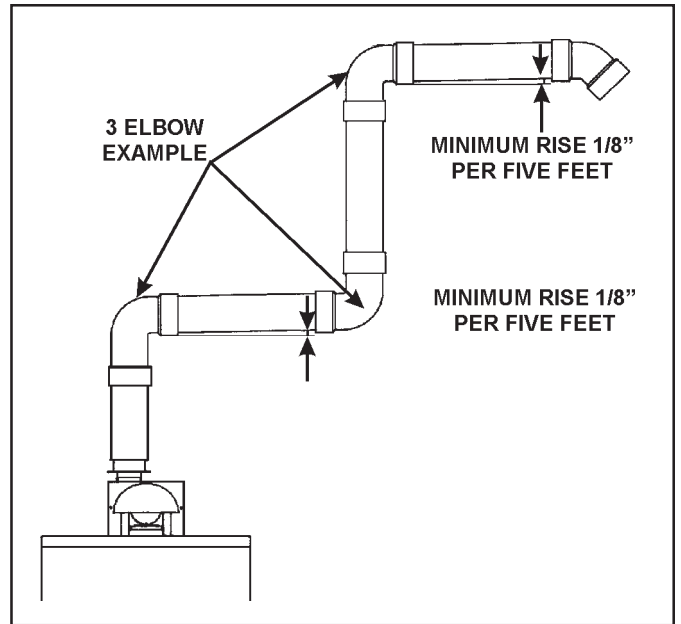


FIGURE 36.

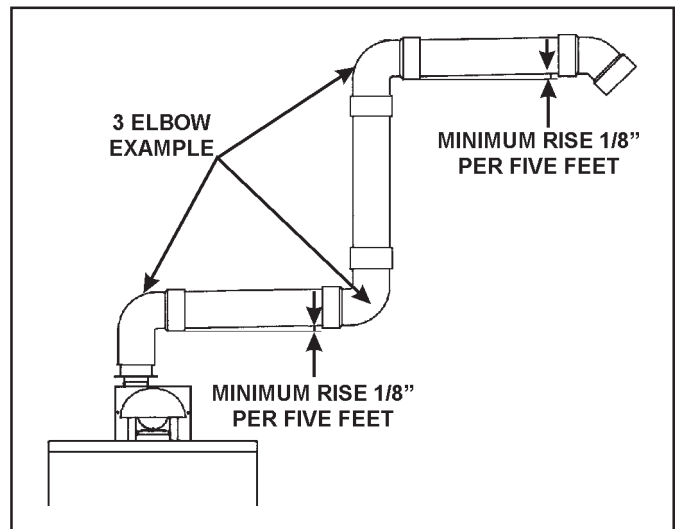


FIGURE 37.

**75 GALLON 70,000 AND 75,000 BTU/HR MODELS**

See chart on following page for maximum length.

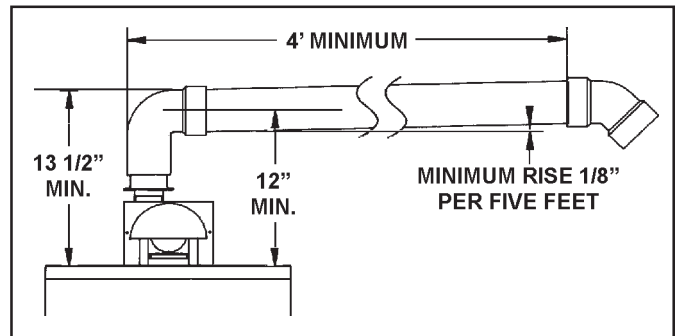
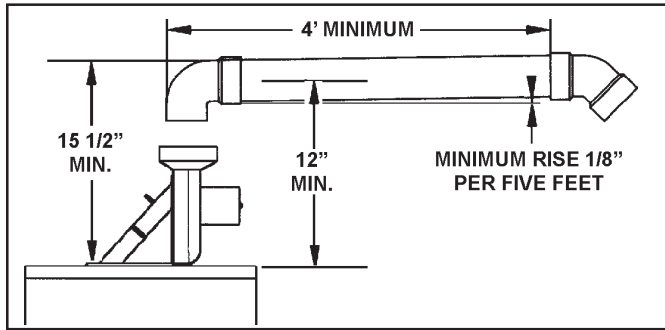


FIGURE 38.

**40 AND 50 GALLON 40,000 BTU/HR MODELS**

See Chart below for maximum length.



**FIGURE 39.**

- The total vertical and horizontal vent run cannot exceed the maximum length with the number of 90° elbows as specified in the following tables. If more are required the venting distance must be reduced 5 feet for every 90° elbow.

**75 GALLON 70,000 AND 75,000 BTU/HR MODELS ONLY**

3" DIA. VENT MAX. LENGTH (FT.)	NUMBER OF 90° ELBOWS*
70	1
65	2
60	3
55	4
50	5
45	6

**75 GALLON 70,000 AND 75,000 BTU/HR MODELS ONLY -  
OPTIONAL 4" VENT PIPING**

4" DIA. VENT MAX. LENGTH (FT.)	NUMBER OF 90° ELBOWS*
110	1
105	2
100	3
95	4
90	5
85	6

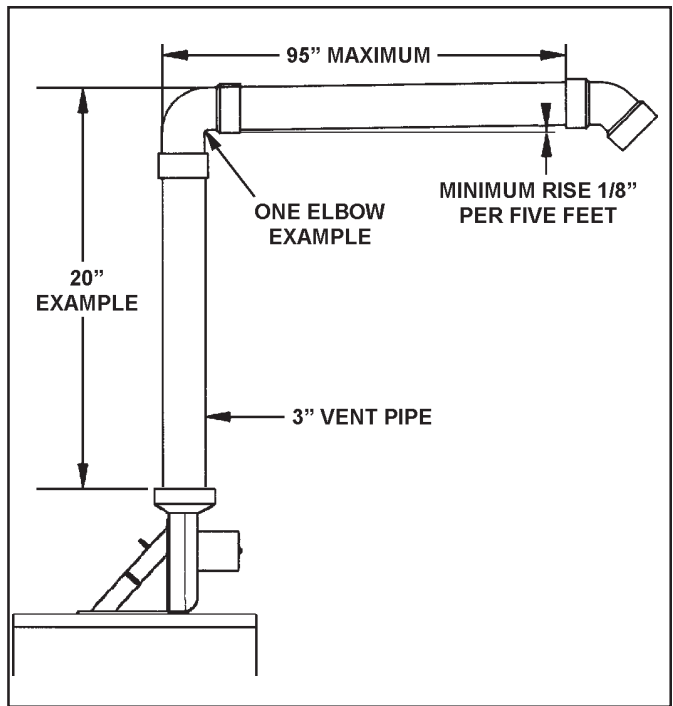
**ALL 40 AND 50 GALLON 40,000 BTH/HR MODELS ONLY**

3" DIA. VENT MAX. LENGTH (FT.)	NUMBER OF 90° ELBOWS*
115	1
110	2
105	3
100	4
95	5
90	6

**ALL 40 AND 50 GALLON 40,000 BTH/HR MODELS ONLY -  
OPTIONAL 2" VENT PIPING**

2" DIA. VENT MAX. LENGTH (FT.)	NUMBER OF 90° ELBOWS*
50	1
45	2
40	3
35	4
30	5
25	6

\* Two 45° elbows are equivalent to one 90° elbow.  
One 90° elbow equals 5 feet of equivalent vent length.

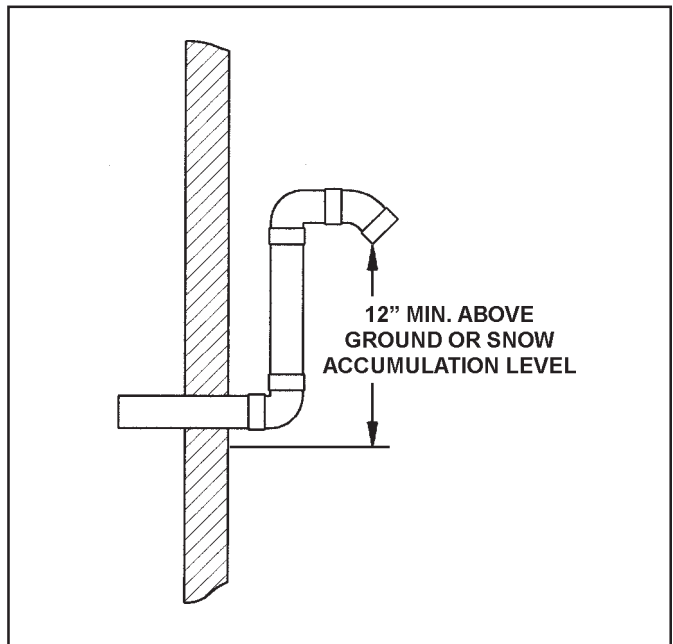


**FIGURE 40.**

- Minimum vent length for all 40,000 BTU/HR input models is 4 feet and 16 inches for all other models.

**VENTING THROUGH AN OUTSIDE WALL WITH LOW GROUND CLEARANCE**

- When the venting piping cannot pass through an outside wall at a height greater than or equal to 12" above the ground (or above snow accumulation level), then the installation can be modified as shown below.



**FIGURE 41.**

- Refer to the tables on page 23 for maximum vent lengths for low ground clearance installations. All installations assume the use of two additional 90° elbows and the standard 45° vent cap with screen outside of the exterior wall.

**75 GALLON 70,000 AND 75,000 BTU/HR MODELS ONLY**

3" DIA. VENT MAX. LENGTH (FT.)	NUMBER OF 90° ELBOWS*(Inside bldg.)
60	1
55	2
50	3
45	4
40	5
35	6

**75 GALLON 70,000 AND 75,000 BTU/HR MODELS ONLY -  
OPTIONAL 4" VENT PIPING**

4" DIA. VENT MAX. LENGTH (FT.)	NUMBER OF 90° ELBOWS*(Inside bldg.)
100	1
95	2
90	3
85	4
80	5
75	6

**ALL 40 AND 50 GALLON 40,000 BTU/HR MODELS**

3" DIA. VENT MAX. LENGTH (FT.)	NUMBER OF 90° ELBOWS*(Inside bldg.)
105	1
100	2
95	3
90	4
85	5
80	6

**ALL 40 AND 50 GALLON 40,000 BTU/HR MODELS -  
OPTIONAL 2" VENT PIPING**

2" DIA. VENT MAX. LENGTH (FT.)	NUMBER OF 90° ELBOWS*(Inside bldg.)
40	1
35	2
30	3
25	4
20	5
15	6

\* Two 45° elbows are equivalent to one 90° elbow.  
One 90° elbow equals 5 feet of equivalent vent length.

**CEMENTING PVC, ABS OR CPVC PIPE AND FITTINGS**

Read and observe all safety information printed on primer, cleaner and cement containers.

<b>CAUTION</b>
<b>Store all Primers, Cleaners and Cement in well ventilated Spaces and Away From Harms way</b>
<ul style="list-style-type: none"> <li>• Primer, cleaner and cements are extremely flammable.</li> <li>• Do not smoke, eat or drink while handling.</li> <li>• Vapors can be harmful or fatal if swallowed.</li> <li>• Seek medical care if ill feeling persists.</li> <li>• Keep out or reach of children.</li> </ul>

Primer, cleaner and cements are extremely flammable. They are harmful or fatal if swallowed. The vapors are harmful They may irritate eyes and skin and can be absorbed through the skin.

Always store primers, cleaners and cements in cool, dry, well ventilated places. Do not store them near heat, sparks or flames. Keep containers closed. Use them in well ventilated areas. Wear impervious clothing while handling. Do not smoke, eat or drink while handling. Wash thoroughly after handling and before eating. Wear eye protection when handling. If swallowed, drink water, do not induce vomiting, and call a physician or poison control center immediately. If inhaled, get fresh air and seek medical attention if ill feeling persists. In case of eye and skin contact, immediately flush with plenty of water for 15 minutes and seek medical attention if irritation persists. **KEEP OUT AND REACH OF CHILDREN.**

All primers, cleaners and cements must meet all local codes and applicable standards of the American Society for Testing Materials Standards.

Before using primers, cleaners and cements, stir or shake, making sure contents of liquid. Do not use if found to be lumpy or jelly-like.

1. Cut pipe ends squarely removing all burrs and dirt.
2. Dry fit pipe and fittings to be connected for proper fit.
3. Clean pipe and fitting with a primer/cleaner.
4. Apply a thin coat of cement to fitting, avoiding puddling inside.
5. Apply a liberal coat of cement to pipe leaving no voids
6. QUICKLY assemble parts while cement is fluid! If you wait too long, re-coat pipes.
7. Push pipe completely into socket of fitting, turning as it goes until it bottoms.
8. Hold pipe and fitting together for 30 seconds. Then carefully clean off excess with a cloth. Allow connections a sufficient time to cure before disturbing.
9. Remember that vent pipes must be adequately and securely supported.

**APPROXIMATE SETTING TIME FOR  
2 1/2" TO 4" PIPE JOINTS**

	MOVEMENT OF JOINTS	COMPLETE SET
90° F TO 150° F	3/4 HR.	8 HRS.
50° F TO 90° F	1 HR.	15 HRS.
0° F TO 50° F	1 1/3 HR.	18 HRS.

