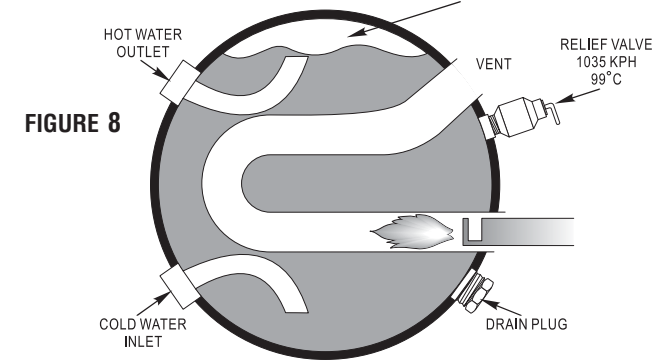


MAINTENANCE

- 1. Turn off the gas at the gas bottle if any gas pipe is to be opened.
- 2. Keep the unit and its surroundings clean and free of combustible materials, as well as inflammable liquids and vapours.
- 3. Keep the air intake exhaust openings clear.
- 4. Always drain the water when the unit is shut down or when there is a danger of freezing. If allowed to freeze, the tank or pipes may burst. In such cases, the warranty is void.
- 5. In the case of overheating or lack of gas supply, close the valve on the gas bottle or on the feed pipe to the water heater. Place the main switch into the "off" position and remove the red wire from the left side of the connection on the ECO switch (safety temperature limiter) (Figure 7, Page 3). Contact your dealer.
- 6. If after several attempts and if unit does not start, when gas is present and the 12 Volt DC supply is in order, check the burner (Figure 9, Part 4, Page 4). It is possible that it has been blocked due to spiders, spider webs or the like. Remove the burner and clean it.
- 7. The Water Heater is designed with an internal air space in the top of the water tank (Figure 8, Page 4). This space is to reduce dripping of the Pressure Temperature Relief Valve. In time water expansion will reduce the HWS air space causing the PTR Valve to drip excessively. To re-establish the internal air space follow these steps.
 - a) Turn off Hot Water System.
 - b) Turn off the incoming water supply.
 - c) Open a hot water tap inside the caravan.
 - d) Slowly raise the PTR valve lever and allow water to flow until it stops.
 - e) Slowly release the PTR Valve lever until closed.
 - f) Close hot water tap.
 - g) Turn on water supply.
 - h) Turn Hot Water Service on.

BEWARE! of discharge of hot water splashing from PTR Valve outlet.



WHO TO CONTACT - For service of your water heater contact your selling agent.

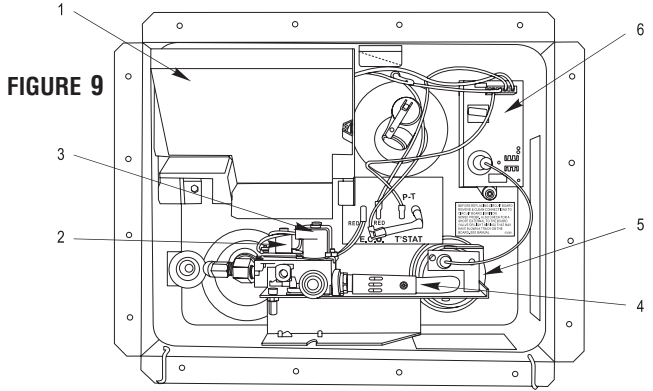
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- 8. Rinse the tank at regular intervals (2 to 3 times per year). This increases the life of the tank and gives you a full 22.7 litres of hot water. In rinsing the tank switch the unit off and wait until the water has cooled before taking the following steps:
 - a) Turn off the incoming water supply.
 - b) Open a hot water tap inside the caravan.
 - c) Slowly raise the PTR valve lever and allow water to flow until it stops. (Figure 4, Page 2)
 - d) Turn on the incoming water supply for 1 to 2 minutes to flush the HWS
 - e) Repeat steps c) and d) at least 3 times
 - f) Turn on water supply.
 - g) Turn Hot Water Service on.
- 9. The interior of the burner tube and the interior of the flue tube should be cleaned at least once a year and more frequently if spiders and other nest-building insects are a problem in your area. Only a qualified technician should perform these operations.



