



Rheem Australia Pty Ltd

A.B.N 21 098 823 511

TECHNICAL BULLETIN – TB11 002

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Applicable to:	Rheem	Vulcan	Raypak	Solahart	Paloma	Edwards	Everhot	AquaMax
	✓	✓	✓	✓	✓	✓	✓	✓

Subject: Submerged Water Heaters

Where a flooding event occurs, Rheem Australia recommend the following guidelines be followed for dealing with water heaters that have been partially or completely submerged in floodwaters.

Our advice for water heaters that have been partially or fully submerged is that in the majority of cases they will need to be replaced. The reasons for this requirement vary between water heater types and the extent of damage to the specific water heater unit in question. As a general rule submerged water heaters will have:

Electrical components including controls, pumps & motors damaged beyond repair and/or with indeterminate functionality following contact with water.

Gas components and flue paths including heat exchangers, may be affected by silt & blockage leading to unsafe operation.

Other components of the water heater such as insulation may be rendered ineffective thereby affecting the operation of the water heater.

If contaminated water has entered a water heater, the quality of the potable water provided may be compromised and it is recommended the unit be replaced.

In some cases a water heater may be able to be salvaged. This document contains a general outline of which types of water heater can be economically repaired, and the minimum general requirements of those repairs.



Any work carried out on a water heater **MUST** be carried out by suitably licensed, qualified, skilled and competent persons as required by the controlling Regulatory Authorities.



Work on ALL water heaters with a mains electrical supply must include an inspection and insulation resistance test of the water heater installation's electrical supply circuit.



All water heaters connected to the power supply must be electrically isolated before conducting any other work.



All water heaters connected to the gas supply must have the gas supply isolated before conducting any other work.

Storage water heaters should be sitting on a firm, flat and level base.

The area immediately around the water heater should be cleared of debris and the plumbing to and from the heater as well as electrical supply circuit, checked for integrity.

All areas of the water heater should be cleaned, dried and cleared of mud, sand and debris at the completion of all repairs.





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Domestic Water Heaters

ELECTRIC WATER HEATERS

- Terminal block – clean and dry
- Accessible wiring – clean and dry
- Element – conduct an insulation resistance test and replace if element fails
- Thermostat – replace
- T&PR valve – release some water to confirm the T&PR valve is operational

Conduct an insulation resistance test on the repaired water heater. Advice may be sought from a specialist service provider (such as Rheem Service).

3 & 4 STAR GAS STORAGE WATER HEATERS

Note: applies only to units with polystyrene or polyurethane solid blocks for insulation. 3 & 4 Star Gas Storage water heaters with fiberglass insulation should be replaced.

- Gas supply – purge any water from the gas supply
- Flue – check the gas flue is clear and the baffle inside the flue is clean
- Combustion chamber and burner assembly – thoroughly clean and dry
- Ignitor – replace if necessary
- Gas valve – replace complete assembly
- T&PR valve – release some water to confirm the T&PR valve is operational

Advice may be sought from a specialist service provider (such as Rheem Service)

5 STAR GAS STORAGE WATER HEATERS

Do not attempt to operate or repair a Rheem 5 star, Rheem Stellar or Aquamax storage water heater that has been partially or fully submerged. These products should be replaced. Advice may be sought from a specialist service provider (such as Rheem Service).

CONTINUOUS FLOW GAS WATER HEATERS

Do not attempt to operate or repair a continuous flow water heater that has been partially or fully submerged. These products should be replaced. Advice may be sought from a specialist service provider (such as Rheem Service).





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ELECTRIC-BOOSTED SOLAR WATER HEATERS

- Solar panels – replace if the panels have been submerged otherwise clean the glass
- Terminal block – clean and dry
- Accessible wiring – clean and dry
- Hot and cold sensors (if fitted) – clean and dry
- Element – conduct an insulation resistance test and replace if element fails
- Thermostat – replace
- T&PR valve – release some water to confirm the T&PR valve is operational

Where fitted, replace the following electrical components:

- Printed circuit board
- Pump
- Solenoid
- Cord set
- Timer (if submerged)

Conduct an insulation resistance test on the repaired water heater. Advice may be sought from a specialist service provider (such as Rheem Service).

GAS-BOOSTED SOLAR WATER HEATER WITH CONTINUOUS FLOW UNIT AS BOOSTER

All Advice as above for Electric Boosted Solar. In addition, advice is as per that for continuous flow water heater units: do not attempt to operate or repair a continuous flow water heater that has been partially or fully submerged. These products should be replaced. Advice may be sought from a specialist service provided (such as Rheem Service).

