

Instructions for conversion

Instructions for converting the MWH180 from nat. gas to LP gas or LP gas to nat. gas.

DANGER: Serious injury or death can result to individuals who are not licensed professionals properly trained in performing conversions. Proper tools and safety gear are always required. If you are not a professional trained in conversions do not attempt to perform a conversion.

WARNING: This conversion should only be performed by a qualified gas company, plumber, HVAC technician, or trained service person familiar with gas fired equipment. This person should have tools to perform the conversion, check gas pressures, re-adjust gas pressures if necessary, and leak test the unit once the conversion is complete.

To convert to Natural gas you will need to contact your local MWH supplier and order part# 3724-2 Damper and part #3722-2 Manifold Assembly. For conversion to Propane part# 3724-1 Damper and part# 3722-1 Manifold Assembly will be needed.

MPI P/N	Description
3722-1	Manifold Assembly (Propane Gas)
3722-2	Manifold Assembly (Natural Gas)
3724-1	Damper (Propane Gas)
3724-2	Damper (Natural Gas)

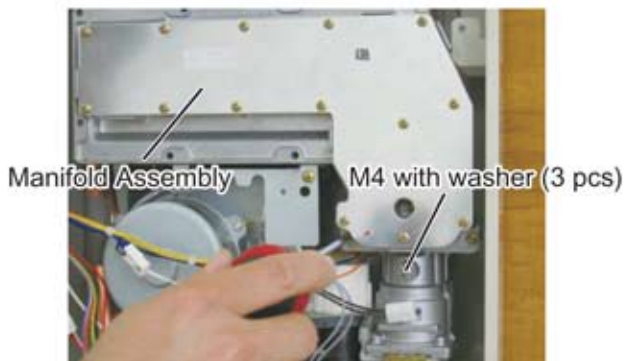
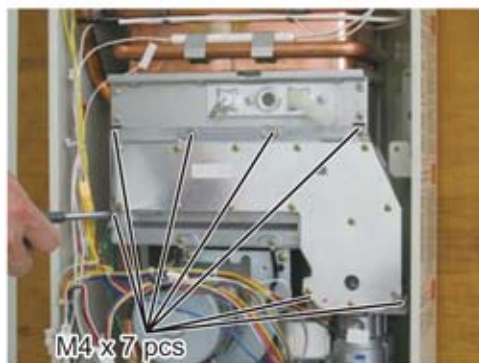
WARNING: If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

Procedure

Step 1:

- (1) Remove the four screws from front panel, and place on the side so that they not get lost or damaged.
- (2) Remove wires from flame sensor and electrode
- (3) Remove the set screws fixing the Manifold Assembly (M4 x 7 pcs, M4 w/ washer x 3 pcs).
- (4) Remove Manifold Assembly by gently pulling it from both sides. Once Manifold is removed make sure that the two O-rings that seal between the Manifold and gas valve are fixed in their grooved surfaces. Should an O-ring stick to the Manifold or drop out, gently peel off the O-ring, inspect both O-rings to make sure they are clean and not damaged, then reinsert into groves in the Gas Control Assembly. If either O-ring is damaged it should not be reused but replaced.

Illustration



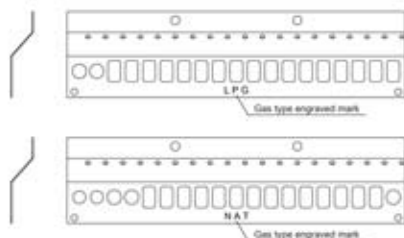
Procedure

Illustration

Step 2:

(1) Remove set screws (2 pcs) fixing the Damper and pull the Damper out downward.

(2) Replace Damper with appropriate one stamped LP or Nat.



Note: Damper slides up in between the Burner and the Front Panel, housing the Flame Rod and Electrode, leaving Gasket exposed for sealing to the Manifold.

(3) Re-attach the two screws to secure the Damper



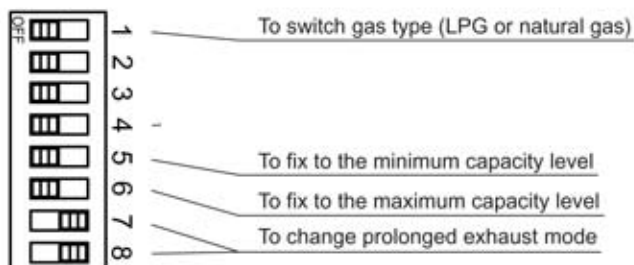
Step 3:

When reinstalling the new Manifold make sure the three fine thread screws w/ washers are used at the Gas Control Valve, and that there are no wires pinched under the Manifold before any screws are tightened. Once it has been confirmed there are no obstructions and the Manifold can seal properly to the Gasket on the Burner as well as the Gas Valve O-rings then all screws should be tightened firmly and evenly.