PART	NAME	PART	NAME
1	Air inlet (Intake)	4	Burner Assembly
2	Gas Control Valve (Regulator)	5	Igniter Assembly
3	Gas Control Valve (Solenoid Coils)	6	Connection box & Controller

DRAINING AND STORAGE INSTRUCTIONS

If unit is to be stored during the winter months, the heater must be drained to prevent damage in the case of freezing temperatures.

- 1. Turn off the gas supply to the water heater
- 2. Turn off pressure pump on the water system
- 3. Open both the hot and cold water taps
- 4. Open the drain on the water heater
- 5. Follow RV manufacturer's instructions for draining of the entire water system.

NOTE:
Be certain to refill water heater with water before re-lighting the appliance



•Installation •Operation •Maintenance

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Manufacturer: Atwood Mobile Products
Elkhart, IN. U.S.A.

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TECHNICAL DATA

Capacity	22.7 Litre
Water temperature	60°C
Maximum water pressure	3.5 bar
Heating medium	Gas
Type of gas	Propane
Gas pressure	2.75kpa
Gas heating capacity	1.5kW

WARNING:

- > Do not store or use petrol, or other combustible materials or liquids near or adjacent to this heater or any other appliance. This appliance shall not be installed in any other location where flammable liquids or vapours are likely to be present.

INSTALLER: Affix these instructions to or adjacent to the water heater.

OWNER: Retain these instructions and warranty for future reference

PLEASE REFER TO APPLIANCE DATA PLATE FOR ADDITIONAL INFORMATION

MPD 93754

22.7 Litre Water Heater

Effective 11/28/05

DESCRIPTION:

A lightweight (6.4kg.), 22.7 Litre capacity storage gas water heater with electronic remote ignition, of an advanced design that delivers hot water faster with greater overall efficiency.
12 VOLT DC ONLY

GENERAL INFORMATION

Atwood water heaters are approved for use only with liquified gas and only for installation in mobile homes, motor homes and caravans.

The installation and connection to the gas supply must be done in accordance with AG601 (Australian Gas Installation Code) and local Gas Rules (Vic = Office of Gas Safety).

PRESSURE TEMPERATURE RELIEF VALVE

The Hot Water Service (HWS), Pressure Temperature Relief Valve (PTR) is located at the top of the HWS behind the access door. The PTR valve has a white plastic release lever.

Weeping or dripping of the PTR valve DOES NOT mean that the HWS or the PTR valve is faulty. This is normal and is due to the water expanding as it is heated to the thermostat cut out temperature.

WATER SAFETY VALVE

In some States of Australia it is required that a Cold Water Expansion Valve be fitted to the water inlet line to the HWS.

In order to prevent an unwanted pressure increase, a 450 kpa Cold Water Expansion valve is fitted (or if not available a 550 kpa valve) in the piping to the Atwood Water Heater. This opens and relieves pressure, if the pressure rises above 450 kPa (65PSI).

It must be located in such a fashion that any pressure released flows water into the outside atmosphere (see installation page 2).

PIPING AND CONNECTION

The pipes must be routed in such a manner that they will not be damaged or caused to leak by driving stresses. At fastening points, and where they pass through surfaces, they must be protected by suitable protective materials (soft bushings, rubber grommets, wall joints) etc.

In places where increased corrosion is to be expected, especially under the vehicle floor and at pass-through points, piping and connections must be provided with suitable corrosion protection, for example, plastic sheath, tar coating.

Plumbing should be in accordance with AS 3500-2000 Part 4.2 of the National Plumbing Code and in conjunction with your local plumbing codes (Vic = Plumbing Industry Commission).



TESTING OF THE INSTALLATION

After connection to the Atwood Water Heater, the installation must be tested by an authorised tradesperson, before being placed into operable service.

1. Ensure the appliance settings comply with the appliance data plate.
2. Pressure test the gas supply line.
3. Check for leaks using a soapy water solution.

