

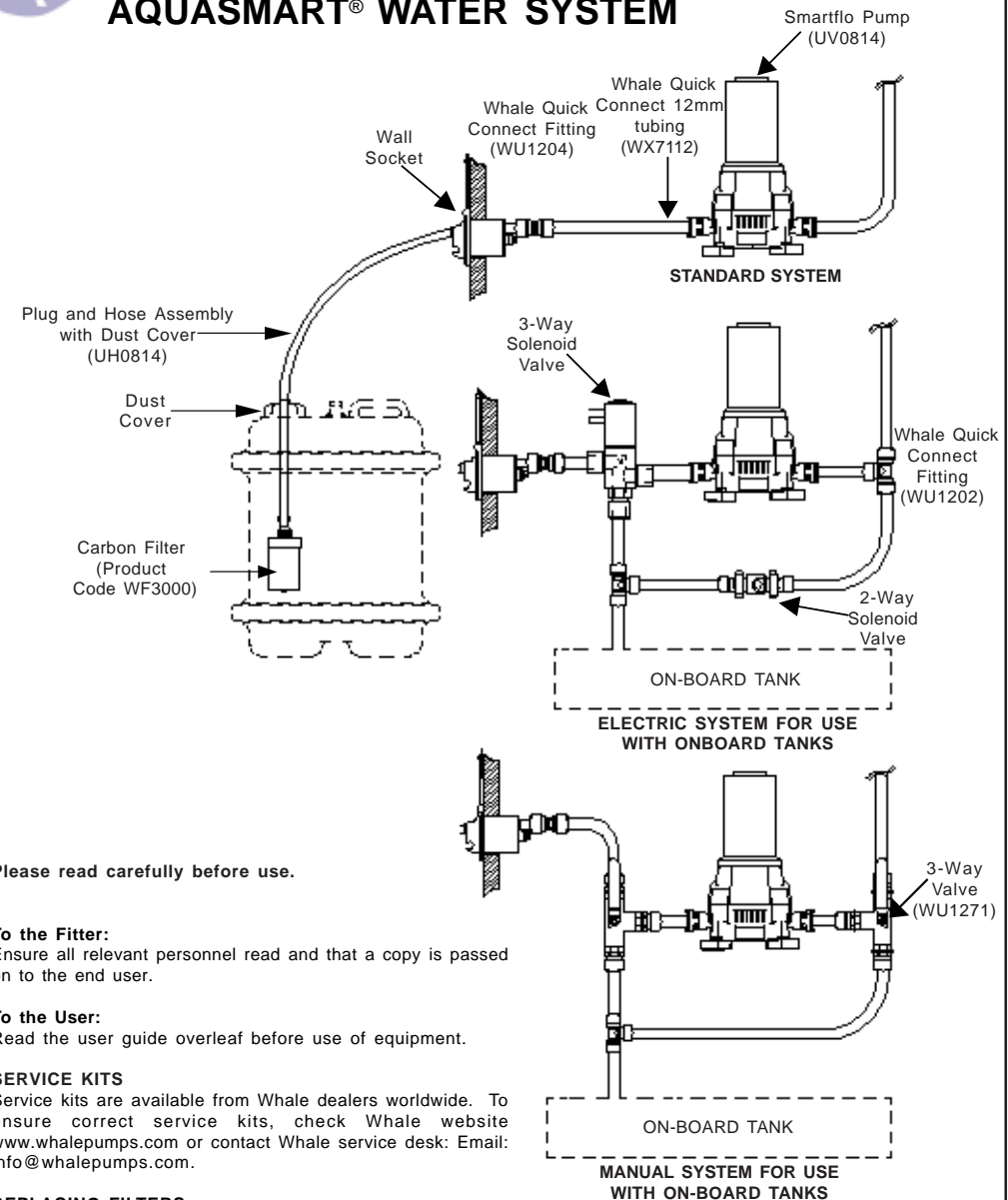
FAULT	CAUSE	SOLUTION
Pump doesn't run	No power to pump	Check power supply Attach leads/ clean connections Check tap microswitch is present
	Fuse has blown	Replace fuse – do not exceed recommended fuse size
	Blockage in pipework	Check pipework for kinks
Pump runs but no water appears	No water getting to pump	Check water tank is not empty Check filter is not blocked Check filter is fully submerged in water Check all connections from tank to inlet of pump are secure, any leaks will prevent prime. To test for air leaks hold showerhead underwater and operate pump. If air bubbles visible coming from the showerhead then leak is present
	Water leak at outlet side of pump	Check pipework and fittings for leaks and repair Check system drain plugs are closed
Pump runs but will not switch off	Water leak at outlet side of pump	Check pipework/ fittings for leaks and repair Check system drain plugs are closed
	No water	Check water supply level Check and replace filter if clogged
Pump cycles on and off periodically when all the taps are closed (Normal with partially opened tap)	Water leaking at outlet side of pump	Check pipework/ fittings for leaks and repair Check system drain plugs are closed
	Excessive back pressure	Check pipework for kinks and filters etc. are clear Check shower rose & taps for blockages and repair See CAUSE 'NO water getting in pump'
Noisy Operation	Pump drawing air	Check pump is secured to a solid surface Check pump body is clear of hard surfaces Locate away from interfering surfaces Check pipework is securely supported
	Noise created by vibration	Check pump is secured to a solid surface Check pump body is clear of hard surfaces Locate away from interfering surfaces Check pipework is securely supported
Low flow	Bore of pipework / connections too small	8.5mm minimum bore recommended for pipework (Whale Quick Connect 12mm tubing – Product code WX7112 blue/cold and WX7114 red/hot) Check for kinks in pipework Check pipework is not blocked
	Power supply to the pump	Check power supply to pump uses correct wire (2.5mm ²) to give full voltage at pump Check battery is not flat
	Pipework/ Connections crushed due to over tightened jubilee clips	Replace damaged connections
	Pump too far from water tank	Pump should be situated beside inlet/ water tank
	Water leaking at outlet side of pump	Check pipework fittings for leaks and repair Check system drain plugs are closed
	Valves internal filters clogged (if present)	Remove manual/ electric valve, inspect internal filters If necessary remove fitting nearest filter Clean and refit filter and plumbing

