



A rectangular plastic collar holds the microswitch secure on Whale's Elegance mixer tap

TAP TALK

CLUB SURVEYS SHOW THAT COMPLAINTS ABOUT TAPS HAVE GROWN IN RECENT YEARS. **JOHN WICKERSHAM** LOOKS AT SOME OF THE THINGS THAT GO WRONG

On most modern caravans, turning a tap or lifting a lever performs two functions: (1) it triggers an in-built switch which sets the pump in motion, and (2) it opens a valve to release the water being pumped.

In some caravans, and the majority of motor caravans, the system is different because the taps are not built with a switch; their purpose is solely to open or close the supply. Somewhere else in the system there's a device which detects when you open a tap because your action causes pressure in the system to fall. That triggers a pressure-sensitive switch which then activates the pump.

Pressure-sensitive switches are often built into the casing of a diaphragm pump, though sometimes they are fitted within a pipe run. They normally have an adjuster to ensure the pump is activated only when there's a large drop in pressure. Unfortunately, some adjusting screws are hard to find!

If it's any consolation to you, neither

a poor pipe coupling also cause a drop in pressure.

WHICH SYSTEM HAVE I GOT?

To check which system is fitted in your caravan, look under your sink. If you see a pair of wires coming somewhere from the hot tap and another pair from the cold side, you've got microswitched taps.

TAP PROBLEMS

Three common problems are:

- Microswitch failure
- Taps whose microswitch cannot be replaced
- Frost damage

If your caravan uses microswitches it's always wise to carry a spare. Then if a problem develops on holiday – especially if you are abroad – you stand a



ABOVE: On the Shurflo TrailKing 7 diaphragm pump, pressure sensitivity is adjusted by the central screw

RIGHT: The pressure sensitivity adjustment screw on this Whale Evenflow pump is hidden behind protective silicon sealant

system is perfect. Taps fitted with a switch – called a microswitch – are certain to fail if moisture gets into the switch casing. Pressure-sensitive switches can be troublesome too, activating the pump when it isn't needed. That's because a dripping tap or





reasonable chance of finding a caravan specialist who could fit it for you.

Many DIY owners do this themselves, of course, and sometimes it's easy. The hardest part is squeezing yourself under a sink or basin and working in semi-darkness.

Being a contortionist isn't always necessary, however. On Whale's Elite 'lever-lift' taps the job is done from above. Once the red/blue insert has been prised out, the screw head which retains the lift-up lever is revealed. But be careful: hurriedly removing the control lever can dislodge parts of the mechanism below. It can take a moment or two to work out how the switch activating plate should be re-assembled but, that said, the switch sits in view and, having prised it upwards, a replacement is easily fitted.

Sadly, however, some imported taps have been fitted in the past whose microswitch is completely sealed inside the moulding. In that case, if a microswitch fails, the entire tap has to be thrown away and replaced.

ALTERNATIVE STRATEGIES

If you don't carry a spare microswitch, remember that it's function is merely to link-up the pair of cables that you see hanging under the tap. So a makeshift answer is to cut these cables and connect them to a suitable temporary switch instead. Whale even includes a switch in its catalogue which can be foot, knee, or hand operated, depending where you install it. This lacks the finesse of a switch activated by the turn of a tap top, but it's better than nothing. So is the following strategy.

ABOVE: Plumbing problems are common in winter. A small quantity of residual water in a flexible shower hose partly caused this damage

RIGHT: Check how the switch activating plate is fitted and commit it to memory or paper



LEFT: The chromed plastic collar which secured this flexible shower hose was irreparably damaged during frosty weather

RIGHT: This microswitch has two location holes and the unit is mounted on two small plastic pegs



- Very gently, turn the cold tap on a tiny amount – just enough to trigger its microswitch but not enough to create a flow of cold water
- Eureka! The pump comes to life but *hot* water gushes out of the spout

DOMESTIC TAPS

In some caravans and motor caravans domestic taps are being fitted, and these usually work in conjunction with pressure-sensitive switching systems. They're heavy but usually work very positively. Getting spares might be less straightforward; and I'm not a fan of glitzy 'gold' plate taps which often tarnish quickly. (Where weight isn't critical, I prefer the stainless steel taps from Whale's marine range which are now being fitted in some motorhomes.)

FROST PRECAUTIONS

Lastly, frost! Remember that it's not just ice that physically splits pipes or forces couplings apart. When water freezes, its volume apparently increases by as much as 8.79% and that can create a significant build-up of pressure in a water system. It's enough to damage a coupling. That's why you *must* leave all taps and the shower control open throughout a winter lay-up.

Remember too that, if you've got lever taps, the lifted lever must be exactly in the middle position so that both hot and cold feeds get pressure relief.

A USEFUL TIP

If you've got a traditional mixer tap with separate hot and cold controls and a central spout, read on! In the event of one of the microswitches failing, here's how to 'beat the system'.

Let's imagine that the problem is on the sink's hot water supply. You find that when you turn the hot tap, it doesn't get the pump to work – even though all the other taps in your caravan are working properly. Try this:

- Turn the hot tap at the sink and *leave it fully open*

The penalty for failure is shown in one of the pictures. Although the system had been drained down, the shower head had not been lowered and left in the shower tray, so water remained in the downturn of the flexible hose. And while the shower's lever control was raised, it wasn't completely centralised. Given an extended spell of low temperatures, water in the shower hose froze, the pressure built-up in one of the supply pipes and the damage was quite astonishing.