

how to fit a

# Superfil pump and socket

Fancy an easier time when touring and not face having to carry the can for life's little luxuries away from home, like a toilet? **Matt Stubbs** certainly did and he wonders, after fitting a Superfil pump and socket, why he didn't do it sooner!

## Data panel

**DIY fitting rating** Well within the competence of the average DIYer, However, 12v electrical connections are involved and although these are straightforward, if you doubt your competency, seek expert help. In any event, the 12v system should be switched off before starting the project to avoid any potential problems.

**Tools needed** Power drill, 6mm drill, 11/16" dia hole cutter, hammer, screwdrivers – one of which needs to be watchmaker size, pliers, wire cutter/stripper, torch.

**Additional materials:** 5-amp twin cable, cable clips, silicone sealant, scotchlok connectors.

I'VE REACHED THE AGE where I hate having to carry water. When I was a lot younger it didn't worry me too much if I had to carry five gallons of fresh or waste, but as I've got older I have come to the conclusion being macho comes a poor second to opting for anything which can save muscular effort.

When we got our latest caravan, I immediately realised I was going to have to lift a water container to fill the fresh water chamber of the Thetford cassette toilet. Lifting the Aquaroll was out of the question – it looked as though I would have to get a small jerrycan for the job or fit a suitable pump. I chose the later.

For many years Whale has produced an excellent pump called the Superfil 80. It is often fitted to the toilet compartments of some of the more expensive caravans, both those fitted with a cassette toilet and the C-200CW



**1** The Superfil 80 comprises the pump, socket and socket cap but you have to supply the twin core cable.



**2** Drill the 6mm hole for the cable up through the floor only after making sure you've chosen a suitable spot.



**3** Cut the socket hole through the side using an 11/16" hole cutter after careful marking and positioning.



**4** Don't rush this part! The cutter can make light work of the caravan's skin and easily create a hole too large.



**5** The cable was taped to a piece of coathanger wire and pushed up through the hole in the floor.



**6** The cable was then pulled out of the socket hole with a wire hook, again using a simple bent coathanger.

and CWE swivel toilets. I thought that if an expensive caravan can have one, then why not mine?

My WC compartment is at the rear offside corner of the 'van. This means that there is a space – between the left-hand edge of the exterior door to the waste tank and the rear panel of the caravan. This was where I decided to fit the Superfil socket.

The socket is made for surface mounting and fits into an 11/16" diameter hole in the wall. This meant that I had to be able to feed the cable in the void between the rear panel and the side wall. The

first job was to check if this would be possible, and involved drilling a 6mm hole up through the floor in line with where the socket would be fitted. If a problem had come to light, I would then have been able to fill the hole with sealant and rethink the project.

Once the hole had been drilled, I pushed a piece of coathanger wire up through it to confirm that there were no obstructions which prevented me from feeding the cable. Once I knew that all was well, the next job was to cut the socket hole through the side wall. This is a job which needs to be



**7** Having offered the socket and cap in place, sealant was squirted into the hole before the socket was properly fixed.



**8** The finished socket. Note the WC label. There are two socket tubes; decide how you want to wire pump up.



**9** The cable was run along the underside of the caravan floor and secured with cable clips. Ensure cables don't snag.



**10** A 6mm hole was drilled down through the floor and then the cable fed up into the caravan.



**11** Once the live and return was connected to the pump circuit, the cable was secured.



**12** The final job was to test the full system. It works well and has other uses apart from the WC.

done carefully, bearing in mind the outer aluminium skin is only about 1mm thick and that if you let the hole cutter run amok, you will end up with an oversize hole.

To feed the cable, first strip off several inches of its outer sheath and then tape the two leads to the end of the coathanger wire. This was then pushed up through the hole in the floor until it could be seen through the socket hole. Using a second length of coathanger wire, with the end bent at a right-angle, I hooked the cable out through the hole. A torch is helpful when looking for the cable through the socket hole.

Having removed the cable from the coathanger, I fitted the socket cap over it and then stripped both leads and fitted them to the socket. The two tubes in the socket are different sizes to ensure that the pump is always plugged in correctly. It is therefore vital to decide which tube will be the live and which the return.

It doesn't matter which one is which, but remember when you are connecting the other end of each lead to the van's 12v system.

I decided to make the larger tube the positive and connected the brown sheathed cable to it. The terminal screws in the socket are extremely small so you will require something really dinky like a watchmaker's screwdriver to unscrew and tighten them. Before

securing the socket, I squirted some silicone sealant into the hole and round it. The instructions call for pilot holes to be drilled for the two securing screws. However, I prefer to let them cut their own threads through the aluminium. The excess sealant which squeezed out was immediately wiped off with a damp cloth.

The cable was then run along underside of the caravan floor, being secured at intervals with cable clips. Once it was secure, I applied sealant to the the entry hole in the floor.

Forward of the axle was the socket for the submersible pump. On checking under the front off-side seat I could see the live and return feed to the socket, and decided that this would be a suitable point to pick up the 12v supply to the Superfil. Having checked that there were no obstructions under the floor, I drilled a 6mm hole down through it and fed the cable up into the caravan, cutting it slightly over-length. Whenever possible I cut over-length as it allows me more freedom to make small cable run alterations should the need arise.

Using scotchlocks I clipped the live lead from the Superfil to the live supply to the submersible pump socket and the return to the return. After the cable was secured to the floor with cable clips, it was now time to test the system.

With a bucket full of water below the Superfil socket I placed the Superfil in the bucket and plugged it into the socket and switched on. It worked a treat; and now I'm able to fill the fresh water chamber from my Aquaroll.

Having used the Superfil 80 for some time, what's my overall opinion? Since I fitted the Superfil, I have used it every time I have needed to add water to the cassette fresh water chamber. I have been delighted how easy it's made the job. And it's also been useful on other occasions, such as when I need to clean the mud off my boots, for instance.

My only criticism concerns the socket cap. This is made in one piece and fits between the back of the socket and the caravan wall. Being one-piece, it has a strap-type hinge which, I regret to say, does not stand the test of time – it eventually breaks, resulting in the socket cap becoming detached. This raises the distinct possibility of the cap being lost, while the broken strap flapping about looks unsightly. It's something I think Whale should look into, because otherwise this is a super product.

Our thanks to Munster Simms Engineering Ltd, Old Belfast Road, Bangor, Co. Down, BT19 1LT.  
Tel: 01247 270531.  
Fax: 01247 466421.