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Please read carefully before use.

To the Fitter:

Ensure all relevant personnel read and that a copy is passed on to the end user.

To the User:

Read the user guide overleaf before use of equipment.

SERVICE KITS

Service kits are available from Whale dealers worldwide. To ensure correct service kits, check Whale website www.whalepumps.com or contact Whale service desk: Email: info@whalepumps.com.

REPLACING FILTERS

A pack containing two replacement filters (Product Code WF3000) is available. Filters will need to be replaced after filtering 3000 litres (approx. 33 days of normal use). These filters are not designed for removing bacteria and should not be used on water supplies of an unknown bacterial quality.

Take care to retain the o-ring seal when replacing filters

OPERATIONS

Onboard Tanks:

If manual valves are included in this system they must be positioned appropriately (figs.1 to 4) when switching between the three functions of the water system; using an external water supply, filling the onboard tank, and using the onboard tank. If electric valves are included in this system the three functions are selected by the three positions of the switch.

For optimum flow use the onboard tank.

Priming:

1. Select external water supply (position the manual valves as shown in fig.1)
2. Open one hot tap (e.g. kitchen sink)
3. Place carbon filter fitted to hose, into water container.
4. Insert plug into wall socket and close lid to lock plug in place (see fig.5).
5. Adjust dust cover over water container opening (please note dust cover should not be secured to water container as air must be allowed to enter container to replace water being drawn out).
6. Switch on 12 volt DC supply at main panel isolator switch.
7. Water will flow from the open tap after filling the water heater. This can take a few minutes if the heater is empty. The water may at first be grey in colour which is quite normal, the discolouration is due to harmless media being flushed out of the new filter cartridge.
8. When water is flowing smoothly close hot tap and open cold tap to expel any remaining air in the plumbing system
9. The system is now ready for use. Hose can be inserted into plug groove (fig.6) to keep filter off ground while refilling water container. Keep socket lid shut at all times when plug is removed
10. When the caravan is left unattended or water supply has been allowed to empty, to prevent the pump running continuously, turn off at isolating switch.

To boost flow rate use an AquaSource Mains Water Hook-up (Product Code EM9401) and switch the pump on.

WARNING

When using with an AquaSource system, do not sleep or leave the vehicle unattended without turning off the mains tap.