**CUTTING OPENING THROUGH AN OUTSIDE WALL AND  
COLLAR INSTALLATION**

After reading the manual and you have determined the location of the opening in the wall, (using the drawing below), cut a 2 1/2" hole for 2" vent piping, 3 1/2" hole for 3" vent piping or a 4 1/2" hole for 4" vent piping through an exterior wall.

**NOTE: When determining location of the opening in the outside wall allow for the 1/8" rise per five feet that has taken place in the horizontal run.**

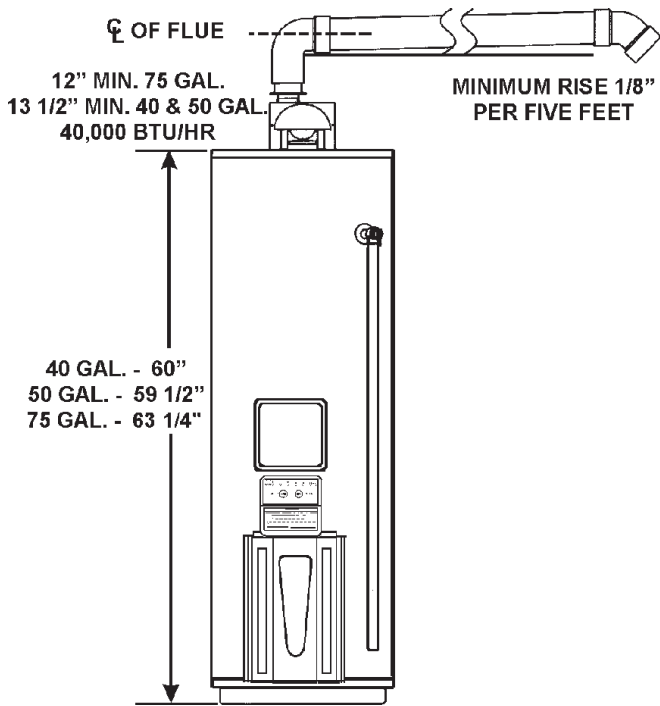


FIGURE 42.

The 3" (or optional 2" or 4") PVC, ABS or CPVC Schedule 40 vent pipe can be run from the water heater through the wall or from the wall to the water heater, whichever is most convenient. The vent pipe must extend a minimum of 1 1/2" through the exterior wall. Extending the vent cap as far as possible from the surface of the exterior wall will help minimize discoloration of the wall in this area which may be caused by the flue gases.

**NOTE:** that the inside collar must be slipped over the vent piping before locating the pipe through the wall. Before securing the inside and outside collars to the wall, use a silicone sealer between pipe and opening to insure a water and air tight seal.

**INSTALLATION SHOWING USE OF PVC, ABS OR CPVC PIPE**

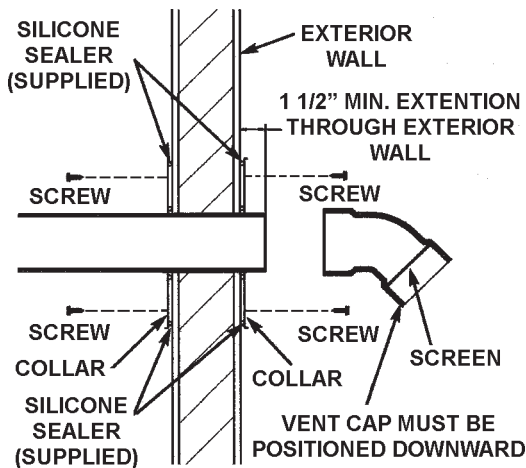


FIGURE 43.

**CONNECTING PVC, ABS OR CPVC PIPE VENT TO BLOWER**

- If making an immediate horizontal run of vent off the blower, a 3" PVC, ABS or CPVC Schedule 40 (supplied locally) elbow is required. Place the elbow in the required direction on the blower and using 3 sheet metal screws, attach the elbow.

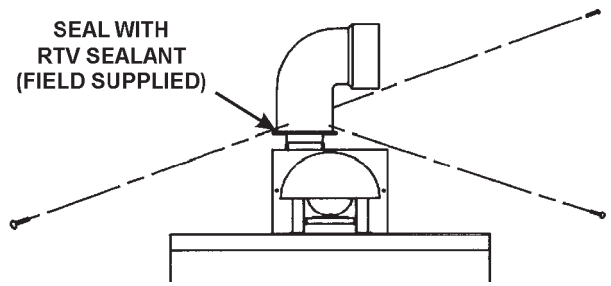


FIGURE 44.

- If there is to be a vertical run of vent from blower, the 3" PVC, ABS or CPVC pipe must be attached to the blower using 3 sheet metal screws.

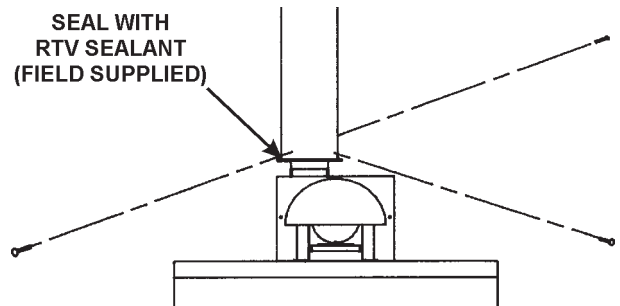


FIGURE 45.

- If the optional 2" vent piping is to be used (40,000 BTU/HR. models only), the 2" street elbow, 3" to 2" reducer and 3" (minimum) section of 3" PVC, ABS or CPVC pipe must be supplied locally. The 3" (minimum) section of 3" PVC, ABS or CPVC pipe must be attached to the blower using 3 sheet metal screws,
- If the optional 4" vent piping is to be used (70,000 BTU/HR. and higher models only), the 4" street elbow, 4" to 3" reducer and 3" minimum section of 3" PVC, ABS or CPVC pipe must be supplied locally. The 3" (minimum) section of 3" PVC, ABS or CPVC pipe must be attached to the blower using 3 sheet metal screws.

**VENTING THROUGH A ROOF - ALL MODELS**

**3" PVC, ABS or CPVC Schedule 40 vent piping:**

- A 3" PVC Schedule 40 - 45° vent cap with wire screen is supplied with the water heater.
- 3" PVC, ABS or CPVC Schedule 40 piping and fittings are acceptable materials for the vent system on all models and must be supplied locally.

**75 GALLON 70,000 AND 75,000 BTU/HR MODELS ONLY - OPTIONAL 4" VENT PIPING**

- A wiring screen to fit a 4" PVC, ABS or CPVC Schedule 40 - 45° vent cap is supplied with the water heater.
- A 3" PVC, ABS or CPVC Schedule 40 pipe, minimum length of 3" (must be supplied locally), to make vent connection at the blower outlet.
- A 4" to 3" PVC, ABS or CPVC Schedule 40 reducer (must be supplied locally).



- 4" and 3" PVC, ABS or CPVC Schedule 40 piping and fittings are acceptable materials for vent system on all 75 gallon 70,000 and 75,000 BTU/HR models and must be supplied locally.

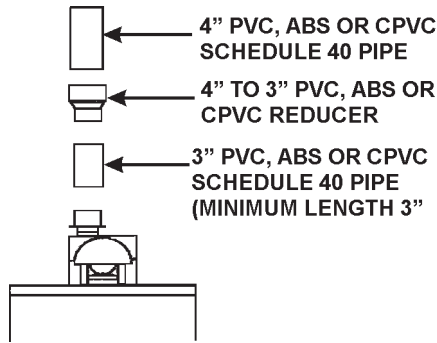


FIGURE 46.

**ALL 40 AND 50 GALLON 40,000 BTU/HR MODELS - OPTIONAL 2" VENT PIPING**

**2" PVC, ABS or CPVC Schedule 40 vent piping:**

- A wire screen to fit 2" PVC, ABS or CPVC Schedule 40 - 45° vent cap is supplied with the water heater.
- A 3" PVC, ABS or CPVC Schedule 40 pipe, minimum length of 3" (must be supplied locally), to make vent connection at the blower outlet.
- A 3" to 2" PVC, ABS or CPVC Schedule 40 reducer (must be supplied locally).
- 2" and 3" PVC, ABS or CPVC Schedule 40 piping and fittings are acceptable materials for the vent system on all 40 and 50 gallon 40,000 BTU/HR models and must be supplied locally.

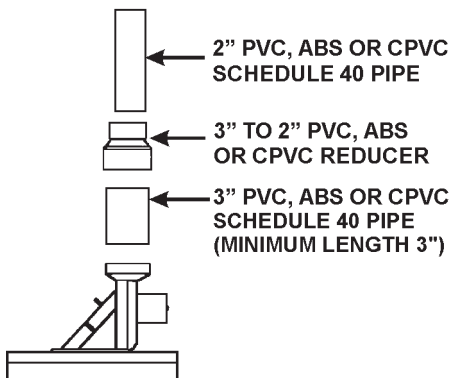


FIGURE 47.

- The water heater requires its own (separate) venting system.
- It cannot be connected to existing vent piping or chimney.
- It must terminate vertically to the outdoors.
- Typical installation(s) in next column.
- Refer to "Cementing PVC, ABS or CPVC pipe and fittings" on page 23 and "Connecting Vent to Blower" on page 24.

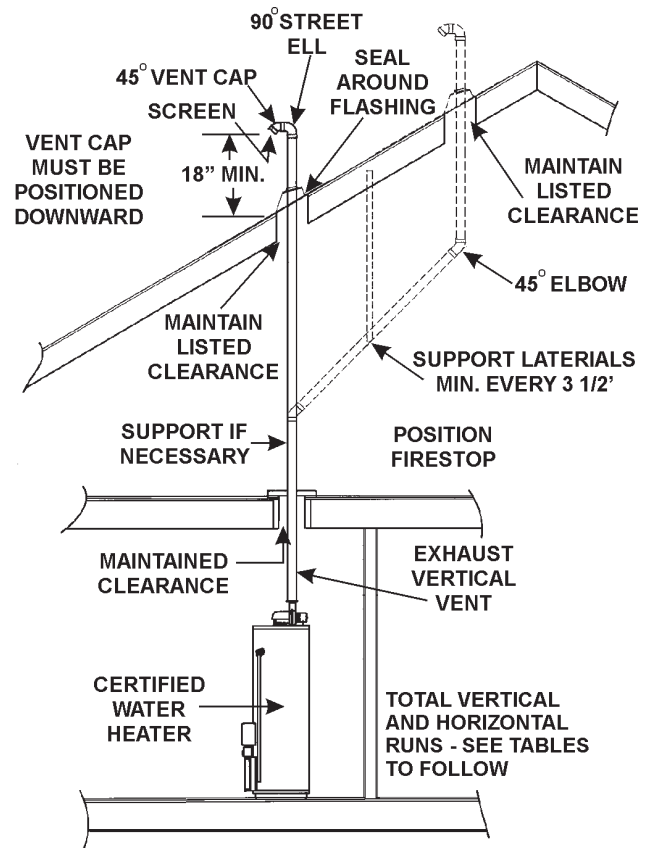


FIGURE 48.

- The total vertical and horizontal vent runs cannot exceed the maximum length with the number of 90° elbows as specified in the tables to follow. If more elbows are required, the venting distance must be reduced 5 feet for every 90° elbow.

**75 GALLON 70,000 AND 75,000 BTU/HR MODELS ONLY**

3" DIA. VENT MAX. LENGTH (FT.)	NUMBER OF 90° ELBOWS*
70	1
65	2
60	3
55	4
50	5
45	6

**75 GALLON 70,000 AND 75,000 BTU/HR MODELS ONLY - OPTIONAL 4" VENT PIPING**

4" DIA. VENT MAX. LENGTH (FT.)	NUMBER OF 90° ELBOWS*
110	1
105	2
100	3
95	4
90	5
85	6

**ALL 40 AND 50 GALLON 40,000 BTH/HR MODELS ONLY**

3" DIA. VENT MAX. LENGTH (FT.)	NUMBER OF 90° ELBOWS*
115	1
110	2
105	3
100	4
95	5
90	6

**ALL 40 AND 50 GALLON 40,000 BTH/HR MODELS ONLY -  
OPTIONAL 2" VENT PIPING**

2" DIA. VENT MAX. LENGTH (FT.)	NUMBER OF 90° ELBOWS*
50	1
45	2
40	3
35	4
30	5
25	6

\* Two 45° elbows are equivalent to one 90° elbow.  
One 90° elbow equals 5 feet of equivalent vent length.

**Gas Piping**

**⚠ WARNING**

**Fire and Explosion Hazard**

- Do not use water heater with any gas other than the gas shown on the rating plate.
- Excessive pressure to gas control valve can cause serious injury or death.
- Turn off gas lines during installation.
- Contact qualified installer or service agency.

Make sure the gas supplied is the same type listed on the model rating plate. The inlet gas pressure must not exceed 14 inch water column (2.6kPa) for natural and propane (L.P.) gas. The minimum inlet gas pressure listed on the rating plate is for the purpose of input adjustment. If the gas control valve is subjected to pressures exceeding 1/2 pound per square inch (3.5kPa), the damage to the gas control valve could result in a fire or explosion from leaking gas.