Step 4:

The DIP Switches in the illustration below can be adjusted without removing the Circuit Board. Familiarize yourself with their location and position, then adjust number 1 to appropriate gas type.

(The illustrated switch settings show the factory settings for the LPG as the gas type.)



(7 and 8 should be set depending on exhaust length before starting this conversion)

Step 5: Gas Pressure Checking and Setting Procedure

1. Preparation

(1) It is assumed that the inlet gas pressure coming into the unit is within the min. to max. allowed, as per the Data Rating Plate, for gas type to be used. The gas inlet pressure can be checked at the threaded hose fitting of the 3/4 inch inlet gas connection to the unit by:

- turning off the gas valve,
- removing the screw from the hose fitting,
- attaching a gas pressure manometer,
- opening the gas valve and checking the incoming gas pressure.

"Should the pressure be out of range adjustments need to be made by the gas supplier prior to any internal adjustments".

If inlet pressure is within range close gas valve, remove Gas Pressure Manometer, reinstall screw with washer into the threaded hose fitting, and reopen gas valve.

(2) Make sure the appliance is not in operation. Then, remove the screw from the Manifold pressure check inlet. (Do not mix the screw up with the front cover screws as they are the same type threads)

(3) connect the hose of the manometer to the pressure check fitting.

2. Adjusting Manifold pressure settings <Minimum pressure should be set before setting the maximum pressure>

(1A) Make sure that "DIP Switch" No. 1 is set to the position for the appropriate gas type.

(1B) Minimum Manifold gas pressure 0.4 inches w. c.

Maximum Manifold gas pressure 2.4 inches w. c.

Note: A small phillips head screwdriver will be needed if gas pressures are out of specification and need to be re-adjusted

(2) After ignition and combustion is started by opening the hot water supply valve, set "DIP Switch" No. 5 to ON position to set the combustion at a minimum capacity level. By turning the minimum gas adjusting control knob under the "DIP Switch," set the gas pressure for the minimum capacity level. Set the "DIP Switch" No. 5 to OFF.

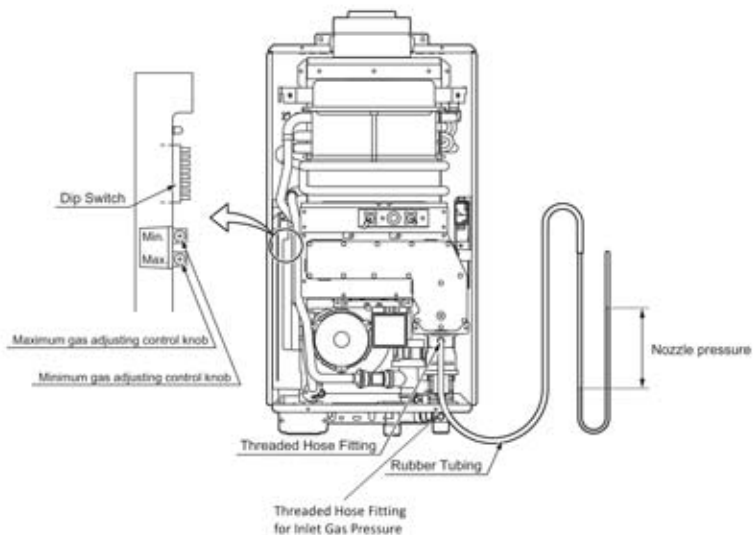
(3) With the unit still running, set "DIP Switch" No. 6 to ON position to set the combustion at a maximum capacity level. At this time, a substantial amount of water should be supplied. "Multiple faucets should be opened to prevent water from boiling, as the maximum capacity is forced, if the water temperature is high, the heated water may reach its boiling point."

(4) Set the gas pressure for the maximum capacity level by turning the maximum gas adjusting control knob under the minimum gas adjusting control knob. Then, set the "DIP Switch" No. 6 to OFF.

(5) Shut the hot water supply valve. Open the valve again for combustion. Repeat steps 2 and 4 to check that the settings are correct.

(6) Shut the hot water supply valve to stop combustion. Disconnect the rubber hose of the manometer from the pressure check fitting. Seal the hole by installing and tightening the screw.

(7) Restart the unit with full water supply and check for any gas leakage at the pressure check screw and around the gas manifold itself. If the gas pressure inlet screw was removed and reinstalled, it should also be leak tested.



Step 6:

Remark the gas type label on the upper left hand side of the cabinet with the new gas type. Reinstall the front cover with its four screws.