NOTICE

This product is designed for use with water. If it is intended for use with any other liquid, it is the users responsibility to ensure that the materials are fully compatible with the liquids to be used and that a system of safe working practice is applied to installation, use, and maintenance. A planned maintenance schedule of regular inspection is recommended, replacing components as necessary.

We recommend the pump head be replaced every 5 years (Product Code AK1318).

WARRANTY

This Whale product is covered by 2 years warranty.

Please see the enclosed document for details of our statement of limited liability.

WINTERISING

If water is allowed to freeze in the system, serious damage to the pipework and pump may occur. To best avoid this damage, completely drain the water system.

1. Ensure that both the hot and cold systems are fully drained by draining separately. The cold drain plug (if fitted) is a separate drain plug from the heater drain plug.
2. Open all the faucets (including drain valve) and allow pump to purge remaining water from the system, then turn the pump off
3. Position manual valves (if fitted) as shown in fig. 4.
4. Remember to leave all faucets including showers open to avoid any damage.

Fig.1
Using an external water supply

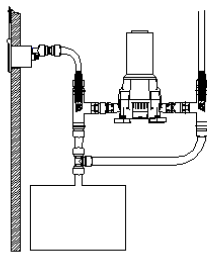


Fig.2
Filling the on-board tank

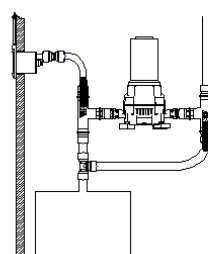


Fig.3
Using the on-board tank

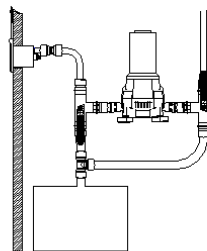
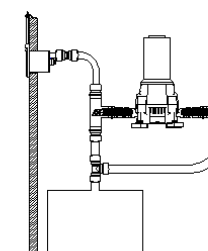


Fig.4
Winterising



PLEASE NOTE: The following section covers installation of an AquaSmart System in a new vehicle. For retro fitting to an existing vehicle see separate leaflet 'AquaSmart Water System – Installation Guide Existing Vehicle Upgrade' ref. no. 180.38. Please read the relevant leaflet before installation.

LOCATION

When looking for a suitable location to fit the Whale AquaSmart System, the following points should be considered:

1. The carbon filter should reach the bottom of the water container.
2. There should be access to the back of the socket.

3. Ideally, the AquaSmart system should be fitted close to the water heater or kitchen sink to avoid long runs of pipework.

4. Locate the pump in a dry position, free from submersion and spray, with adequate ventilation, no more than 2 metres above the water tank.

5. Pump should be mounted vertically (pump head below motor).

6. Wire length from the battery to the pump (via the isolating switch) should be kept as short as possible to minimize voltage drop and hence reduction in pump performance.

INSTALLATION

1. Use template enclosed when fitting the wall socket.

2. Before installing wall socket, fill outer groove around flange with sealant (see fig.7) and secure with four screws.

3. Ensure correct flow direction through pump (as indicated on pump body) and attach pipework using appropriate adapters (see fig.8).

4. Pump feet are adjustable to allow easy installation. Use No.8 stainless steel screws to fasten the pump to a solid surface which supports the pump securely.

5. Connect pump red wire to +12V DC supply via tap micro-switches if present, the isolating switch, and a 5A fuse. Connect pump black wire to battery earth. Recommended wire size is 2.5mm² (AWG 13). Connect the remaining wire to the pump running light if present.

Fig.8 Plumbing Guide

Pipe System Used	Fitting required
12mm semi-rigid	Connect directly using Whale Quick Connect 12mm fittings
15mm semi-rigid	Use Whale Quick Connect adaptor WU1512 for the Water Master Socket and 12mm semi-rigid pipe WX7112 plus WU1512 x 2 for the pump
$\frac{3}{8}$ " (10mm) bore flexible hose	Use Whale Quick Connect WU1280 x 2 (included in retail pack) attaching with Stainless Steel hose clips
$\frac{1}{2}$ " (13mm) bore flexible hose	Use Whale Quick Connect adaptor WX1509 for the Water Master Socket and WU1282 x 2 (included in the retail pack) for the pump attaching with stainless steel hose clips.

Fig.5



Fig.6



Fig.7

