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TYPICAL HOT AND COLD WATER SUPPLY SYSTEM

FRESH AND WASTE WATER SYSTEMS

This is one of the easier supply systems to install in a motorcaravan although some professionally-built water systems are not as good as they ought to be.

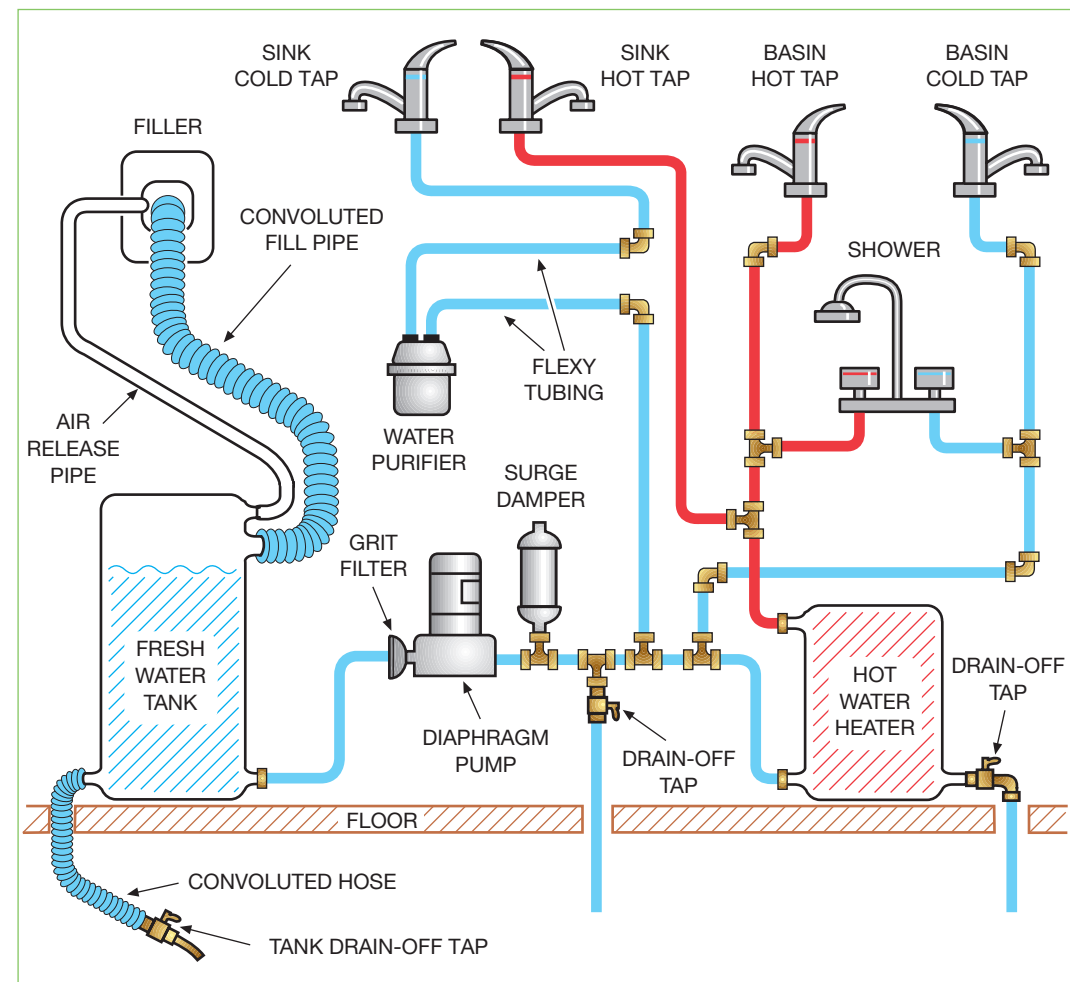
Although a water system shouldn't be difficult to design, the plumbing in professionally built models is sometimes disappointing. Waste water often drains sluggishly out of sinks and many owners report intolerable smells reaching the living area from their waste tanks.

Another reported disappointment occurs when underfloor waste tanks are installed just rearwards of a shower. When the driver brakes sharply, remnants of dirty water from the waste tank surge forwards and discharge into the shower tray.

Needless-to-say, problems like this shouldn't occur. However, before discussing practical issues, the question is: 'What kind of system will you want?'

Decisions

As regards fresh water provision, some motorcaravans used to be only equipped with a cold water supply comprising a faucet (i.e. an open pipe rather than a tap) and a manually



operated pump. It's a simple arrangement with little to go wrong. If you want hot water for personal washing or for washing-up, you merely boil a kettle on the hob. In a small campervan this arrangement is fine and both foot-operated and hand-operated pumps from Whale's range of water accessories are fitted in small boats and older caravans.

Today, most motorcaravanners now expect to have a water heater, a shower and hot water on tap; in fact, few people would purchase a new motorcaravan which didn't have these 'luxuries'. However, the installation of a facility like this needs a heating unit, an electric water pump, a switch to activate its motor, a 12V supply and an elaborate pipe system as shown alongside.

Decisions relate to the choice of pipes, whether you intend having fixed tanks (as opposed to portable water containers), choosing taps and picking the right type of pump.

To find out more about such products, see the detailed descriptions given in Chapter 7 of *The Motorcaravan Manual* (2nd Edition) which also includes guidance on:

- avoiding frost damage,
- fully serviced pitches (which offer permanent stand pipe connections),
- characteristics of different pumps,
- replacing micro-switches in taps,
- pressure-sensitive switching, and so on.

The objective in this chapter is to single out some recommended components and to explain how to fit them. Let's start with the fresh water system.

Fresh water

SOURCES

There are four alternative supply sources:

- A direct coupling to a stand-pipe using a pressure-reducing product e.g. the Whale Aquasource. This arrangement is commonplace at camping grounds in the USA but not many sites in Europe offer 'fully serviced pitches'.
- There's the arrangement used in the UK by touring caravanners which requires two external portable containers – one for fresh water, and another taking waste water from a sink or shower.



- A tank system in which a waste water tank is installed under the floor and a fresh water tank is mounted either nearby or indoors where it cannot freeze-up in cold weather.
- A system (seldom used by manufacturers) employing a submersible pump and portable water containers stored indoors in a purpose-made enclosure. This means that the containers can be carried to a service point instead of the owner having to drive the vehicle there.

Caravanners normally use portable containers to deal with both the fresh and waste water.

PORTABLE EXTERNAL CONTAINERS

In my Starcraft campervan project, the provision included a 22.7-litre (5-gallon) plastic water container, a connecting hose, a caravan-type coupling, and an electric diaphragm pump fitted on the floor inside. In winter, the water container was brought indoors at night. It was simple, effective, and a water heater was added at a later date.

An alternative is to fit an electric submersible pump, products being available from both Whale and Truma. Wall couplings are supplied which couple-up the water pipe feed and



This campervan is equipped with portable fresh water containers instead of a fixed tank.



On this Starcraft motorcaravan, water is supplied 'caravan style' and the container can be stowed indoors at night if it's frosty.