OTHER GAS-BOOSTED SOLAR WATER HEATERS (excluding those systems using a continuous flow booster)

- Solar panels – replace if the panels have been submerged otherwise clean the glass
- Hot and cold sensors (if fitted) – clean and dry
- Gas Supply – purge any water from the gas supply
- Flue – check the gas flue is clear and the baffle inside the flue is clean
- Combustion chamber and burner assembly – thoroughly clean and dry
- Ignitor – replace if necessary
- Gas valve – replace complete assembly
- T&PR valve – release some water to confirm the T&PR valve is operational

Other Gas-Boosted Solar Water Heaters – continued next page





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OTHER GAS-BOOSTED SOLAR WATER HEATERS (continued)

Where fitted, replace the following electrical components:

- Printed circuit board
- Pump
- Solenoid
- Cord set
- Timer (if submerged)

Conduct an insulation resistance test on the repaired water heater. Advice may be sought from a specialist service provided (such as Rheem Service).

HEAT PUMP WATER HEATERS

Do not attempt to operate or repair a heat pump module that has been partially or fully submerged. These products should be replaced.

Do not attempt to operate or repair a heat pump storage tank that contains an electronic sensor strip – Rheem, Solahart, Edwards & Everhot heat pumps with the heater module above the tank. These products should be replaced. Advice may be sought from a specialist service provider (such as Rheem Service).

For all other heat pump storage tanks:

- Terminal block – clean and dry
- Accessible wiring – clean and dry
- Element – conduct an insulation resistance test and replace if element fails
- Thermostat – replace
- Temperature sensor and heat conductor pad – replace
- T&PR valve – release some water to confirm the T&PR valve is operational

Conduct an insulation resistance test on the repaired water heater, including in particular the heat pump module mains cable from the storage tank (which is unable to be replaced). Advice may be sought from a specialist service provider (such as Rheem Service).

BOILING / CHILLED WATER

Do not attempt to operate or repair a boiling / chilled drinking water product that has been partially or fully submerged. These products should be replaced. Advice may be sought from a specialist service provider (such as Rheem Service).





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Commercial Water Heaters

HEAVY DUTY / COMMERCIAL – ELECTRIC

- Terminal blocks – clean and dry
- Accessible wiring – clean and dry
- Elements – conduct an insulation resistance test and replace if element fails
- Thermostats – replace
- T&PR valve – release some water to confirm the T&PR valve is operational

Conduct an insulation resistance test on the repaired water heater. Advice may be sought from a specialist service provider (such as Rheem Service).

HEAVY DUTY / COMMERCIAL STORAGE – GAS

Note: applies only to units without fiberglass insulation surrounding the combustion chamber or the cylinder. For unit with fiberglass insulation, these should be replaced.

- Gas Supply – purge any water from the gas supply
- Flue – check the gas flue is clear and the baffle inside the flue is clean
- Combustion chamber and burner assembly – thoroughly clean and dry
- Ignitor – replace if necessary
- Gas valve – replace complete assembly
- Flue damper (if fitted) – replace
- T&PR valve – release some water to confirm the T&PR valve is operational

On all models, replace the following electrical components:

- Control module
- Temperature sensors
- Fan motor (if fitted)
- Pressure switch
- Relay
- Capacitor
- All wiring

Conduct an insulation resistance test on the repaired water heater. Advice may be sought from a specialist service provider (such as Rheem Service).





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COMMERCIAL HEAT PUMP

Commercial heat pumps that have been partially or fully submerged may require extensive repair works and must be fully assessed before attempting operation. Advice may be sought from a specialist service provider (such as Rheem Service).

COMMERCIAL GAS FIRED WATER HEATERS, POOL HEATERS & STORAGE TANKS (including Raypak & Edwards Commercial water heaters)

Commercial gas fired water heaters, pool heater products and storage tanks that have been partially or fully submerged may require extensive repair works and must be fully assessed before attempting operation. Advice may be sought from a specialist service provider (such as Rheem Service).

NOTES:

This advice is general in nature. Each specific installation must be assessed for all aspects of the safe and effective operation of the water heater.

Ensure replacements are installed in compliance with current regulations.

More information on electricity or gas supply and requirements for reconnection should be sought from the Master Plumbers Association in your state, the utilities suppliers for the installation site or relevant Government Authority as appropriate.

If uncertain of the model or type of water heater, or if any specific water heater or installation appears not to be covered in this advice, contact Rheem Technical Support Ph 1300 712 863.