If the main gas line Shut-off serving all gas appliances is used, also turn "OFF" the gas at each appliance. Leave all gas appliances shut "OFF" until the water heater installation is complete.

A gas line of sufficient size must be run to the water heater. Consult the current edition of National Fuel Gas Code ANSI Z223.1/NFPA 54 and your gas supplier concerning pipe size.

There must be:

- A readily accessible manual shut off valve in the gas supply line serving the water heater, and
- A drip leg (sediment trap) ahead of the gas control valve to help prevent dirt and foreign materials from entering the gas control valve.
- A flexible gas connector or a ground joint union between the shut off valve and control valve to permit servicing of the unit.

Be sure to check all the gas piping for leaks before lighting the water heater. Use a soapy water solution, not a match or open flame. Rinse off soapy solution and wipe dry.

The minimum inlet gas pressure shown on the rating plate is that which will permit firing at the rated input.

**⚠ WARNING**

**Breathing Hazard - Carbon Monoxide Gas**

- High altitude orifice must be installed for operation above 3,300 ft. (1,006 m) or 5,500 ft. (1,676 m) for a high altitude models.
- Contact a qualified installer or service agency.

Breathing carbon monoxide can cause brain damage or death. Always read and understand instruction manual.

If a standard model is installed above 3,300 feet (1,006 m) or a high altitude model is installed above 5,500 feet (1,676 m) the input rating should be reduced at the rate of 4 percent for each 1,000 feet (305 m) above sea level which requires replacement of the burner orifice in accordance with National Fuel Gas Code ANSI Z223.1/NFPA 54. **Contact Maytag Customer Service Center at 1-800-788-8899 or your local gas supplier or call for further information.**

Failure to replace the standard orifice with a high altitude orifice when installed at elevations above 3,300 feet (1,006 m) or above 5,500 feet (1,676 m) for high altitude model could result in improper and inefficient operation of the appliance, producing carbon monoxide gas in excess of safe limits, which could result in serious injury or death. **Contact Maytag Customer Service at 1-800-788-8899 or your local gas supplier for any specific changes which may be required in your area.**

**⚠ WARNING**

**Fire and Explosion Hazard**

- Use joint compound or tape compatible with propane.
- Leak test before operating heater.
- Disconnect gas piping and shut-off valve before pressure testing system.

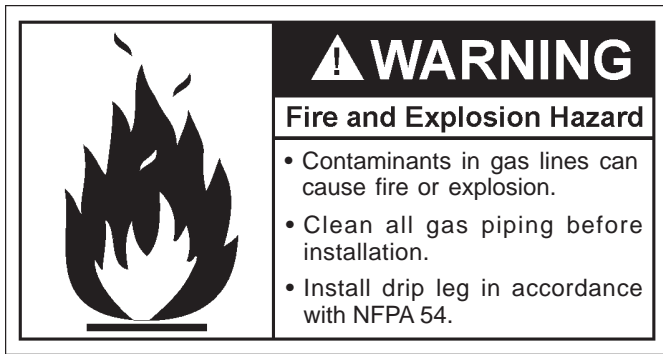
Use pipe joint compound or teflon tape marked as being resistant to the action of petroleum (Propane [L.P.]) gases.

The appliance and its gas connection must be leak tested before placing the appliance in operation.

The appliance and its individual Shut-off valve shall be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 pound per square inch (3.5kPa). It shall be isolated from the gas supply piping system by closing its individual manual Shut-off valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 pound per square inch (3.5kPa).

Connecting the gas piping to the gas control valve of the water heater can be accomplished by either of the two methods, shown in Figures 49 and 50.

## Sediment Traps



Contaminants in the gas lines may cause improper operation

of the gas control valve that may result in fire or explosion. Before attaching the gas line be sure that all gas pipe is clean on the inside. To trap any dirt or foreign material in the gas supply line, a drip leg (sometimes called a sediment trap) must be incorporated in the piping. The drip leg must be readily accessible. Install in accordance with the *Gas Piping* section. Refer to the current edition of the National Fuel Gas Code, ANSI Z223.1/NFPA 54.

A sediment trap shall be installed as close to the inlet of the water heater as practical at the time of water heater installation. The sediment trap shall be either a tee fitting with a capped nipple in the bottom outlet or other device recognized as an effective sediment trap. If a tee fitting is used, it shall be installed in conformance with one of the methods of installation, shown in Figures 49 and 50.

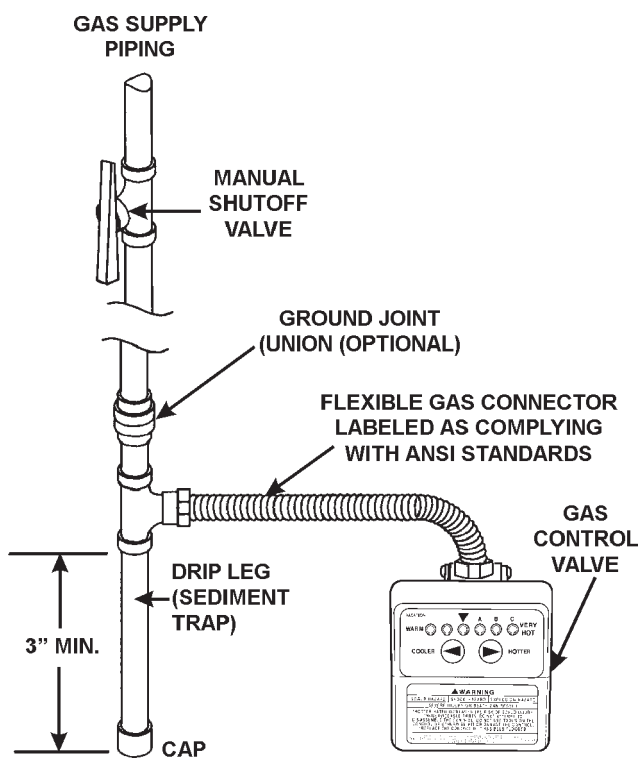


FIGURE 49. GAS PIPING WITH FLEXIBLE CONNECTOR.

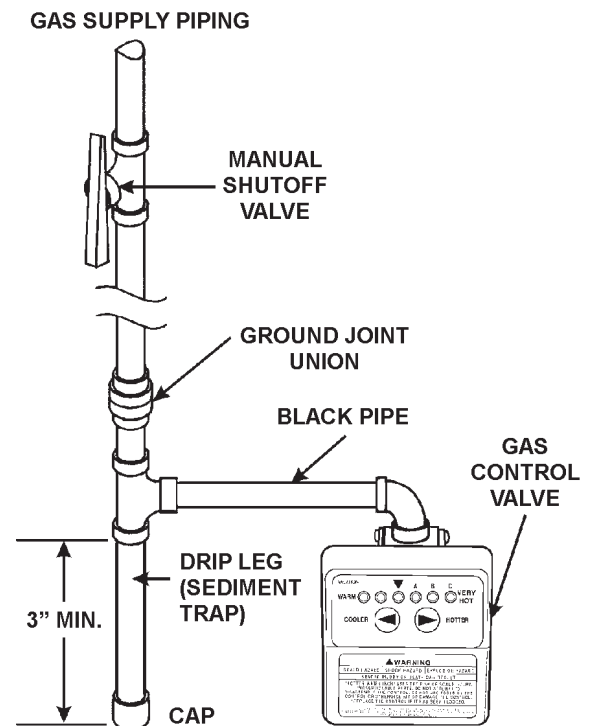


FIGURE 50. GAS PIPING WITH ALL BLACK IRON PIPE TO GAS CONTROL.

### CHECK FOR LEAKS

Be sure to check all your gas pipes for leaks before operating your water heater. Use a soapy water solution, not a match or open flame. Check the factory gas fittings after the main burner is turned "ON". Use a soapy water solution for this, too.

# OPERATING INSTRUCTIONS

This water heater is equipped with an electronically operated venting system and electronic control. For the burner to come on, the water heater thermostat must call for heat. Then the system will begin sequencing, each section proving itself before gas is allowed to flow to the burner.

## BEFORE THE WATER HEATER WILL OPERATE:

1. The control system must be connected to a grounded 110/120 volt power supply. The control system has an overall rating of 2 amps. The water heater must be securely and adequately grounded in accordance with local codes and with the current edition of the National Electrical Code ANSI/NFPA 70.
2. The ON/OFF rocker switch, located on the control box above the thermostat must be in the "ON" position for the electrical control system to operate allowing the gas portion to operate (ignite burner).

3. The venting manual reset switch must be in the closed position. See "Venting Manual Reset Switch" in the "Troubleshooting" section.

4. There is a non-resettable hi-limit switch in the thermostat, which must be good (closed) for the thermostat to be operated. See "High Temperature Limit Switch" in the "Troubleshooting" section.

## OPERATION

When the thermostat calls for heat, gas is allowed to flow to a (N/O) pressure switch closing it. An electrical circuit is then made to the blower, turning it on. When the blower has achieved sufficient venting, the air pressure switch will close. A 120 volt circuit will be completed through the venting manual reset switch and on the 120 volt gas valve. The 120 volt gas valve will open allowing gas to flow to the burner. The hot surface ignitor will establish a main burner flame.

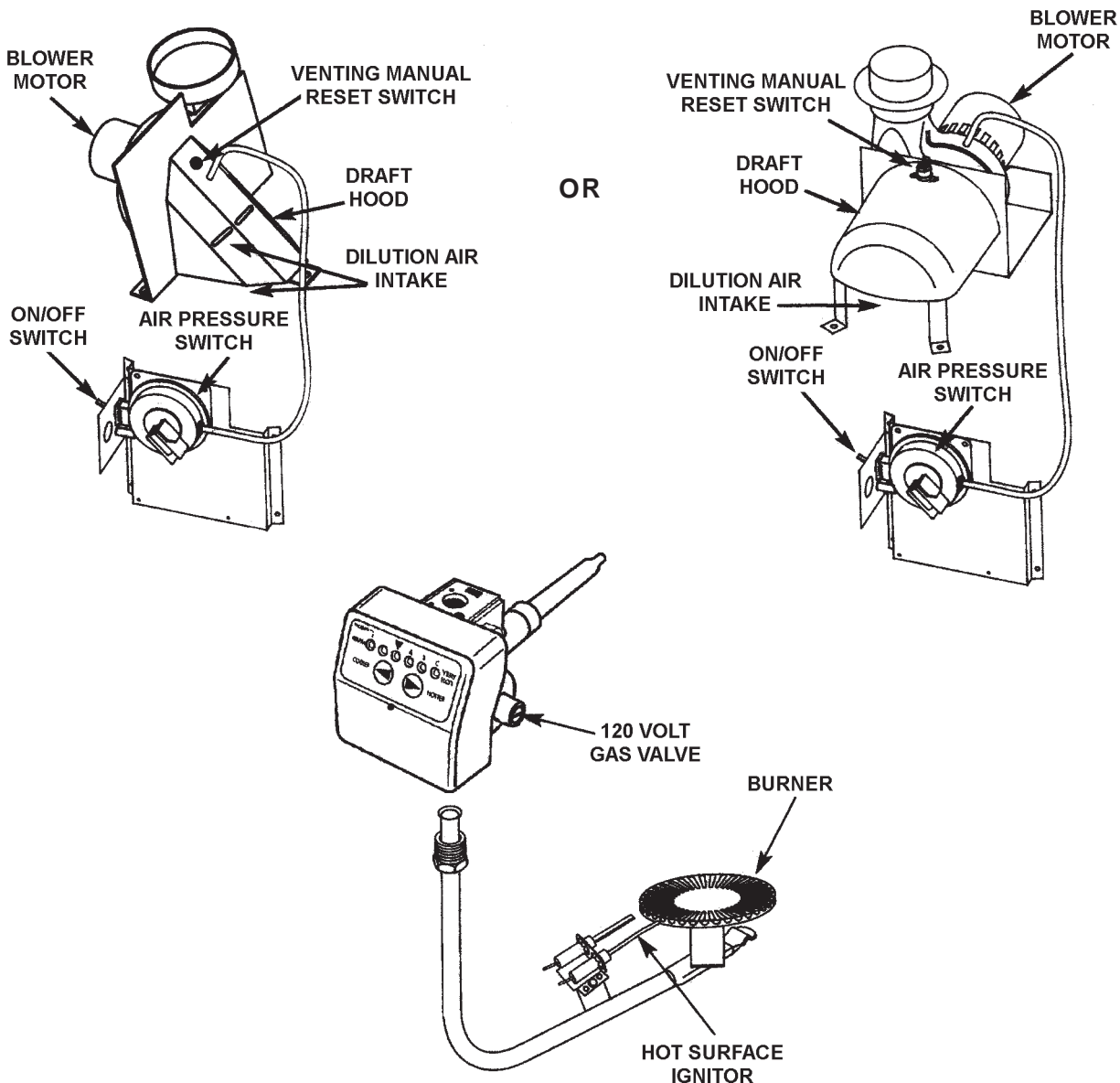


FIGURE 51.