INSTALLATION

FASTENING TO VEHICLE

NOTE:

The air for combustion must be brought in from outside and the exhaust gas must be discharged outside. The unit must be fastened to the outside body wall of the vehicle and the door on the unit must open to the outside.

1. Cut an opening 410mm W x 320mm H in the outer body wall. Provide at least 80mm at the back of the unit for the water connection. (Figure 1)

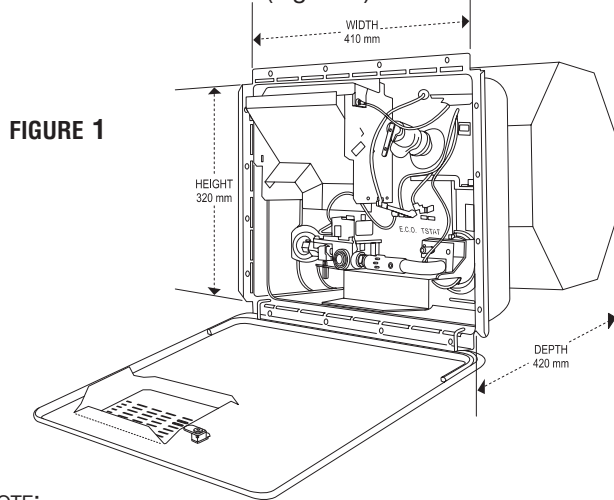


FIGURE 1

NOTE:

The opening must not affect the stability of the body in any way. Do not cut into, cut through or remove reinforcements or other devices used to increase the stability.

2. Fill (rebuild) the openings on the sides between the outside and inside walls of the vehicle body with a wooden frame (Figure 2)

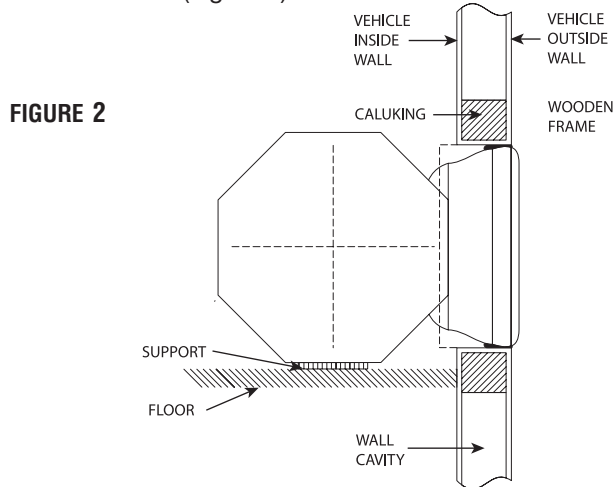
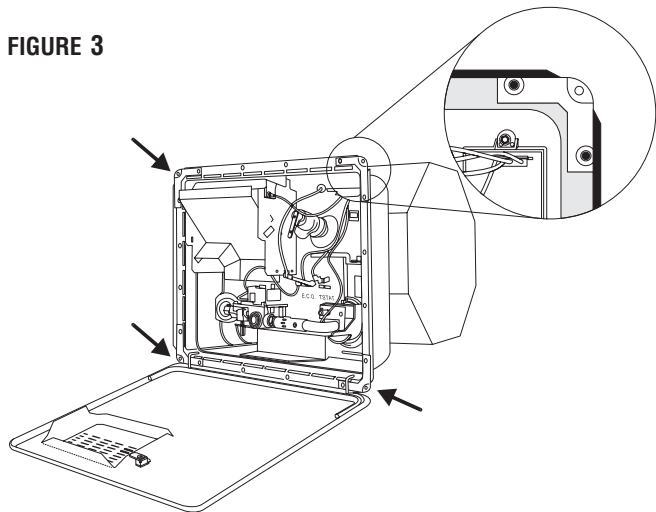


FIGURE 2

3. Carefully apply water-resistant caulking to the side flange of the unit and around the installation opening so as to prevent the later entry of rainwater.
4. Push the unit through the opening and against the caulking and fasten it to the body with screws. Use the 4 corner pieces as shown. (Figure 3)

