

MAINTENANCE

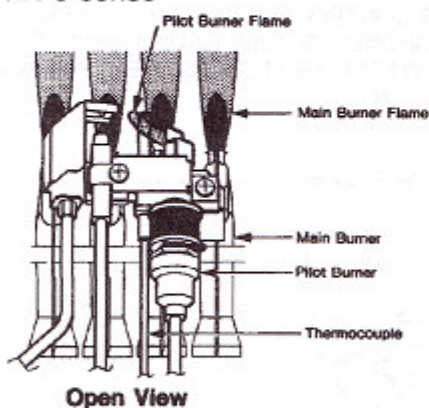
Properly maintained, your water heater will provide years of dependable trouble free service. It is suggested that a regular routine maintenance program be established and followed by the user. It is further recommended that a periodic inspection of the burners, relief valve and venting system should be made by service personnel qualified in gas appliance repair.

1. Check venting systems at least once a year in accordance with the installation instructions for venting on page 4, 5, 7 & 8.
*Make sure that clearance and protection against combustible construction is sufficient and that no obstructions exist in the venting system.
2. Visually inspect the main burner flame and the pilot burner flame at least once a year through the sight window on the front jacket of the water heater.

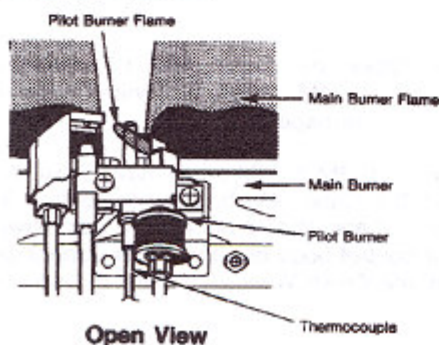
NOTE: No extreme yellow flame exists.

The pilot burner flame should concentrate on the upper third of the tip of the thermocouple as indicated in the following illusts.

A. For PH-6 series



B. For PH-12M series (For PH-24M series, refer to this illust.)



3. Keep appliance area clear and free from combustible materials, gasoline and other flammable vapors and liquids.
4. Do not obstruct the flow of combustion and ventilation air. Keep draft hood opening area and air ways free for ventilation and combustion.

● HOW TO REMOVE THE MAIN BURNER AND THE GAS PRESSURE REGULATOR

A. For PH-6 series

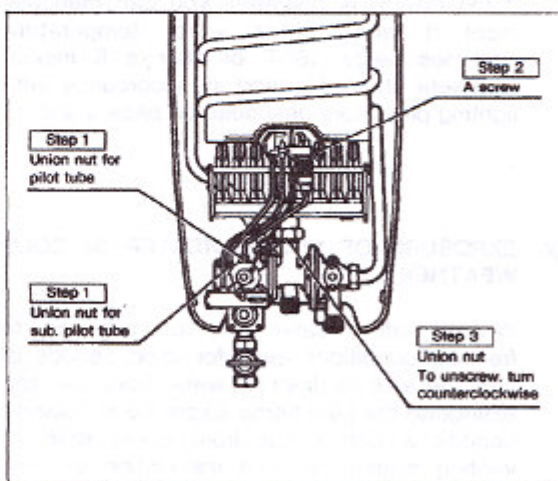
1. To remove the main burner assembly.

Before removing main burner, be sure to shut off gas supply at the gas intake valve.

- Step 1. Unscrew two union nuts of pilot burner tubing and subsidiary pilot burner tubing.
- Step 2. Unscrew a screw fixing the bracket to the main burner.
- Step 3. Unscrew a union nut fixing main burner to top of control.
To loose the nut, push it forward.
- Step 4. Take main burner out of water heater.

After replacing main burner, make sure there is no gas leakage out of connections by testing with bubble solution.

If necessary, clean the burners with vacuum cleaner.

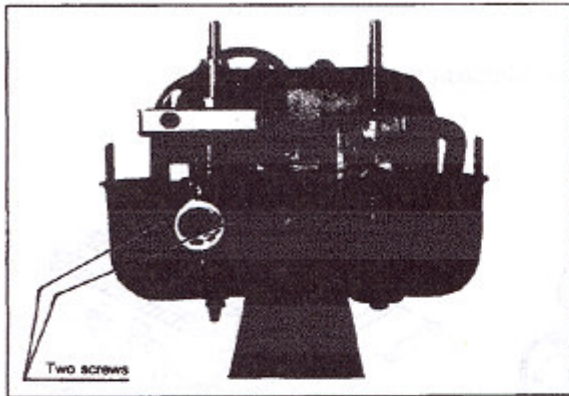


2. To remove gas pressure regulator.

Before removing the regulator, be sure to shut off gas supply upstream of the line.

