



If your caravan was made after August 2003, it is likely that it contains a gas regulator mounted inside the cylinder locker

Gas tasks

John Wickersham examines gas regulator issues affecting old or new caravans and motorhomes

IF YOUR touring or motor caravan was manufactured after August 2003, its gas regulator is likely to be fixed on a wall inside the cylinder locker. It is intentionally designed to accept either butane or propane and it delivers gas at a pressure of 30mbar to suit your caravan's appliances.

Before this date, gas supply systems were different. UK touring or motor caravans built before 1 September 2003 contain a regulator that is attached directly to the top of a cylinder. However, if you decide to use a butane cylinder, you need a butane regulator that delivers gas at a pressure of 28mbar. Alternatively, if you use a propane cylinder, you'll need to buy a propane regulator which delivers gas at 37mbar. To ensure users don't make mistakes, the couplings on butane and propane cylinders are different.

Elsewhere in Europe, gas operating pressures, regulators and cylinders were different, which partly explains why changes were needed.

There is nothing wrong with the earlier systems – just minor irritations. For instance, many of the UK gas cylinders, including those from BP Gas Light, Calor and Campingaz have dissimilar connection points. Calor butane cylinders are also supplied with two types of coupling – screw thread and clip-ons. Add to these variations the many different couplings used in mainland Europe and there's the potential to need a large collection of cylinder-mounted regulators.

Without doubt, the introduction of 'universal' (ie butane/propane) 30mbar wall-mounted regulators made good sense. A caravanner who embarks on a grand tour of Europe no longer needs to buy an array

of regulators. Instead he/she needs to purchase factory-made, high-pressure coupling hoses to link the wall-mounted regulator to the chosen cylinders.

As a point of safety, gas specialists state that you should not upgrade an older caravan fitted with 28/37mbar appliances by merely fitting a wall-mounted 'dual gas' 30mbar regulator. It's also interesting to note that while German manufacturers adopted the revised operating pressure in 2003, some fit cylinder-mounted, dual gas regulators rather than wall-mounted products.

That's actually not as silly as it might seem, in spite of the inconveniences described above. Notwithstanding the logical benefits of employing a wall-mounted regulator, several owners have found that their caravan sometimes suffers from gas starvation (the NCC reckons this occurs in about 4% of models).

Some sort of blockage appears to cause the problem and I experienced a case of gas starvation when winter-testing a motor caravan in the Alps. A combination gas heater failed to operate – by a stroke of luck, I'd packed a low-wattage domestic fan heater as a back-up!

INVESTIGATING GAS STARVATION

So what causes blockages in some post-2003 caravans? Investigations confirmed some wall-mounted regulators fail to work properly and that an 'oily' substance gets into their regulating mechanism and adjacent hoses/pipes.

The fact that liquefied petroleum gas is an oil-related product led some investigators to speculate that there might be contaminants in the gas itself. However, when samples of the so-called 'oily' liquid were analysed, it was found to contain phthalates that form part of the plasticiser used in the manufacture of flexible hose.

Further investigations found that condensation sometimes forms in the short length of high-pressure hose used to link a cylinder to a wall-mounted regulator. This is thought to absorb some of the plasticising agent which might subsequently pass into a

regulator inlet. It's fair to say, though, that the root cause of the problem has been a topic of very lively debate between gas suppliers and component manufacturers, with no overall consensus as to the precise cause yet being agreed on.

Interestingly, this doesn't seem to occur in older caravans where a cylinder-mounted regulator reduces the pressure of gas at source – ie before it passes through a low-pressure hose into the main supply pipe.

RECOMMENDATIONS

In January 2007, the National Caravan Council (NCC) circulated a statement indicating the probable cause of gas blockages and curative measures that a dealer could carry out. The recommendations were:

- Re-mount a fixed regulator as high as possible in its locker
- If necessary, fit an elbow joint on top of a regulator to maximise the height
- Mount high-pressure hose with a steep slope allowing condensation to drain back to the cylinder

As a routine practice, also shut down the supply at the cylinder whenever a vehicle is not being used. Some owners also replace flexible rubberised hose with a semi-flexible stainless steel pipe. Gaslow supplies this pipe and offers kits which include a Clesse regulator (either 8mm or 10mm connections), a 750mm stainless steel flexible butane pipe and an adaptor for propane cylinders. Calor also offers stainless steel replacement hoses.

THE FUTURE

Caravan manufacturers have been monitoring failures, with some changing the details of their installations in the hope of eliminating problems. While there are some signs of success, at present the Club is still receiving reports of failures from time to time, so this is certainly not a resolved issue just yet. So have a look at the way your regulator has been fitted and follow the advice above.

Of course, if your caravan or motorhome has old-style, cylinder-mounted regulators, gas blockage problems seem very unlikely. Similarly, imported German models with 30mbar cylinder-mounted regulators should be trouble-free, too. Finally, if you are planning a long trip abroad, it might be prudent to buy a spare 30mbar regulator to take in case of a blockage. ■

FURTHER INFORMATION

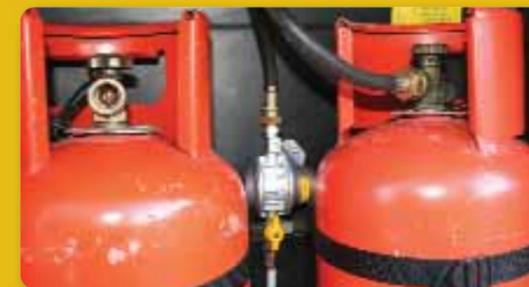
- Gaslow – call 0845 400 0600 or see gaslow.co.uk
- Calor – see calor.co.uk



Although German manufacturers adopted 30mbar products, some fitted cylinder-mounted regulators



During a system check, this motorhome was found to have an oily substance in its gas supply system



This regulator is fitted too low and condensation in part of the hose could run into it



When a dealer made modifications in this caravan, an elbow joint was fitted to raise the height of the regulator's inlet



The hose in this installation has a sharp slope back down to the cylinder as recommended



Fitting a semi-flexible stainless steel hose eliminates the chance of plasticiser entering the regulator



Before September 2003, UK caravans were fitted with cylinder-mounted regulators