FIGURE 3



5. The base of the unit should be on the vehicle floor. If this is not possible, then support the unit on the underside of the tank. (Figure 2, Page 2)

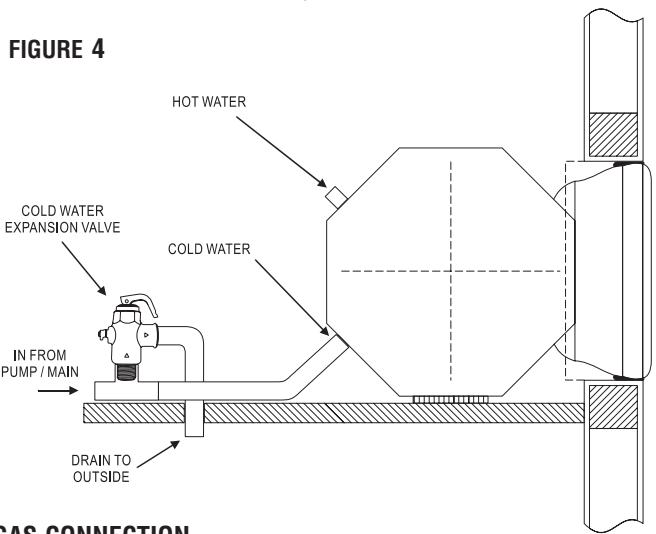
WATER CONNECTION

All connections to the tank should preferably be by means of suitably sized and type of piping. (See AS3500-2000 Part 4.2 for more information).

Where both pump and mains pressure water supply are present, a suitable check valve shall be installed in the supply line. The mains pressure shall be fitted with a pressure reducing / limiting valve which limits the main water pressure to 350 kpa (50 PSI). Install a 450 kpa cold water expansion valve (or if not available a 550 kpa valve) between the pressure reducing valve and HWS Unit. This limits the water inlet pressure to the HWS to a maximum of 550 kpa. (to comply with AS3500 Plumbing Code or Local Plumbing Rules). The Cold water expansion valve fitted to the cold water supply is plumbed to drain any overflow to the outside of the vehicle (Figure 4, Page 2) (check local plumbing rules). No other valve is installed between the pressure relief valve and the HWS.

All work to be carried out by Authorised Tradespersons.

FIGURE 4



GAS CONNECTION

Before undertaking the gas connection, make certain that the feed pipes as well as the water heater are installed tightly and free of strain. Insert the gas pipe from inside through the rubber grommet on the unit and connect it (with the feed pipe to the pressure regulator in the unit) direct to 3/8" SAE compression fitting.

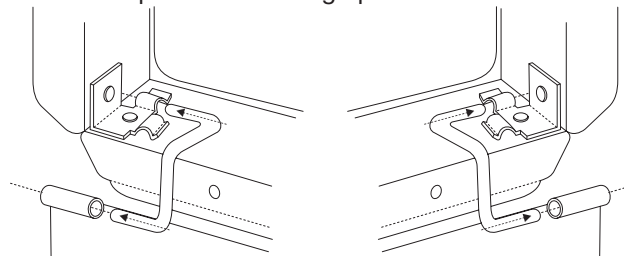
FASTENING OF THE UNIT DOOR

Step 1: Snap 1 hinge pin into clip

Step 2: Push the door extrusion over this hinge pin

Step 3: Push the other hinge pin into the door and snap it into other clip at the same time

NOTE: In order to remove the hinge pin, hold the door and press on the hinge pin



Left

FIGURE 5

Right

ELECTRICAL CONNECTIONS

NOTE:

It is recommended that the unit be connected directly to a 12 Volt battery or to the DC side of a power supply or battery charger. DO NOT connect to the AC side of a transformer. Use wire with a cross section area of at least 1 square mm. Sheathed 2 core cable for + ve. and -ve. Connections.

NOTE:

Do not short blue wire to ground. The circuit board will be destroyed. **(This is not covered under warranty)**. Protect the blue wire during all testing.