## Operating

### **⚠ WARNING**

#### **Before Operating Propane Gas Water Heaters**

- Propane (LP) Gas is heavier than air.
- If a leakage occurs it will settle near the ground.
- Search for odor by sniffing at ground level.
- Before operating system or turning on an electrical light switch, make sure there is no accumulated gas in the area.
- Read "For your safety" located on the cover of this manual and then leave the premises.

Propane gas is heavier than air. Should there be a leak in the system, the gas will settle near the ground. Basements, crawl spaces, skirted areas under manufactured (mobile) homes (even when ventilated), closets and areas below ground level will serve as pockets for the accumulated gas in the area. Search for odor of gas by sniffing at ground level in the vicinity of the appliance. If odor is detected, follow steps indicated at "For Your Safety" on the cover of this manual then leave the premises.

Operating instructions are located on front of the water heater, above or to the side of the gas control valve, see page 30.

#### **CHECK FOR LEAKS**

Be sure to check all your gas pipes for leaks before operating your water heater. Use a soapy water solution, not a match or open flame. Check the factory gas fittings when the main burner is turned "ON".

#### **WATER HEATING IGNITION SEQUENCE**

**(Make sure gas and electric power are connected properly)**

1. The ignition control module is powered and monitors the system, waiting for a call for heat from the thermostat.
2. The thermostat calls for heat by reading a resistance value within a given range directly proportional to water temperature.
3. The control module:
  - a. Checks the pressure switch for an open circuit.
  - b. Energizes the blower.
  - c. Checks the pressure switch for a closed circuit to prove draft.
  - d. Sends line voltage to the hot surface igniter with a 20-second warm up period.
  - e. Opens the gas valve and checks the sensing rod for flame.
4. The burner heats the water to the desired thermostat setting.
  - a. The resistance in the thermostat rises to the value selected by the temperature control knob.
  - b. The control module closes the gas valve and 5 seconds later, removes power from the blower.

5. Cycle is completed.

#### **CONTROL SEQUENCE - HOT SURFACE DIRECT IGNITION**

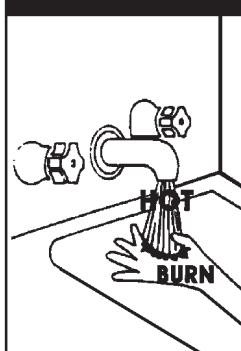
Pre-purge	5 sec.
HSI Warm-Up	20 sec.
Ignition Activation Period	4 sec.
Flame Recognition Period	1 sec.
Ignition Trial	4 sec.
Interpurge	5 sec.
Post-purge	5 sec.
Retries	2
Reset from lockout	1 hr.
Flame Sensing (Nominal) HSI Off/Run Mode	4.0 $\mu$ VDC

## Temperature Regulation

Short repeated heating cycles caused by small hot water uses can cause temperatures at the point of use to exceed the thermostat by up to 30°F. If you experience this type of use you should consider using lower temperature settings to reduce scald hazards.

Any water heater's intended purpose is to heat water. Hot water is needed for cleansing, cleaning, and sanitizing (bodies, dishes, clothing). Untempered hot water can present a scald hazard. Depending on the time element, and the people involved (adults, children, elderly, infirm, etc.) scalding may occur at different temperatures.

### **⚠ DANGER**



Water temperature over 125°F (52°C) can cause severe burns instantly resulting in severe injury or death.

Children, the elderly, and the physically or mentally disabled are at highest risk for scald injury.

Feel water before bathing or showering.

Temperature limiting valves are available.

Read instruction manual for safe temperature setting.

**HOTTER WATER CAN SCALD:** Water heaters are intended to produce hot water. Water heated to a temperature which will satisfy space heating, clothes washing, dish washing, and other sanitizing needs can scald and permanently injure you upon contact. Some people are more likely to be permanently injured by hot water than others. These include the elderly, children, the infirm, or physically/mentally handicapped. If anyone using hot water in your home fits into one of these groups or if there is a local code or state law requiring a certain temperature water at the hot water tap, then you must take special precautions. In addition to using the lowest possible temperature setting that satisfies your hot water needs, a means such as a mixing valve, shall be used at the hot water taps used by these people or at the water heater. Mixing valves are available at plumbing supply or hardware stores, see Figure 8 on page 9 and Figure 21 on page 15. Valves for reducing point of use temperature by mixing cold and hot water

are also available. **Consult Maytag Customer Service (1-800-788-8899)**. Follow manufacturer's instructions for installation of the valves. Before changing the factory setting on the thermostat, read the *Temperature Regulation* section in this manual, see Figure 52.

Never allow small children to use a hot water tap, or to draw their own bath water. Never leave a child or handicapped person unattended in a bathtub or shower.

**NOTE:** A water temperature range of 120°F-140°F (49°C-60°C) is recommended by most dishwasher manufacturers.

The thermostat of this water heater has been factory set at its lowest position, to reduce the risk of scald injury. It is adjustable and must be reset to the desired temperature setting. The mark (▼) HOT indicative of approximately 120°F (49°C) is preferred starting point. Some states have a requirement for a lower setting. If you need hotter water, follow directions for temperature adjustment, but beware of the warnings in this section.

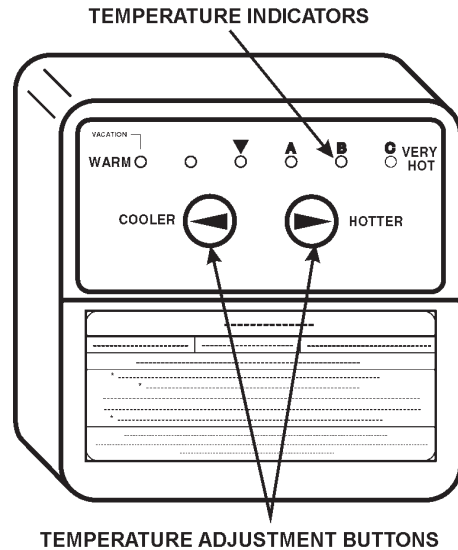
Pressing the "COOLER" button decreases temperature and pressing the "HOTTER" button increases the temperatures.

Should overheating occur or the gas supply fail to shut off, turn off the manual gas control valve to the appliance.

To avoid any unintentional changes in water temperature settings, the control has a tamper resistant feature for changing the temperature setting. To change the temperature setting follow these instructions:

1. "Wake Up" the temperature indicators by holding down both "COOLER" and "HOTTER" temperature adjustment buttons at the same time for one second, see Figure 49. One or two of the temperature indicators will light up. These indicators will only remain on for 30 seconds if no further buttons are pressed. After 30 seconds the control will go back to "Sleep" mode.
2. Release both temperature adjustment buttons.
  - a. To decrease the temperature press and release the "COOLER" button until the desired setting is reached.
  - b. To increase the temperature press and release the "HOTTER" button until the desired setting is reached.

**NOTE:** Holding down the button will not continue to lower or raise the temperature setting. The button must be pressed and released for each temperature change desired.



Temperature Setting	Display ▼ A B C	Time to Produce 2nd & 3rd Degree Burns on Adult Skin
C = Flashing = approx. 160°F	○ ○ ○ ○ ○ ●	About 1/2 seconds
C = Approx. 150°F	○ ○ ○ ○ ○ ●	About 1 1/2 seconds
B = Approx. 140°F	○ ○ ○ ○ ● ○	Less than 5 seconds
A = Approx. 130°F	○ ○ ○ ● ○ ○	About 30 seconds
▼ = Approx. 120°F	○ ○ ● ○ ○ ○	More than 5 minutes
WARM = Approx. 80°F	● ○ ○ ○ ○ ○	-----

FIGURE 52.

**NOTE:** Water temperature range of 120°F-140°F recommended by most dishwasher manufacturers.

Should overheating occur or the gas supply fail to shut off, turn "OFF" the manual gas control valve to the appliance.

# OPERATING INSTRUCTIONS

## FOR YOUR SAFETY READ BEFORE LIGHTING



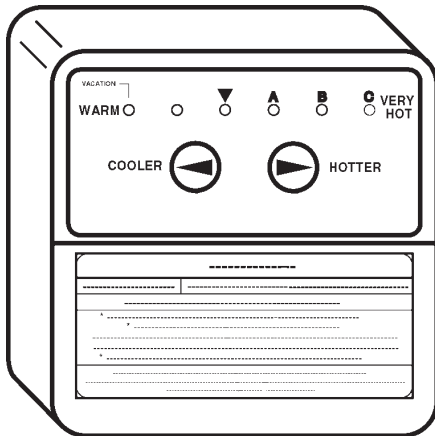
**WARNING:** If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.



**BEFORE OPERATING: ENTIRE SYSTEM MUST BE FILLED WITH WATER AND AIR PURGED FROM ALL LINES.**

- A. This appliance does not have a pilot. It is equipped with an ignition device which automatically lights the burner. **Do NOT try to light the burner by hand.**
- B. **BEFORE LIGHTING** smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
- WHAT TO DO IF YOU SMELL GAS:**
- Do not try to light any appliance.
  - Do not touch any electric 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.
- C. Use only your hand to push in or turn the gas control button. Never use tools. If the control button will not push in, don't try to repair them, call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D. Do not use this appliance if any part has been under water. Immediately contact a qualified installer or service agency to replace a flooded water heater. Do not attempt to repair the unit! It must be replaced!

## LIGHTING INSTRUCTIONS



1. STOP! Read the safety information above on this label.
  2. Set the ON/OFF switch on the control box to the "ON" position.
  3. Set the thermostat to the lowest setting by first pressing the COOLER ⊖ and HOTTER ⊖ buttons together and holding for 1 second. Then press the COOLER ⊖ button until the WARM indicator light appears.
  4. Set the ON/OFF switch on the control box to the "OFF" position.
  5. The appliance is equipped with a device which automatically lights the burner. **DO NOT TRY TO LIGHT THE BURNER BY HAND.**
  6. Wait five (5) minutes to clear out any gas. If you then smell gas, STOP! Follow "B" in the safety information above on this label. If you don't smell gas, go to next step.
  7. Turn on all electrical power to the appliance.
  8. Set the ON/OFF switch on the control box to the "ON" position.
  9. Set the thermostat to desired setting by first pressing the COOLER ⊖ and HOTTER ⊖ buttons together and holding for 1 second. Then press the HOTTER ⊖ button.
  10. WATER TEMPERATURE ADJUSTMENT ▼ is approximately 120°F.
- CAUTION: Hotter water increases the risk of scald injury. Consult the instructions manual before changing temperature.**
11. If the appliance will not operate, follow the instructions "TO TURN OFF GAS TO APPLIANCE" and call your technician or gas supplier.
- WARNING: TURN OFF ALL ELECTRIC POWER BEFORE SERVICING**

## TO TURN OFF GAS TO APPLIANCE


1. Set thermostat to the lowest setting by first pressing the COOLER ⊖ and HOTTER ⊖ buttons together and holding for 1 second. Then press the COOLER ⊖ button until the WARM indicator light appears.
2. Set the ON/OFF switch on the control box to the "OFF" position.
3. Turn off all electric power to the appliance if service is to be performed.

# SERVICE AND MAINTENANCE

## Tank (Sediment) Cleaning

Sediment build-up on the tank bottom may create varying amount of noise, if left in the tank will cause permanent tank failure. In some water areas, sediment can be removed by draining off approximately one gallon of water each month.

## Vent System Inspection

<b>⚠ WARNING</b>	
<b>Carbon Monoxide and Fire Hazard</b>	
	<ul style="list-style-type: none"><li>• Flue gases may escape if vent pipe is not connected.</li><li>• Be alert for obstructed, sooted or deteriorated vent system to avoid serious injury or death.</li><li>• Do not store corrosive chemicals in vicinity of water heater.</li><li>• Chemical corrosion of flue and vent system can cause serious injury or death</li></ul>
Breathing carbon monoxide can cause brain damage or death. Always read and understand instruction manual.	

At least once a year a visual inspection should be made of the venting system. You should look for:

- Obstructions which could cause improper venting. The combustion and ventilation air flow must not be obstructed.
- Damage or deterioration which could cause improper venting or leakage of combustion products.
- Rusted flakes around top of water heater.

Be sure the vent piping is properly connected to prevent escape of dangerous flue gasses which could cause deadly asphyxiation.

Obstructions and deteriorated vent systems may present serious health risk or asphyxiation.

Chemical vapor corrosion of the flue and vent system may occur if air for combustion contains certain chemical vapors. Spray can propellants, cleaning solvents, refrigerator and air conditioner refrigerants, swimming pool chemicals, calcium and sodium chloride, waxes, bleach and process chemicals are typical compounds which are potentially corrosive.

If after inspection of the vent system you found sooting or deterioration, something is wrong. **Call Maytag Customer Service at 1-800-788-8899 for an authorized servicer or your local gas supplier to correct the problem and clean or replace the flue and venting before resuming operation of the water heater.**

## Burner Inspection

Flood damage to a water heater may not be readily visible or immediately detectable. However, over a period of time a flooded water heater will create dangerous conditions which can cause **DEATH, SERIOUS BODILY INJURY, OR PROPERTY DAMAGE**. Contact the Maytag dealer from whom the appliance was purchased or **call Maytag Customer Service at 1-800-788-8899 for an authorized servicer to replace a flooded water heater. Do not attempt to repair the unit! It must be replaced!**

At least once a year a visual inspection should be made of the main burner and pilot burner, see Figure 50.

