

Troubleshooting Guide

INTRODUCTION

In this section you will be given information allowing you to make simple and safe checks to determine whether it will be necessary to call a qualified service engineer. These simple checks do not involve you breaking into the gas circuit, which we recommend should only be carried out by a Corgi registered engineer. If you are in any doubt follow the “Find an Engineer” link on the Navigation Bar for your nearest registered engineer.

For a boiler, (water heater or combi boiler), to function to its full potential it is essential that it is connected to an adequate gas and water supply. It must also have adequate ventilation and flueing and be protected from sources of contamination, either airborne or waterborne. It should be checked annually for safe operation, regardless of how often it has been used. This is especially important if the appliance is fitted in Holiday accommodation (IE Caravan Holiday Home) where infrequently used boilers are especially susceptible to contamination from insects such as spiders etc.

Boilers are powerful appliances whose output is easily measured by the end user (i.e. how hot the water is). Any drop in performance is easily noticed. Please read the section called “Gas/Water supply checks” before you go straight to the “quick faultfinding guide” for your particular appliance. In our experience 50% of problems are caused by faults in the water or gas supply.

Note: If you smell gas or fumes, switch off at the supply, do not use, and call an engineer.

Gas/Water supply checks

Bottle size and type

Always use propane in a minimum of a 19Kg bottle size. Do not use Butane, as a 13Kg butane cylinder will not provide a sufficient continuous off-take to supply the boiler. This will cause the boiler to under-perform (water not hot enough) typically in winter weather, although it may be OK in summer.

Regulators

There are three main parameters when choosing a regulator:

1. Gas type e.g. Propane
2. Pressure, for Propane this is 37millibar
3. Capacity or flow rate. This may be stated in:
 - Kg per hour
 - cubic feet per hour
 - Cubic meters per hour.

A suitable size for a Caravan Holiday Home is 4kg per hour (75 cu. ft. per hour, or 7.5 cu. m. per hour).

The outlet should be 3/8 inch BSP and not a moulded hose tail. Anything with a moulded hose tail will be a small capacity, say 1.1 kg/hour, and designed for use with a single appliance.

WATER SUPPLY

INTRODUCTION

The water heater requires a clean potable (i.e. drinking quality) water supply at sufficient pressure to give a minimum operating pressure at the inlet of 1 bar, and a maximum standing pressure of 10bar.

Any physical contaminants such as sand, gravel, rust flakes, jointing compound, silicone sealant, swarf etc. may cause catastrophic damage, resulting in the water heater mechanism jamming. (There is an effective water filter fitted to all Morco water heaters, but it is possible it was lost during installation).

Likewise, high standing pressure of over 10bar, which may cause hydraulic shocks when shower levers and taps are operated, can also cause severe damage and jamming.

Low water pressure will not cause any danger, but the water heater may not operate correctly.

In areas of high water pressure (over 6bar) where the standing water pressure could easily exceed 10Bar during periods of low draw off, we recommend the fitting of a pressure reducing regulator (PRV).

A PRV will protect the system from excessive pressure, save water, reduce initial

surge, eliminate excessive noise and banging in the pipe work and stop the water jumping out of the basin into your face. They are inexpensive and easy to fit in line on the mains 15mm feed. **NOTE:** Turning the stopcock nearly off is not the same; it will reduce the flow rate but not the standing pressure.

CONSEQUENCES OF HIGH/LOW WATER PRESSURE

The main results of extremes of pressure are that the water heater may extinguish when other cold taps are opened, or the shower mixer tap is operated. Very often it will be the performance of the boiler when running the shower which is affected most of all. A large water heater is more likely to be affected by low water pressure than a small water heater. Indeed, a water supply which is adequate for a small boiler with a draw off of only five or six litres per minute may be inadequate to run a large boiler of ten or eleven litres.

How to check water pressure

If you suspect there is insufficient water pressure or flow to operate your boiler, set the hot tap running with the heater setting at minimum. Using a one litre kitchen jug and your wrist watch, time how many seconds it takes to fill. Divide these into sixty which will give you the flow rate in litres per minute. Compare your figure with that specified in the instructions for your boiler.

Other problems

Quite often there may be a problem with the plumbing between the boiler and the outlet. Check for correct operation at all the taps starting with single outlet taps first (IE bathroom basin). If it functions correctly at one tap, the boiler is OK and the problem must be in the plumbing.

Common problems occur with mixer taps and Thermostatic shower mixers in that the internal valves pass cold water across to the hot, causing either too low a temperature or the boiler wont fire up at all.

Remember that water supply will be affected by occupancy on the park. If you find you can't get a shower at 6pm on a busy Friday night in summer, but it is fine on a weekday morning when no-one else is there, **DON'T BLAME THE BOILER!**