IMPORTANT:

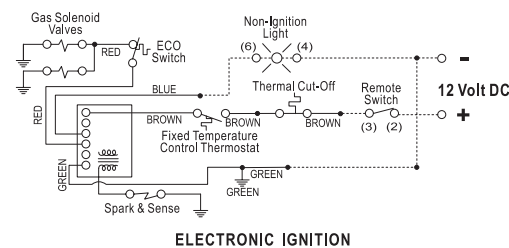
For electrical connections, use wire suitable for at least 90°C

1. Fasten the switch where it is most convenient. Put the switch in the "OFF" position, where it rests against the symbol 0.
2. Connect the battery to the switch. Be careful to ensure correct polarity i.e. +ve to +ve, -ve to -ve.

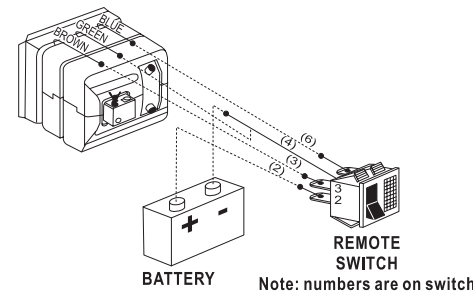
FIGURE 6

WIRING DIAGRAMS

Dotted lines are wired by customer



ELECTRONIC IGNITION



BATTERY

REMOTE SWITCH

Note: numbers are on switch

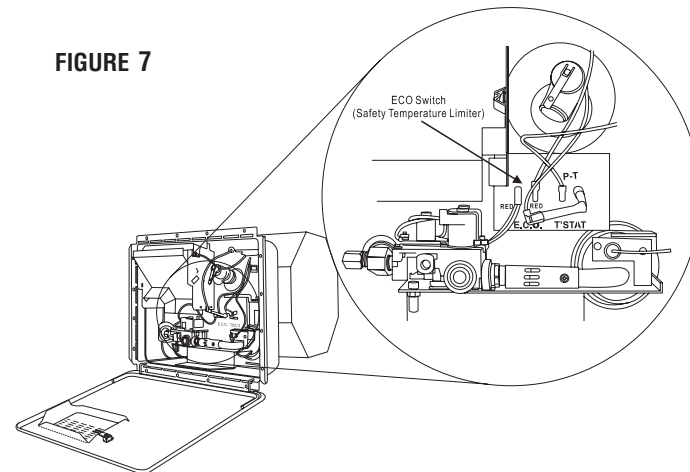
CAUTION
ELECTRICAL DAMAGE

- Label all wires before disconnecting when servicing controls.
- Verify proper operation after servicing.

OPERATION

1. Turn the main switch to the "ON" position.
2. If the red lamp lights for more than 15 seconds, turn the switch back to the "OFF" position and wait 5 minutes.
3. Repeat step 1.
4. When the burner lights, the red lamp will go out.
5. In the case of a shut-down for long periods and before service work:
 - a) Place the switch in the "OFF" position.
 - b) Remove the red wire from the ECO switch (safety temperature limiter) (ECO to valve – Figure 7)

FIGURE 7



6. If the unit switches off due to too high a water temperature, it must be switched back on manually. When the water has cooled, the unit can be switched back on by switching the main switch to the "OFF" position for at least 30 seconds and then back to the "ON" position.

7. If the unit still fails to start, contact your dealer.

WARNING:

Never place a frozen unit in operation. First allow the vehicle or the unit to thaw in a warm environment (e.g. garage). Check carefully for leaks after thawing.

WARNING:

The unit may not be operated while the vehicle is being driven. Always switch it off before driving.

WARNING:

Do not store or use combustible materials or liquids near or adjacent to this heater. This appliance shall not be installed in any location where flammable liquids or vapours are likely to be present. (Refer AG 601).

WARNING:

Be sure the water heater pilot and all ignition systems are "OFF" during any type of refueling and while vehicle is in motion or being towed.

8. Cold and especially heated potable water, which has been stored for a long time, generally no longer has the quality required for human consumption, especially due to the increase in bacteria count. Further, under certain operating conditions, when very soft alkaline water is used, the aluminium content in the water in the water heater may exceed the limit value of 0.2mg/l Al. for potable water.

Therefore, water from the heater should not be used for drinking purposes.