You should check for sooting. Soot is not normal and will impair proper combustion.

Soot build-up indicates a problem that requires correction before further use. Turn "OFF" gas to water heater and leave off until repairs are made, because failure to correct the cause of the sooting can result in a fire causing death, serious injury, or property damage.

If improper flame characteristics are not evident, check for accumulation of lint or other foreign material that restricts or blocks the air openings in the heater or burner. Also check Combustion Air and Ventilation Requirements.

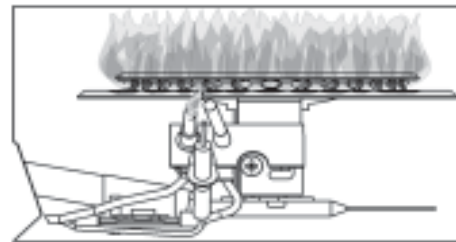


FIGURE 53.

## Burner Cleaning

**NOTE: Burner assembly must be handled carefully to avoid damaging the hot surface ignitor.**

In the event your burner needs cleaning, following these instructions:

If inspection of the burner shows that cleaning is required, turn the "ON/OFF" rocker switch located on the control box to "OFF" position and allow the burner to cool.

Loose deposits on or around the burner can be removed by carefully using the hose of a vacuum cleaner inserted through the access door of the water heater. If the burner needs to be removed for additional cleaning, call the local gas utility or qualified service agent to remove and clean the burner with a soft brush. Clean main burner orifice with a suitable soft material. Correct the problem that requires the burner to be cleaned.



## L.P. Gas Control Valve & Burner Assembly Replacement Information

### For Propane (L.P.) Models Only

Your water heater is equipped with a Propane (L.P.) gas control valve and a main burner assembly with left hand threads for the following fittings and their connections.

- The connection between the manifold and the gas control valve (A and B) are left hand threads.
- The connection between the main burner orifice and the manifold (C to D) are left hand threads.

For ordering these replacement parts, please refer to the "Repair Parts List" section of this manual.

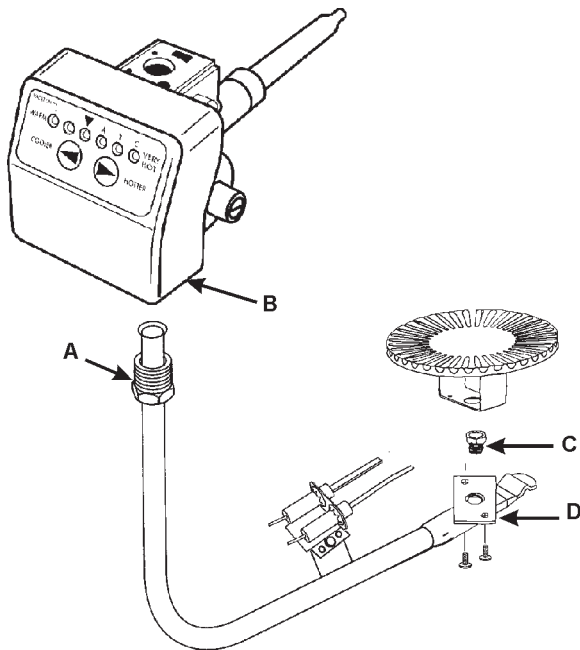


FIGURE 54.

## Housekeeping

Vacuum around base of water heater for dust, dirt, and lint on a regular basis.

**⚠ DANGER**

**Fire and Explosion Hazard**

- Do not obstruct combustion air openings at the bottom of the water heater.
- Do not use or store flammable vapor products such as gasoline, solvents or adhesives in the same room or area near water heater or other appliance.
- Can cause serious injury or death.

**INSTALLED IN SUITABLE AREA:** To insure sufficient ventilation and combustion air supply, proper clearances from the water heater must be maintained. See *Facts to Consider About the Location* section. Combustible materials such as clothing, cleaning materials, or flammable liquids, etc. must not be placed against or adjacent to the water heater which can cause a fire.

## Anode Rod Inspection

**CAUTION**

**Property Damage Hazard**

- Avoid water heater damage.
- Inspect and replace anode rod as needed.

The anode rod is used to protect the tank from corrosion. Most hot water tanks are equipped with an anode rod. The submerged rod sacrifices itself to protect the tank. Instead of corroding the tank, water ions attack and eat away the anode rod. This does not affect the water's taste or color. The rod must be maintained to keep the tank in operating condition.

Anode deterioration depends on water conductivity, not necessarily water condition. A corroded or pitted anode rod indicates high water conductivity and should be checked and/or replaced more often than an anode rod that appears to be intact. Replacement of a depleted anode rod can extend the life of your water heater. Inspection should be conducted by a qualified technician. At a minimum, the anode(s) should be checked annually after the warranty period.

## Draining

The water heater should be drained if being shut down during freezing temperatures. Also periodic draining and cleaning of sediment from the tank may be necessary.

**⚠ DANGER**

- Burn hazard
- Hot water discharge.
- Keep hands clear of drain valve discharge.

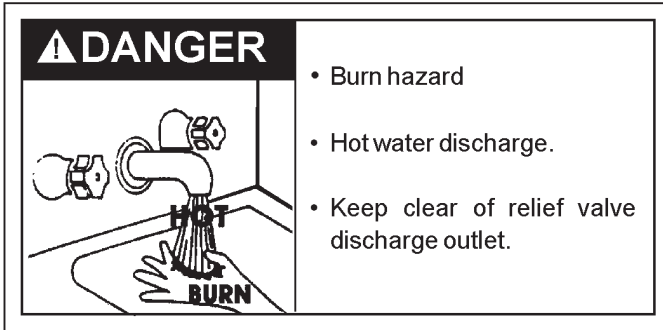
- Turn "OFF" gas supply to the water heater.
- CLOSE the cold water inlet valve to the water heater.
- OPEN a nearby hot water faucet and leave open to allow for draining.
- Connect a hose to the drain valve and terminate to an adequate drain.
- OPEN the water heater drain valve to allow for tank draining.

**NOTE: If the water heater is going to be shut down and drained for an extended period, the drain valve should be left open with hose connected allowing water to terminate to an adequate drain.**

- CLOSE the drain valve.
- Follow instructions in the *Filling The Water heater* section.
- Follow the lighting instructions in the *Operation* section to restart the water heater.

## Temperature-Pressure Relief Valve Operation

The temperature-pressure relief valve must be manually operated at least once a year.



When checking the temperature-pressure relief valve operation, make sure that (1) no one is in front of or around the outlet of the temperature-pressure relief valve discharge line, and (2) that the water discharge will not cause any property damage, as the water may be extremely hot, see Figure 55.

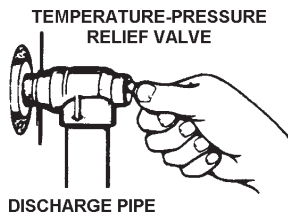


FIGURE 55.

If after manually operating the valve, it fails to completely reset and continues to release water, immediately close the cold water inlet to the water heater, follow the draining instructions, and replace the temperature-pressure relief valve with a new one.

If the temperature-pressure relief valve on the appliance weeps or discharges periodically, this may be due to thermal expansion. You may have a check valve installed in the water

line or a water meter with a check valve. **Consult Maytag Customer Service at 1-800-788-8899 for further information. Do not plug the temperature-pressure relief valve.**

## Drain Valve Washer Replacement

(See Figure 56)

**NOTE: For ordering replacement washers, refer to the “Repair Parts List” section of this manual.**

- Turn “OFF” gas supply to water heater.
- Follow “Draining” instructions.
- Turning counter clockwise (↺), remove the hex cap below the screw handle.
- Remove the washer and put the new one in place.
- Screw the handle and cap assembly back into the drain valve and retighten using a wrench. **DO NOT OVER TIGHTEN.**
- Follow instructions in the *Filling The Water Heater* section.
- Check for leaks.
- Follow the lighting instructions in the *Instructions for Operation* section to restart the water heater.

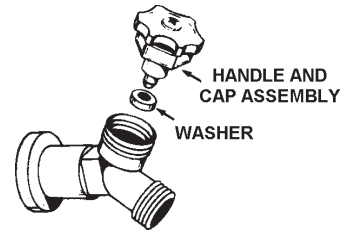


FIGURE 56.

## Service

Before calling for repair service, read the *Start Up Conditions* and *Operational Conditions* found in the *Troubleshooting Guide* of this manual.

If a condition persists or you are uncertain about the operation of the water heater, let the Maytag Customer Service Center check it out.

**Call the Maytag Customer Service at 1-800-788-8899 for an authorized servicer.**

# TROUBLESHOOTING

## Start Up Conditions

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### Condensation

Whenever the water heater is filled with cold water, some condensate will form while the burner is on. A water heater may appear to be leaking when in fact the water is condensation. This usually happens when:

- A new water heater is filled with cold water for the first time.
- Burning gas produces water vapor. In water heaters, particularly high efficiency models where flue temperatures are lower.
- Large amounts of hot water are used in a short time and the refill water in the tank is very cold.

Moisture from the products of combustion condense on the cooler tank surfaces and form drops of water which may fall onto the burner or other hot surfaces to produce a "sizzling" or "frying" noise.

Because of the suddenness and amount of water, condensation water may be diagnosed as a "tank leak". After the water in the tank warms up (about 1-2 hours), the condition should disappear.

Do not assume the water heater is leaking until there has been enough time for the water in the tank to warm up.

An undersized water heater will cause more condensation. The water heater must be sized properly to meet the family's demands for hot water including dishwashers, washing machines and shower heads.

Excessive condensation may be noticed during the winter and early spring months when incoming water temperatures are at their lowest.

Good venting is essential for a gas fired water heater to operate properly as well as to carry away products of combustion and water vapor.

### Smoke / Odor

It is not uncommon to experience a small amount of smoke and odor during the initial start-up. This is due to burning off of oil from metal parts, and will disappear in a short while.

### Thermal Expansion

<b>CAUTION</b>
<b>Property Damage Hazard</b>
<ul style="list-style-type: none"><li>• Avoid water heater damage.</li><li>• Install thermal expansion tank or device if necessary.</li><li>• Contact qualified installer or service agency.</li></ul>

Water supply system may, because of such events as high line pressure, frequent cut-offs, the effects of water hammer among others, have installed devices such as pressure reducing valves, check valves, back flow preventers, etc., to control these types of problems. When these devices are not equipped with an internal by-pass, and no other measures are taken, the devices cause the water system to be closed. As water is heated, it expands (thermal expansion) and closed systems do not allow for the expansion of heated water.

The water within the water heater tank expands as it is heated and increases the pressure of the water system. If the relieving point of water heater's temperature-pressure relief valve is reached, the valve will relieve the excess pressure. **The temperature-pressure relief valve is not intended for the constant relief of thermal expansion.** This is an unacceptable condition and must be corrected.

It is recommended that any devices installed which could create a closed system have a by-pass and/or the system have an expansion tank or device to relieve the pressure built by thermal expansion in the water system. Thermal expansion tanks are available for ordering through the Maytag Customer Service Center (1-800-788-8899). Contact the local plumbing inspector, water supplier and/or **call Maytag Customer Service at 1-800-788-8899 for assistance in controlling these situations.**

### Strange Sounds

Possible noises due to expansion and contraction of some metal parts during periods of heat-up and cool-down do not represent harmful or dangerous conditions.

Condensation causes sizzling and popping within the burner area during heating and cooling periods and should be considered normal. See *Condensation* section.

## Operational Conditions

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### Smelly Water

In each water heater there is installed at least one anode rod (see parts section) for corrosion protection of the tank. Certain water conditions will cause a reaction between this rod and the water. The most common complaint associated with the anode rod is one of a "rotten egg smell". This odor is derived from hydrogen sulfide gas dissolved in the water. The smell is the result of four factors which must all be present for the odor to develop:

- a concentration of sulfate in the supply water.
- little or no dissolved oxygen in the water.
- a sulfate reducing bacteria within the water heater. (This harmless bacteria is non-toxic to humans.)
- an excess of active hydrogen in the tank. This is caused by the corrosion protective action of the anode.

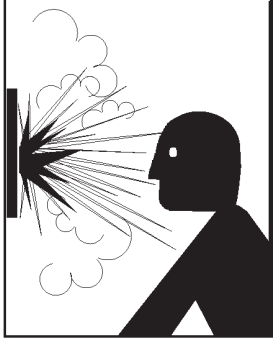
Smelly water may be eliminated or reduced in some water heater models by replacing the anode(s) with one of less active material, and then chlorinating the water heater tank and all

hot water lines. **Contact Maytag Customer Service at 1-800-788-8899 for further information concerning an Anode Replacement Kit and this Chlorination Treatment.**

If the smelly water persists after the anode replacement and chlorination treatment, we can only suggest that chlorination or aeration of the water supply be considered to eliminate the water problem.