Unscrew two screws fixing gas pressure regulator.

After replacing disassembled parts, be sure there is no gas leakage out of connections by testing with bubble solution.



● HOW TO REMOVE THE MAIN BURNER AND THE GAS PRESSURE REGULATOR

B. For PH-12M & 24M series

1. To remove the main burner assembly:

Before removing main burner, be sure to shut off gas supply at the gas intake valve.

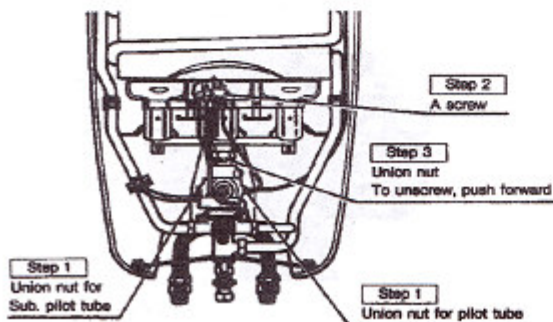
- Step 1. Unscrew two union nuts of pilot burner tubing and subsidiary pilot burner tubing.
- Step 2. Unscrew screw fixing the pilot bracket to the main burner.
- Step 3. Unscrew union nut fixing main burner to top of control.
To loose the nut, push it forward.
- Step 4. Take main burner out of water heater.

Note: For PH-24M

Unscrew two screws holding main burner assembly to back jacket.

After replacing main burner, make sure there is no gas leakage out of connections by testing with bubble solutions.

If necessary, clean the burners with vacuum cleaner.

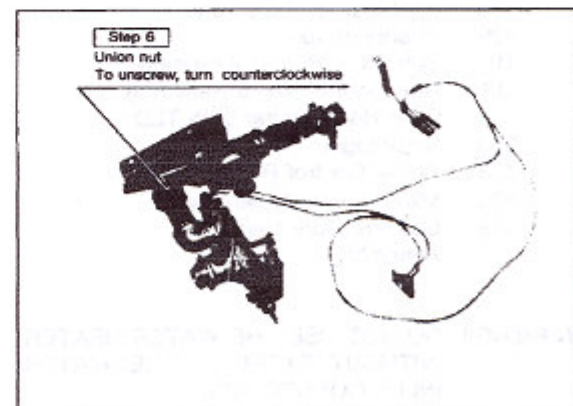
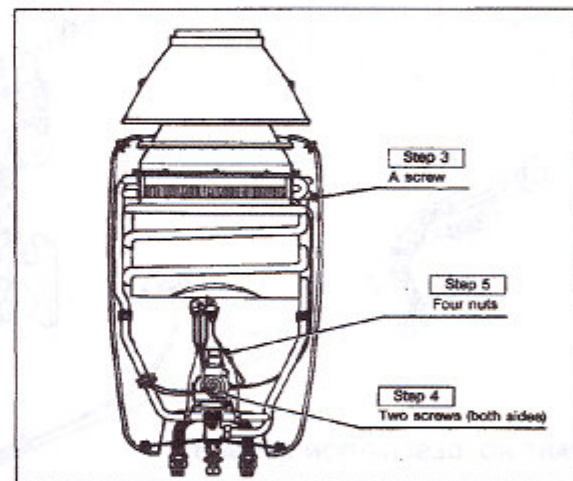


2. To remove gas pressure regulator:

Before removing the regulator, be sure to shut off gas supply upstream of the line.

- Step 1. Remove the main burner in accordance with the procedure described in item 1.
- Step 2. Unscrew two screws fixing temperature limiting device to joint pipe.
- Step 3. Unscrew screw fixing over heat limiting device to back jacket.
- Step 4. Unscrew two screws fixing gas portion of control to water portion thereof.
- Step 5. Unscrew four nuts fixing regulator to back jacket.
- Step 6. Take regulator with gas portion of control out of water heater.
- Step 7. Unscrew union nut fixing regulator to gas portion of control to remove regulator alone.

After replacing disassembled parts, be sure there is no gas leakage out of connections by testing with bubble solution.