**Do not remove the anode leaving the tank unprotected. By doing so, all warranty on the water heater tank is voided.**

### “AIR” In Hot Water Faucets

	<h2>⚠ WARNING</h2>
	<p style="text-align: center;"><b>Explosion Hazard</b></p> <ul style="list-style-type: none"> <li>• Flammable hydrogen gases may be present.</li> <li>• Keep all ignition sources away from faucet when turning on hot water.</li> </ul>

**HYDROGEN GAS:** Hydrogen gas can be produced in a hot water system that has not been used for a long period of time (generally two weeks or more). Hydrogen gas is extremely flammable and explosive. To prevent the possibility of injury under these conditions, we recommend the hot water faucet, located farthest away, be opened for several minutes before any electrical appliances which are connected to the hot water system are used (such as a dishwasher or washing machine). If hydrogen gas is present, there will probably be an unusual sound similar to air escaping through the pipe as the hot water faucet is opened. There must be no smoking or open flame near the faucet at the time it is open.

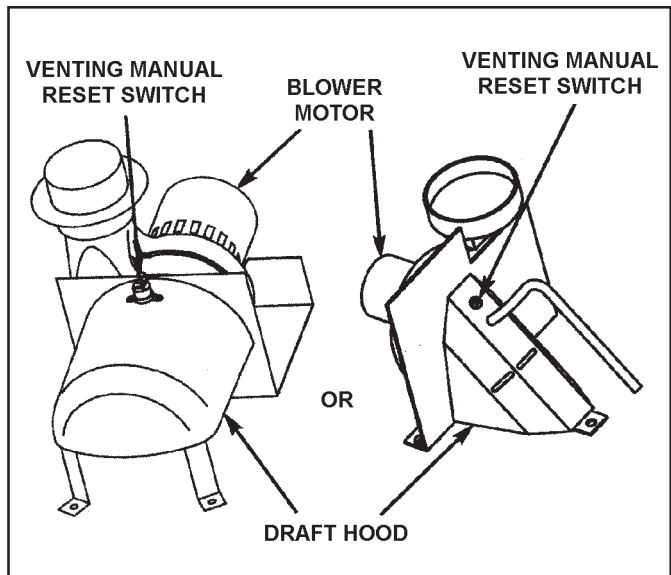
### High Temperature Limit Switch (Single-Use Type Energy Cut Off)

The thermostat has a built-in limit switch which will actuate in case of excessive water temperatures. The heater cannot be relit until the gas control valve is replaced. It is important that a serviceman be called to determine the reason for limit operation and thus avoid repeated thermostat replacement. Lower the temperature adjustment setting on new control. **Call Maytag Customer Service at 1-800-788-8899 for an authorized servicer.**

**Should overheating occur or the gas supply fail to shut off, turn “OFF” the manual gas control valve to the appliance.**

### Venting Manual Reset Switch

There is a venting manual reset switch located on the draft hood. If the venting manual reset switch is activated, it will not reset itself. Before resetting this venting manual reset switch, check for flue blockage and propriety of the venting system. To reset the venting manual reset switch, press the red reset button.



**FIGURE 57.**

### Not Enough or No Hot Water

1. Check the manual gas shut off valve to be sure it is open.
2. The ON/OFF switch on the control box must be “ON”.
3. The temperature button adjustment may be set too low. See the “Temperature Regulation” section.
4. The gas company can check the gas input to see if it is correct. An under-fired water heater will not heat water as quickly.
5. Look for leaking or open hot water faucets. Make sure all are closed.
6. The cold water inlet temperature may be colder during the winter months. It will take longer to heat the water and seem like less hot water.
7. If you cannot find what is wrong, **call Maytag Customer Service 1-800-788-8899 for an authorized servicer.**

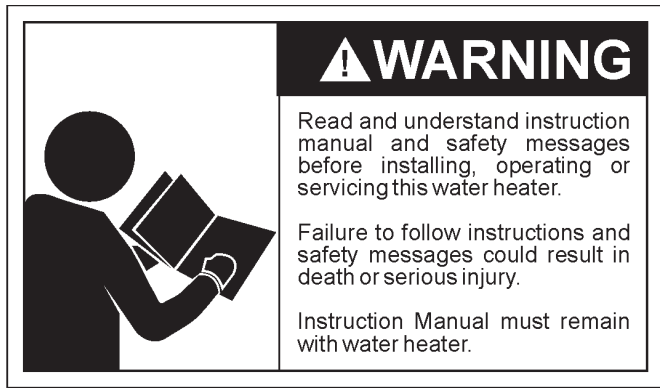
### Water is Too Hot

1. The temperature adjustment dial may be set too high. See the “Temperature Adjustment” section.

**NOTE: A period of time is necessary after an adjustment has been made for the water temperature to reach the new temperature setting.**

2. If lower temperature settings will not lower the water temperature, call Maytag Customer Service 1-800-788-8899 for an authorized servicer.

## Leakage Checkpoints



Read this manual first. Then before checking the water heater make sure the gas supply has been turned "OFF", and never turn the gas "ON" before the tank is completely full of water.

Never use this water heater unless it is completely filled with water. To prevent damage to the tank, the tank must be filled with water. Water must flow from the hot water faucet before turning "ON" gas to the water heater, see Figure 58.

- (A) Water at the draft hood is water vapor which has condensed out of the combustion products. This is caused by a problem in the vent. **Call Maytag Customer Service at 1-800-788-8899 for an authorized servicer.**
- (B) \*Condensation may be seen on pipes in humid weather or pipe connections may be leaking.
- (C) \*The primary anode rod fitting may be leaking.
- (D) Small amounts of water from temperature-pressure relief valve may be due to thermal expansion or high water pressure in your area.
- (E) \*The temperature-pressure relief valve may be leaking at the tank fitting.
- (F) Water from a drain valve may be due to the valve being slightly opened.
- (G) \*The drain valve may be leaking at the tank fitting.
- (H) Combustion products contain water vapor which can condense on the cooler surfaces of the tank. Droplets form and drip onto the burner or run on the floor. This is common at the time of start-up after installation and when incoming water is cold.
- (I) Water in the water heater bottom or on the floor may be from condensation, loose connections, or the relief valve. **DO NOT** replace the water heater until a full inspection of all possible water sources is made and necessary corrective steps taken.

Leakage from other appliances, water lines, or ground seepage should also be checked.

- \* To check where threaded portion enters tank, insert cotton swab between jacket opening and fitting. If cotton is wet, follow "Draining" instructions in the *Periodic Maintenance* section and then remove fitting. Put pipe dope or teflon tape on the threads and replace. Then follow *Filling the Water Heater* instructions in the *Installation Instructions* section.

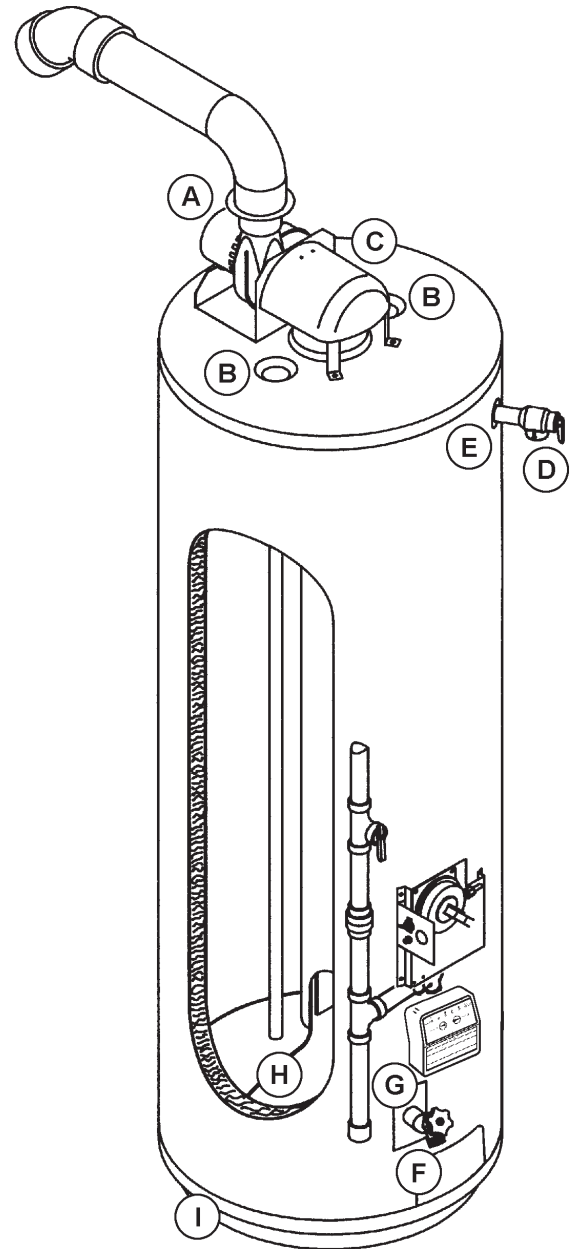


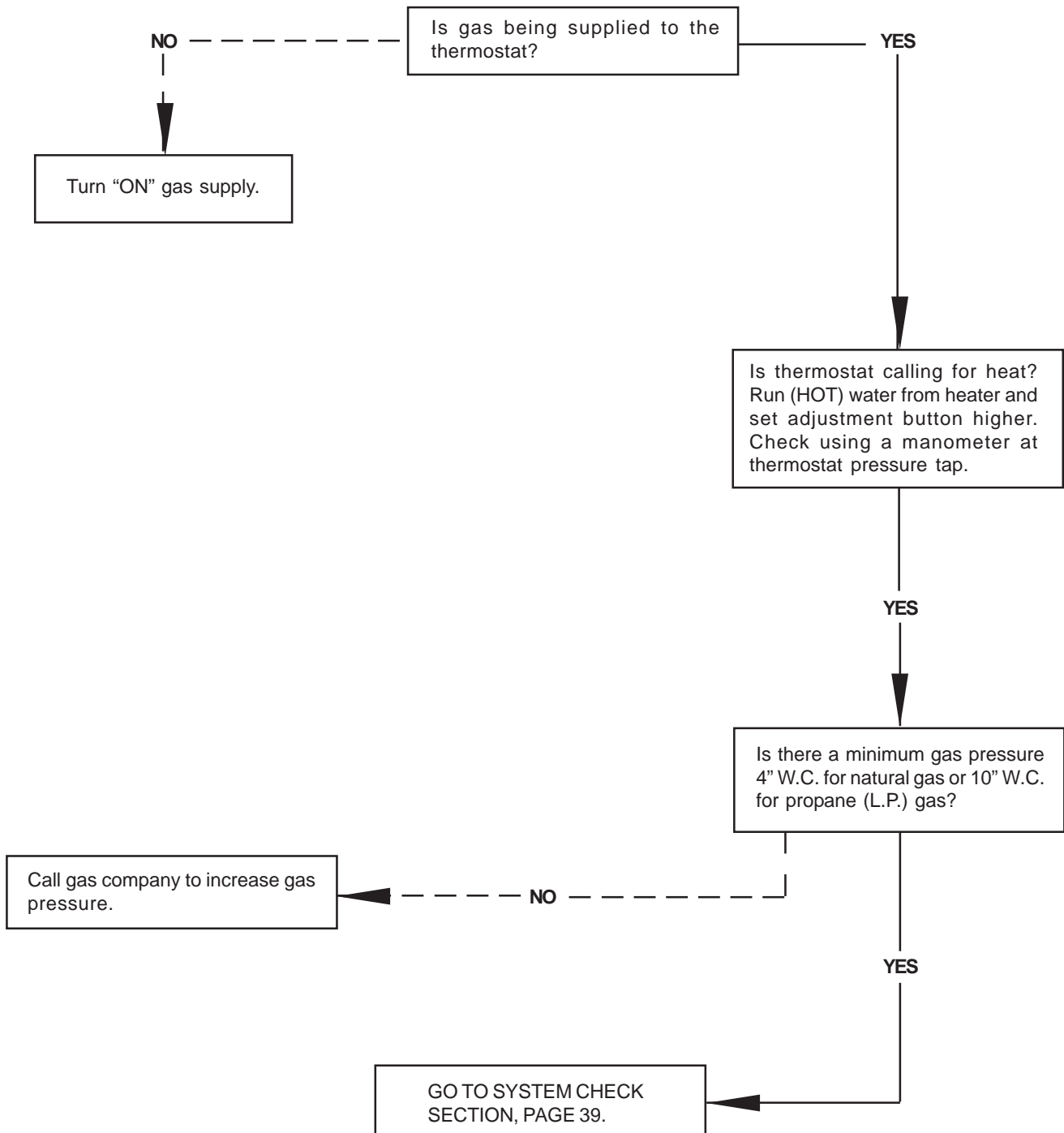
FIGURE 58.

## TROUBLESHOOTING (Continued)

This troubleshooting guide has been supplied for use by qualified service personnel who have a complete understanding of both electricity and gas.

Label all wiring before disconnecting any wiring; to ensure correct reconnection. Failure to follow this instruction could cause improper and possible dangerous operation, resulting in DEATH, SERIOUS BODILY INJURY, OR PROPERTY DAMAGE.

### THERMOSTAT AND GAS SUPPLY CHECK



## SYSTEM CHECK

Please check guidelines below. For your safety, water heater service should be performed only by a qualified service technician.

**DO NOT BY-PASS ANY CONTROLS TO MAKE HEATER OPERATE. OPERATE ONLY AS WIRED FROM FACTORY.**

LED STATUS		
	An open earth ground circuit to the ignition system.	<ol style="list-style-type: none"> <li>1. Check that the earth ground connection is properly connected.</li> <li>2. Check that the ground conductor on the water heater is properly connected.</li> </ol>
	Wiring error or a high resistance to earth ground.	<ol style="list-style-type: none"> <li>1. Check for proper connection of line neutral and hot wires.</li> <li>2. Check that the water heater is securely connected to earth ground.</li> </ol>
	Pressure switch remained closed longer than 5 seconds after the call for heat began.	<ol style="list-style-type: none"> <li>1. Pressure switch wiring is incorrect.</li> <li>2. Replace pressure switch.</li> </ol>
	Pressure switch remained open longer than 5 seconds after the combustion blower was energized.	<ol style="list-style-type: none"> <li>1. Pressure switch wiring is incorrect.</li> <li>2. Pressure switch tubing not connected correctly.</li> <li>3. Air intake or exhaust obstructed.</li> </ol>
	Error in the hot surface ignitor circuit.	<ol style="list-style-type: none"> <li>1. Check that all wiring is correct and secure.</li> <li>2. Replace hot surface ignitor.</li> </ol>
	System in lockout.	<ol style="list-style-type: none"> <li>1. Gas supply is off or too low to operate.</li> <li>2. Hot surface ignitor not positioned correctly.</li> <li>3. Low voltage to the water heater.</li> <li>4. Electric polarity to unit is incorrect - test and correct.</li> </ol>
	Problem in the gas valve driver circuit.	<ol style="list-style-type: none"> <li>1. Turn power to the water heater off for 10 seconds and then back on.</li> <li>2. Replace gas control valve.</li> </ol>
	Problem with the internal circuit.	<ol style="list-style-type: none"> <li>1. Turn power to the water heater off for 10 seconds and then back on.</li> <li>2. Replace gas control valve.</li> </ol>
	Problem with the internal circuit.	<ol style="list-style-type: none"> <li>1. Turn power to the water heater off for 10 seconds and then back on.</li> <li>2. Replace gas control valve.</li> </ol>
	Flame signal sensed out of proper sequence.	<ol style="list-style-type: none"> <li>1. Replace gas control valve.</li> </ol>
	ECO activated.	<ol style="list-style-type: none"> <li>1. Replace gas control valve.</li> </ol>
	One of the temperature adjust buttons stuck closed.	<ol style="list-style-type: none"> <li>1. Press and release each of the buttons once.</li> <li>2. Replace gas control valve.</li> </ol>
	Water temperature sensor is either open or short circuited.	<ol style="list-style-type: none"> <li>1. Check that all wiring is correct and secure.</li> <li>2. Replace gas control valve.</li> </ol>

WATER HEATER CONTROL

## TROUBLESHOOTING (Continued)

These guidelines should be used by a qualified Maytag Customer Service Center Agent. Call the Maytag Customer Service Center at 1-800-788-8899 for assistance.

Problem	Cause	Solution
<b>NOT ENOUGH HOT WATER</b>	<b>Blower will not run.</b>	
	A) "ON/OFF" control switch turned off	Turn switch to the "ON" position.
	B) Blower unplugged.	Plug blower back into 115 VAC outlet.
	C) No power at outlet.	Repair service to outlet.
	D) Thermostat defective.	Replace thermostat.
	E) Control harness defective.	Replace control harness.
	F) High limit control circuit open.	Replace ECO.
	G) Blower motor defective.	Replace blower assembly.
	<b>Thermostat problems.</b>	
	A) Thermostat set too low.	Set temperature control higher.
	B) Thermostat or ECO defective.	Replace thermostat or ECO as required.
	<b>Others.</b>	
	A) Heater undersized.	Reduce hot water use.
	B) Low gas pressure.	Contact dealer.
C) Incoming water is unusually cold.	Allow more time for heater to reheat.	
D) Leaking hot water pipes or fixtures.	Have plumber check and repair leaks.	
<b>VENT PIPE TOO HOT (ABOVE 170°F)</b>	A) Not enough dilution air to mix with flue gases.	Proper dilution air must be provided for dilution of flue temp. Refer to "Installation Instructions" section.
	B) Dilution air too hot for mixing with flue gases.	Check for heat sources around and/or blockage of dilution air intake at draft hood. (see page 28).
	C) Wrong burner assembly.	Install correct orifice.
<b>YELLOW FLAME</b>	A) Dirt in burner ports.	Turn off heater and gas, clean burner head.
	B) Combustion air path restricted.	Check dilution air intake, exhaust venting and air openings in bottom base pan for obstructions or blockage.
	C) Not enough dilution air.	Check dilution air intake for obstructions or blockage.
<b>CONDENSATION</b>	A) Water on the floor under heater.	See "Condensation" section.
	B) Water dripping from the blower assembly.	Provide drip "TEE" to catch condensation from horizontal section of exhaust vent close to blower assembly.
<b>WATER LEAKS</b>	Improperly sealed, hot or cold supply connections, relief valve, drain valve or thermostat threads.	Tighten threaded connections.
	Leakage from other appliances or water lines.	Inspect other appliances near the water heater.
	Condensation of flue products.	See "Condensation" section.
<b>LEAKING T &amp; P</b>	Thermal expansion in closed water system.	Install thermal expansion tank (DO NOT plug T & P valve).
	Improperly seated valve.	Check relief valve for proper operation (DO NOT plug T & P valve).
<b>HOT WATER ODORS (Refer to Smelly Water)</b>	High sulfate or mineral content in water supply.	Drain and flush heater thoroughly then refill.
	Bacteria in water supply.	Chlorinate water supply.
<b>WATER TOO HOT</b>	Thermostat set too high.	Refer to TEMPERATURE REGULATION.
<b>WATER HEATER SOUNDS SIZZLING-RUMBLING</b>	Condensation dripping on burner.	See "Condensation" section.
	Sediment at bottom of heater tank.	Clean sediment from tank. Refer to "Draining" instruction in "Maintenance" section of manual.
<b>SOOTING</b>	Improper combustion.	Refer to "Combustion Air and Ventilation" on pages 11-14.
<b>HEATER LIGHTS BUT GOES OUT IN 4-5 SECONDS</b>	Outlet polarity is reversed.	Test polarity and correct.

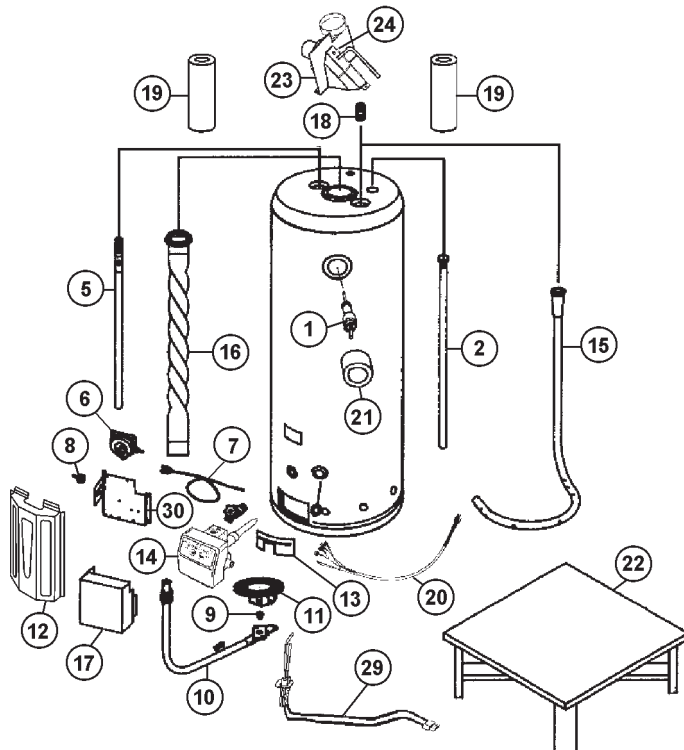
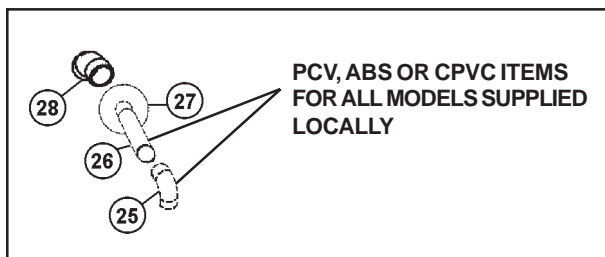


# REPAIR PARTS LIST

## MAYTAG GAS WATER HEATERS

### MODEL NO'S

HRN11240P	40 Gallon Natural Gas
HRN31240P	40 Gallon Natural Gas
HRP11240P	40 Gallon Propane Gas (L.P.)
HRP31240P	40 Gallon Propane Gas (L.P.)



Key No.	Part Description	Model Numbers			
		HRN11240P	HRN31240P	HRP11240P	HRP31240P
1	Temperature-Pressure Relief Valve	66001700	66001700	66001700	66001700
2	Primary Anode Rod	66001020	66001020	66001020	66001020
3	Drain Valve	66001015	66001015	66001015	66001015
*4	Drain Valve Washer (17/32" x 13/64" x 1/8" thick)	66001021	66001021	66001021	66001021
5	Secondary Anode Rod w/Heat traps	66001881	66001881	66001881	66001881
6	Pressure Switch	66001369	66001369	66001369	66001369
7	Power Cord	66001372	66001372	66001372	66001372
8	On/Off Switch	66001247	66001247	66001247	66001247
9	Burner Orifice (Drill Size)	66001538	66001538	66001538	66001538
10	Manifold	66001530	66001530	66001533	66001533
11	Burner	66001027	66001027	66001027	66001027
12	Outer Door	66001190	66001190	66001190	66001190
13	Inner Door	66001029	66001029	66001029	66001029
14	Gas Control Valve (Natural)	66001527	66001527	-----	-----
14	Gas Control Valve (Propane(L.P.))	-----	-----	66001528	66001528
15	Dip Tube	66001617	66001617	66001617	66001617
16	Flue Baffle	66001399	66001399	66001399	66001399
17	Junction Box Cover	66001895	66001895	66001895	66001895
18	Inlet Nipple w/Heat Traps	66001707	66001707	66001707	66001707
19	Pipe Insulation (2 ea.)	66001755	66001755	66001755	66001755
20	Wiring Harness	66001526	66001526	66001526	66001526
21	T & P Insulation	66001709	66001709	66001709	66001709
22	Water Heater Stand	66001243	66001243	66001243	66001243
23	Blower/ Draft Hood Ass'y	66001366	66001366	66001366	66001366
24	Venting Switch	66001367	66001367	66001367	66001367
25	3" or 2" Schedule 40 90° Elbow	-----	-----	-----	-----
26	3" or 2" Schedule 40 Vent Pipe	-----	-----	-----	-----
27	Wall Collar	66001262	66001262	66001262	66001262
28	3" PVC Vent Terminal	66001255	66001255	66001255	66001255
29	Hot Surface Ignition Ass'y	66001525	66001525	66001525	66001525
30	Mounting Bracket	66001896	66001896	66001896	66001896
*31	Manual	66001897	66001897	66001897	66001897

\* Not Shown.

Now that you have purchased this gas water heater, should a need ever exist for repair parts or service, simply call **Maytag Customer Service at 1-800-788-8899 for an authorized servicer.** Be sure to provide all pertinent facts when you call or visit.

### THIS IS A REPAIR PARTS LIST, NOT A PACKING LIST.

The model number of this gas water heater will be found on the model rating plate located near the gas control valve.

When ordering repair parts, always give the following information:

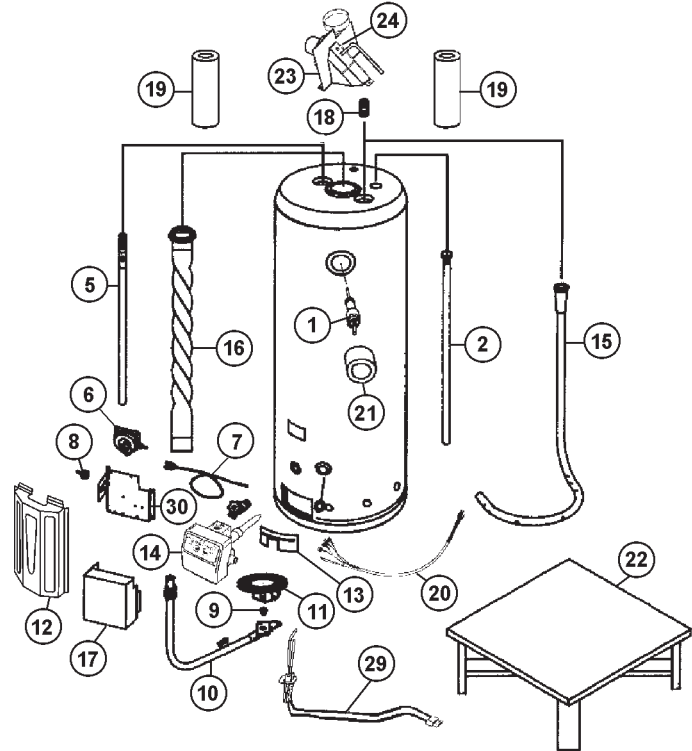
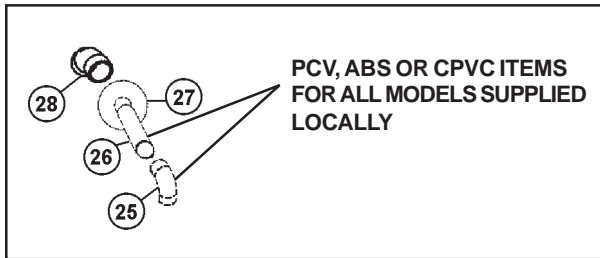
- Model number
- Serial Number
- Part Description
- Part Number

# REPAIR PARTS LIST

## MAYTAG GAS WATER HEATERS

### MODEL NO'S

HRN11250P	50 Gallon Natural Gas
HRN31250P	50 Gallon Natural Gas
HRP11250P	50 Gallon Propane Gas (L.P.)
HRP31250P	50 Gallon Propane Gas (L.P.)