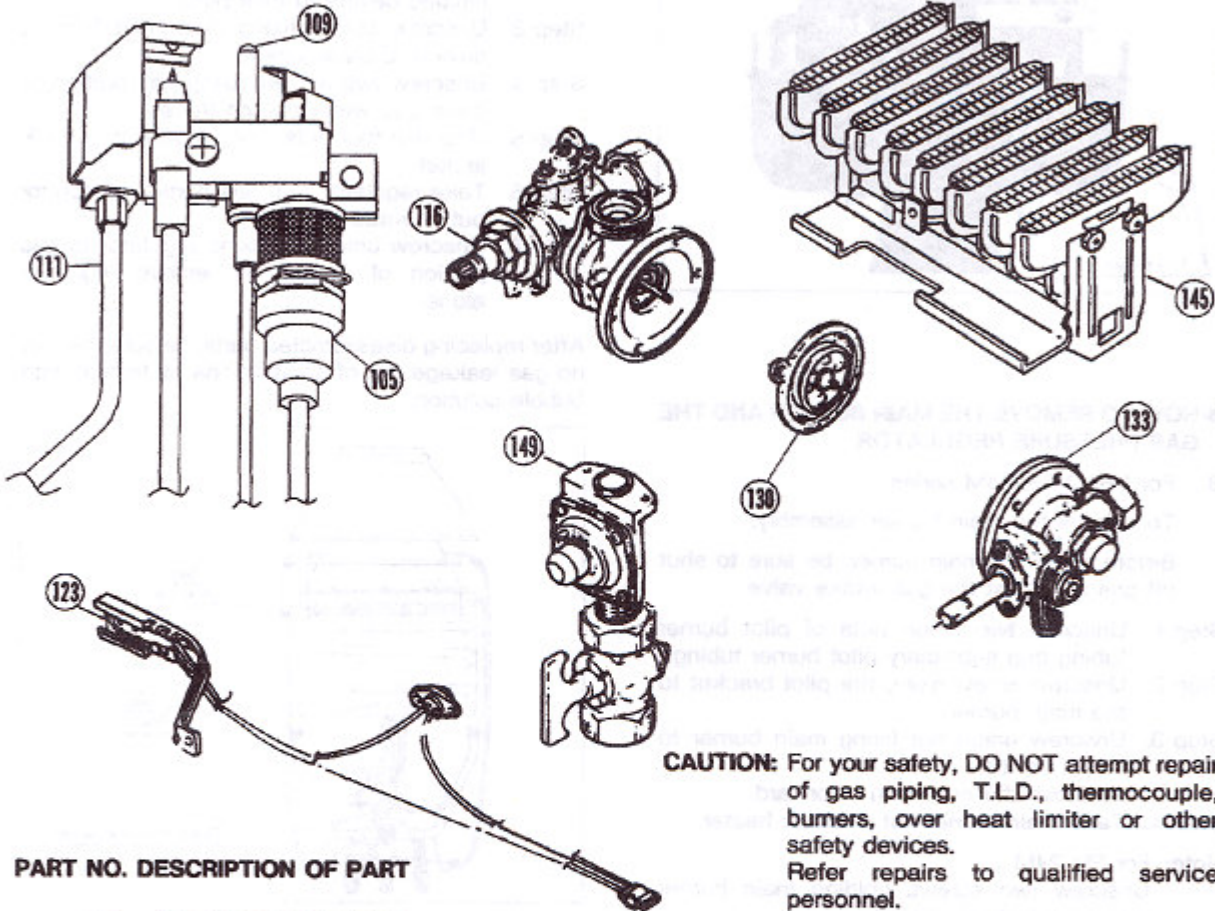
PARTS LIST FOR PH-6DN/DP

The parts list below includes the most commonly required components.

NOTE: All orders for repair parts must include the following informations:

1. Model No. & Type of Gas
2. Serial No.
3. Parts number(s) (if not illustrated, indicate)

Address parts orders to your distributor or dealer (whom you purchase the unit).

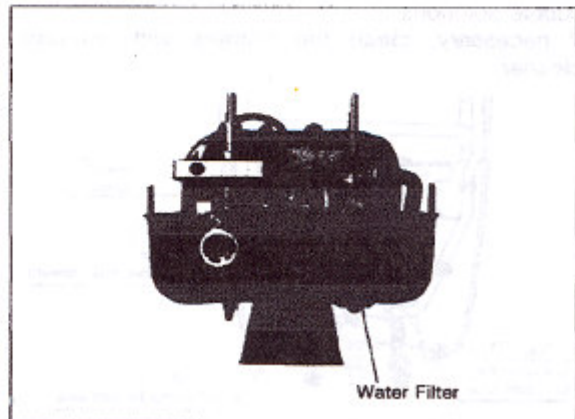


CAUTION: For your safety, DO NOT attempt repair of gas piping, T.L.D., thermocouple, burners, over heat limiter or other safety devices. Refer repairs to qualified service personnel.

PART NO. DESCRIPTION OF PART

| | |
|-----|---------------------------------|
| 105 | Pilot Burner Assembly |
| 109 | Thermocouple |
| 111 | Sub. Pilot Burner Assembly |
| 116 | Gas Control Valve Assembly |
| 123 | Over Heat Limiter with TLD |
| 130 | Diaphragm |
| 133 | Water Control Body Assembly |
| 145 | Main Burner Assembly |
| 149 | Gas Pressure Regulator Assembly |

WARNING!! DO NOT USE THE WATER HEATER WITHOUT FILTER IN THE WATER INLET CONNECTION. SERIOUS DAMAGE TO THE WATER HEATER AND INJURY TO PERSON CAN OCCUR IF THE WATER FILTER IS REMOVED AND USED.



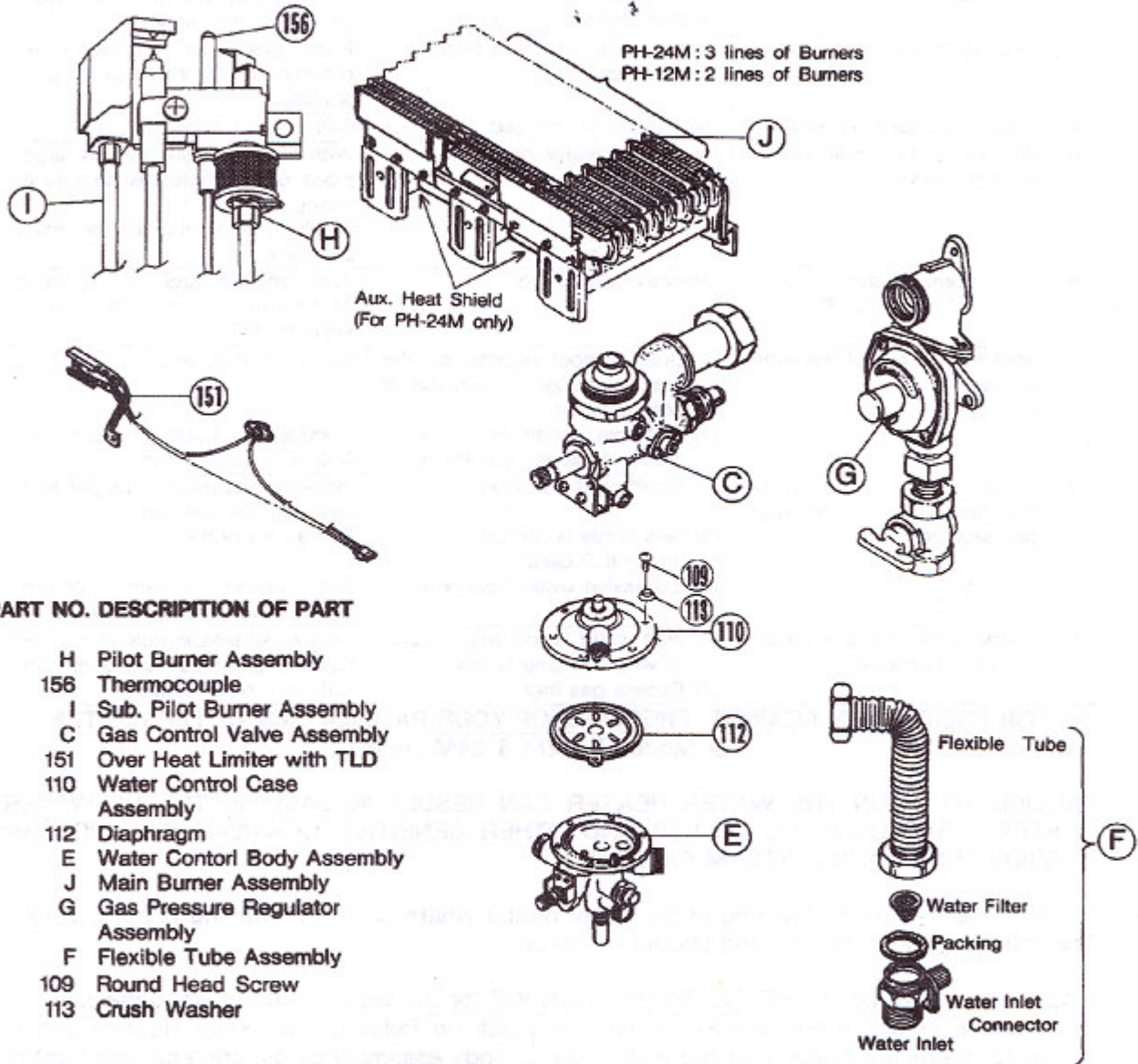
PARTS LIST FOR PH-24M-DN/DP (FOR PH-12M series, refer to this parts list.)