Key No.	Part Description	Model Numbers			
		HRN11250P	HRN31250P	HRP11250P	HRP31250P
1	Temperature-Pressure Relief Valve	66001700	66001700	66001700	66001700
2	Primary Anode Rod	66001020	66001020	66001020	66001020
3	Drain Valve	66001015	66001015	66001015	66001015
*4	Drain Valve Washer (17/32" x 13/64" x 1/8" thick)	66001021	66001021	66001021	66001021
5	Secondary Anode Rod w/Heat traps	66001898	66001898	66001898	66001898
6	Pressure Switch	66001368	66001368	66001368	66001368
7	Power Cord	66001372	66001372	66001372	66001372
8	On/Off Switch	66001247	66001247	66001247	66001247
9	Burner Orifice (Drill Size)	66001538	66001638	66001540	66001515
10	Manifold	66001659	66001659	66001659	66001659
11	Burner	66001027	66001027	66001027	66001027
12	Outer Door	66001190	66001190	66001190	66001190
13	Inner Door	66001029	66001029	66001029	66001029
14	Gas Control Valve (Natural)	66001527	66001527	-----	-----
14	Gas Control Valve (Propane(L.P.))	-----	-----	66001528	66001528
15	Dip Tube	66001052	66001052	66001052	66001052
16	Flue Baffle	66001399	66001399	66001399	66001399
17	Junction Box Cover	66001899	66001899	66001899	66001899
18	Inlet Nipple w/Heat Traps	66001707	66001707	66001707	66001707
19	Pipe Insulation (2 ea.)	66001755	66001755	66001755	66001755
20	Wiring Harness	66001526	66001526	66001526	66001526
21	T & P Insulation	66001709	66001709	66001709	66001709
22	Water Heater Stand	66001243	66001243	66001243	66001243
23	Blower/ Draft Hood Ass'y	66001366	66001366	66001366	66001366
24	Venting Switch	66001367	66001367	66001367	66001367
25	3" or 2" Schedule 40 90° Elbow	-----	-----	-----	-----
26	3" or 2" Schedule 40 Vent Pipe	-----	-----	-----	-----
27	Wall Collar	66001262	66001262	66001262	66001262
28	3" PVC Vent Terminal	66001255	66001255	66001255	66001255
29	Hot Surface Ignition Ass'y	66001525	66001525	66001525	66001525
30	Mounting Bracket	66001896	66001896	66001896	66001896
*31	Manual	66001897	66001897	66001897	66001897

\* Not Shown.

Now that you have purchased this gas water heater, should a need ever exist for repair parts or service, simply call **Maytag Customer Service at 1-800-788-8899 for an authorized servicer**. Be sure to provide all pertinent facts when you call or visit.

### THIS IS A REPAIR PARTS LIST, NOT A PACKING LIST.

The model number of this gas water heater will be found on the model rating plate located near the gas control valve.

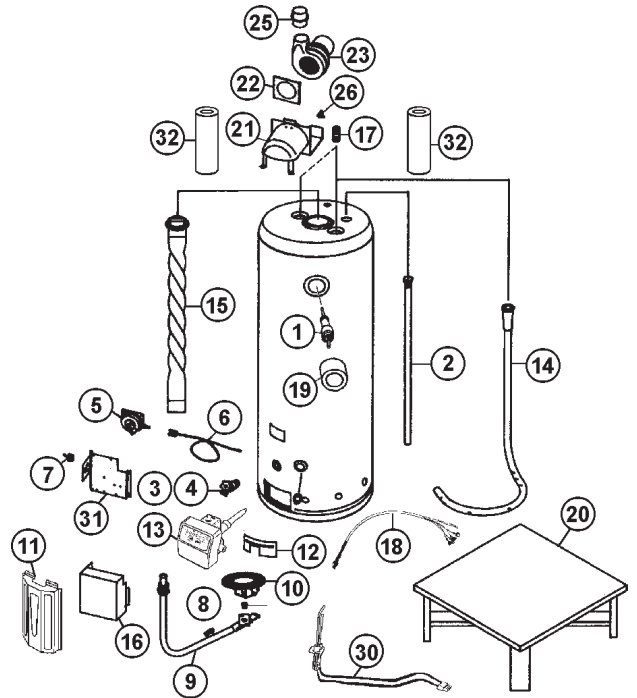
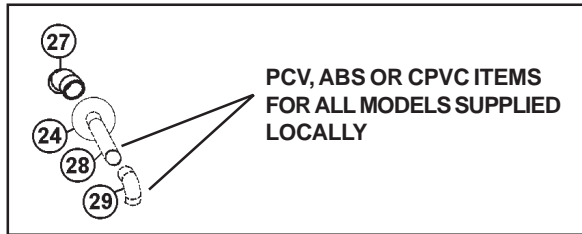
When ordering repair parts, always give the following information:

- Model number
- Serial Number
- Part Description
- Part Number

# REPAIR PARTS LIST

## MAYTAG GAS WATER HEATERS

MODEL NO'S	
HRN11275P	75 Gallon Natural Gas
HRN31275P	75 Gallon Natural Gas
HRP11275P	75 Gallon Propane Gas (L.P.)
HRP31275P	75 Gallon Propane Gas (L.P.)



Key No.	Part Description	Model Numbers			
		HRN11275P	HRN31275P	HRP11275P	HRP31275P
1	Temperature-Pressure Relief Valve	66001700	66001700	66001700	66001700
2	Primary Anode Rod	66001020	66001020	66001020	66001020
3	Drain Valve	66001015	66001015	66001015	66001015
*4	Drain Valve Washer (17/32" x 13/64" x 1/8" thick)	66001021	66001021	66001021	66001021
5	Pressure Switch	66001294	66001294	66001294	66001294
6	Power Cord	66001372	66001372	66001372	66001372
7	On/Off Switch	66001247	66001247	66001247	66001247
8	Burner Orifice (Drill Size)	66001900	66001901	66001902	66001903
9	Manifold	66001532	66001532	66001532	66001532
10	Burner	66001221	66001221	66001221	66001221
11	Outer Door	66001190	66001190	66001190	66001190
12	Inner Door	66001146	66001146	66001146	66001146
13	Gas Control Valve (Natural)	66001657	66001657	-----	-----
13	Gas Control Valve (Propane(L.P.))	-----	-----	66001658	66001658
14	Dip Tube	66001030	66001030	66001030	66001030
15	Flue Baffle	66001350	66001350	66001350	66001350
16	PV Switch Cover	66001895	66001895	66001895	66001895
17	Cold and Hot Water Nipples	66001148	66001148	66001148	66001148
18	Wiring Harness	66001526	66001526	66001526	66001526
19	T & P Insulation	66001709	66001709	66001709	66001709
20	Water Heater Stand	66001243	66001243	66001243	66001243
21	Draft Hood Ass'y	66001401	66001401	66001401	66001401
22	Gasket Blower	66001291	66001291	66001291	66001291
23	Blower	66001402	66001402	66001402	66001402
24	Wall Collar	66001262	66001262	66001262	66001262
25	Vent-Blower Adapter	66001403	66001403	66001403	66001403
26	Venting Switch	66001342	66001342	66001342	66001342
27	3" PVC Vent Terminal	66001255	66001255	66001255	66001255
28	3" or 4" Schedule 40 Vent Pipe	-----	-----	-----	-----
29	3" or 4" Schedule 40 90° Elbow	-----	-----	-----	-----
30	Hot Surface Ignition Ass'y	66001524	66001524	66001524	66001524
31	Mounting Bracket	66001896	66001896	66001896	66001896
32	Pipe Insulation (2 ea.)	66001034	66001034	66001034	66001034
*33	Manual	66001897	66001897	66001897	66001897

\* Not Shown.

Now that you have purchased this gas water heater, should a need ever exist for repair parts or service, simply call **Maytag Customer Service at 1-800-788-8899 for an authorized servicer**. Be sure to provide all pertinent facts when you call or visit.

### THIS IS A REPAIR PARTS LIST, NOT A PACKING LIST.

The model number of this gas water heater will be found on the model rating plate located near the gas control valve.

When ordering repair parts, always give the following information:

- Model number
- Serial Number
- Part Description
- Part Number

# REPAIR PARTS LIST

## MAYTAG/STATE PART NUMBER CONVERSION KEY

MAYTAG	STATE
66001010	9002404
66001011	9001609
66001012	9001608
66001013	ETC2X
66001014	ETC5X
66001015	9002401
66001020	9000734
66001021	9001584
66001025	0230120
66001027	9002411
66001029	9000281
66001030	9002444
66001034	9002445
66001035	0230141
66001041	0230224
66001046	0230124
66001047	0230123
66001052	9002059
66001068	9001453
66001105	9002769
66001146	9000369
66001148	9002565
66001168	0230209
66001169	0230212
66001172	0230225
66001174	0230247
66001177	0230260
66001190	9000358
66001221	9001271
66001243	9001422
66001247	9001773
66001255	9001957
66001259	9001976
66001262	9001993
66001291	9002508
6001294	9002511
66001295	9002512
66001317	9002597
66001342	9002678
66001350	9002981
66001366	9003081
66001367	9003082
66001368	9003089
66001369	9003090

MAYTAG	STATE
66001372	9003095
66001399	9003083
66001400	9003156
66001401	9003153
66001402	9003152
66001403	9003154
66001404	9003157
66001405	9000736
66001515	9003453
66001524	9003626
66001525	9003627
66001526	9003628
66001527	9003629
66001528	9003630
66001530	9003685
66001532	9003687
66001533	9003688
66001538	9003493
66001540	9003495
66001617	9003527
66001638	9003443
66001654	9003690
66001657	9003693
66001658	9003694
66001659	9003697
66001660	9003698
66001700	9003917
66001707	9003909
66001708	9003717
66001709	9003716
66001755	9003971
66001758	9003916
66001818	9003930
66001881	9004274
66001895	9002113
66001896	9004277
66001897	184683-001
66001898	9004268
66001899	9002113
66001900	9001671
66001901	9002978
66001902	9004278
66001903	9004273

## NOTES

## NOTES

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# WARRANTY

## FULL ONE YEAR WARRANTY

For one year from the date of original retail purchase, any part which fails in normal home use will be repaired or replaced free of charge.

If a leak occurs in the tank, a new water heater of the closest capacity and quality then available, will be replaced free of charge.

The warranty of the replacement is the balance of the original water heater's warranty.

## LIMITED PARTS WARRANTY

After the first year and through the twelfth year from the date of original retail purchase, any parts which fail due to a defect in materials or workmanship, will be replaced or repaired free of charge for the part itself, with the owner paying all other costs, including labor, mileage and transportation.

If the water heater is subjected to commercial, institutional, industrial or non-residential use, the above warranty coverage for parts that are proved to be defective in material or workmanship is effective for one year from the date of the original retail purchase.

The warranty of the replacement is the balance of the original water heater's warranty, or twelve months from the date of the part(s) purchase, whichever comes first.

Blower fan and assembly are warranted for five years.

This warranty is limited to the original owner of the water heater.

## LIMITED TANK WARRANTY AGAINST LEAKS

After the first year and through the twelfth year from the date of original retail purchase, if a leak occurs in the tank, a new water heater of the closest capacity and quality then available, will be replaced free of charge for the water heater, with the owner paying all other costs, including labor, mileage and transportation.

If the water heater is subjected to commercial, institutional, industrial or non-residential use, the above warranty coverage for the tanks that are proved to be defective in material or workmanship is effective for two years from the date of the original retail purchase.

The warranty of the replacement is the balance of the original water heater's warranty.

Please note: The full and limited warranty applies only while this water heater is used in the United States of America.

This warranty is limited to the original owner of the water heater.

## TO OBTAIN WARRANTY SERVICE

To locate an authorized service company in your area contact the Maytag dealer from whom your appliance was purchased; or call Maytag Customer Service at the number listed below. Should you not receive satisfactory warranty service, please call or write:

Maytag Customer Service  
P.O. Box 2370  
Cleveland, TN 37320-2370  
U.S.A. 1-800-788-8899

When contacting Maytag Customer Service be sure to provide the model and serial number of your appliance, the name and address of the dealer from whom you purchased the appliance and the date of purchase.

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