The parts list below includes the most commonly required components.

NOTE: All orders for repair parts must include the following information:

1. Model No. & Type of Gas
2. Serial No.
3. Parts number(s) (if not illustrated, indicate)

Address parts orders to your distributor or dealer (whom you purchase the unit).



PART NO. DESCRIPTION OF PART

- | | |
|-----|---------------------------------|
| H | Pilot Burner Assembly |
| 156 | Thermocouple |
| I | Sub. Pilot Burner Assembly |
| C | Gas Control Valve Assembly |
| 151 | Over Heat Limiter with TLD |
| 110 | Water Control Case Assembly |
| 112 | Diaphragm |
| E | Water Control Body Assembly |
| J | Main Burner Assembly |
| G | Gas Pressure Regulator Assembly |
| F | Flexible Tube Assembly |
| 109 | Round Head Screw |
| 113 | Crush Washer |

WARNING!! DO NOT USE THE WATER HEATER WITHOUT WATER FILTER BETWEEN FLEXIBLE TUBE AND WATER INLET CONNECTOR. SERIOUS DAMAGE TO THE WATER HEATER AND INJURY TO PERSON CAN OCCUR IF THE WATER FILTER REMOVED AND USED.

CAUTION: For your safety, DO NOT attempt repair of gas piping, T.L.D., thermocouple, burners, over heat limiter or other safety devices. Refer repairs to qualified service personnel.

TROUBLE SHOOTING

| PROBLEM | PROBABLE CAUSE | MEASURES |
|---|---|---|
| 1. Pilot fails to light WITHOUT spark. | (1) Spark gap too wide. (2) Spark leak. (3) Electrode is dirty. | Adjust gap to 9/64-11/64 inch. Pull the lead line away from place of spark leak. Clean electrode. |
| 2. Pilot fails to light WITH spark. | (1) Insufficient purging of air in pipes. (2) Pilot orifice is clogged. | Push the gas knob in at ► position long enough to exhaust. Call your serviceman. |
| 3. Pilot lights then goes out. | Gas knob is not being pushed in long enough. | Push gas knob in depressed position for 20 seconds at pilot position. |
| 4. Pilot flame goes out easily. | Pilot orifice is clogged. | Call your serviceman. |
| 5. Pilot stays lit but main burner does not ignite. | Insufficient water pressure. | With city water supply use larger pipes or eliminate resistances in piping. If using pump, increase the pump pressure. |
| 6. Main burner stays on even when hot water is off. | Defective gas valve. | Turn off the gas intake valve immediately and call your serviceman. |
| 7. Soot comes out of the main burner. | (1) Dust or soot deposit on the heat exchanger is a result of poor exhaust. (2) Improper combustion is a result of excess gas input. | Call your serviceman. Reduce gas input to proper rate. Call your serviceman. |
| 8. Water is not hot, even when the heater is set at High temperature. | (1) Insufficient gas input. (2) Gas bottle is almost empty (L.P.Gas) (3) Excessive water flow rate. | Increase gas input to proper rate. Call your serviceman. Get a new bottle. Dirt deposit in water control device. Call your serviceman. |
| 9. Water is too hot, even if set at Warm temperature. | (1) Inlet water is too warm and/or water volume is low. (2) Excess gas input. | Inlet water temperature is too hot. Reduce gas input to proper rate. Call your serviceman. |

FOR PROTECTION AGAINST FREEZING OF YOUR PALOMA GAS WATER HEATER

For Model PH-12M & 24M series

FAILURE TO DRAIN THE WATER HEATER CAN RESULT IN DAMAGE TO THE WATER HEATER'S GAS CONTROL VALVES AND OTHER SENSITIVE COMPONENTS AND CAN POSSIBLY RESULT IN A STEAM EXPLOSION.

To minimize the risk of freezing of the water heater where constant draining is not possible. The following measure can and should be taken.

Installation of PALOMA FREEZE PROTECTION KIT for the water control body assembly.

The Paloma Freeze Protection Kit is easy to install on Paloma Gas Water Heaters and is designed to prevent freezing of the water control body assembly by directly applying heat to the water control body assembly. Paloma Freeze Protection Kit is available from Paloma Industries, Inc. and all Paloma distributors and dealers.

Heating Tapes for water supply pipings may be purchased where electrical and plumbing supplies are also available and may be used to heat the water control body assembly.

Paloma Industries, Inc.
31111 Agoura Road,
Westlake Village, CA 91361