



Road Sweeper Pump

IS1218B / IS2418B

INSTALLATION & USER INSTRUCTIONS

Thank you for purchasing this Whale® product.

For over 40 years Whale® has led the way in the design and manufacturer of freshwater and waste systems including:- plumbing, faucets, showers and pumps for low voltage applications. The company and its products have built a reputation for quality, reliability and innovation backed up by excellent customer service.

For information on our full product range visit: www.whalepumps.com

Read the following carefully before installation and use.

WARNING: Please note that incorrect installation may invalidate the warranty.

To the Fitter:

Check that the product is suitable for the intended application. Follow these installation instructions and ensure all relevant personnel read the points listed below. Also ensure that these operating instructions are passed on to the end user. The manufacturer cannot be held responsible for claims arising from incorrect installation, unauthorised modification or misuse of the product.

To the User:

Read the following instructions carefully .

1. SPECIFICATION

Product Code	IS1218B	IS2418B
Voltage	12 V d.c.	24 V d.c.
Open Flow Rate	12 Ltrs (3.2 US gals)/min	12 Ltrs (3.2 US gals)/min
Ingress Protection Rating	IP65	IP65
Recommended Fuse Size	10 Amp Automotive	5 Amp Automotive
Minimum Wire Size	2.5mm ² (13 AWG)	2.5mm ² (13 AWG)
Weight	2.4kg (5.3 lbs)	2.4kg (5.3 lbs)
Port Sizes	1/2" BSP Male	
Connectors Used	None	
Materials	Pump Body: Glass-filled Polypropylene Diaphragm & Valves: Santoprene® Seals: Viton®	

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3. PRINCIPLES OF OPERATION

This D.C. operated pump is designed to provide a constant flow of water under pressure when demanded. It is recommended that a filter with a mesh size of 20 is fitted to the inlet side of the pump.

4. TO THE USER

Please read the following carefully before installation.

WARNING: Please note that incorrect installation may invalidate the warranty.

5. TO THE FITTER

Check that the product is suitable for the intended application, follow these installation instructions and ensure all relevant personnel read the points listed below. Also ensure that these operating instructions are passed on to the end user.

6. APPLICATION

If it is intended to use it with any other liquid, it is the user's responsibility to ensure that the materials are fully compatible with the liquids to be used.

A system of safe working practice should be applied to the installation, use and maintenance.

Do not use this pump with flammable or combustible fluids such as gasoline, kerosene, diesel etc.

7. WARNINGS



Please note that the incorrect installation of this product may invalidate the warranty.

1. Not suitable for pumping flammable liquids, diesel, chemicals etc
2. This pump is not intended for damage control.
3. With all applications it is important that a system of safe working practice is applied to installation, use and maintenance. Ensure the electric supply is turned off and water system is drained before installation. In order to securely fasten the unit, ensure that the mounting surface is a minimum thickness of 19mm (¾") when fitted with the screws supplied.
4. **WARNING:** Fire hazard. Wiring must comply with applicable electrical standards and include a properly sized fuse or circuit breaker. Improper wiring can cause a fire resulting in injury or death. Switch off the power while making connections. Suggested wiring information is given as a guide only.

8. PARTS LIST

Whale® Road Sweeper Pump and installation instructions.

2 Off 1/2" BSP - 1/2" Hose elbow connectors

9. SPARES

AK1317 Microswitch Service Kit
AK1322 Replacement Head Service Kit

10. INSTALLATION

Mounting the Pump

- Locate the pump with adequate ventilation and no more than 3 meters from the tank.
- The pump may be mounted horizontally or vertically, the preferred position for the pump is below the tank.
- Feet positions are adjustable to allow replacement from other pump types. Use No.8 stainless steel screws to fasten the pump to a solid surface.

Electrical Connections

- Use the specified automotive fuse that is indicated on the motor label, in the circuit.
- Connect the RED wire to the Positive + lead, and the Black wire to the Negative – lead.
- The recommended wire size is 2.5mm² (AWG13).
- Fit an isolating switch with adequate current rating on the positive side of the supply.
- To prevent motor damage from the pump running continuously, or cycling on/off too often, turn off at the isolating switch when the sprayer is left unattended, or when the fluid supply has been allowed to empty.

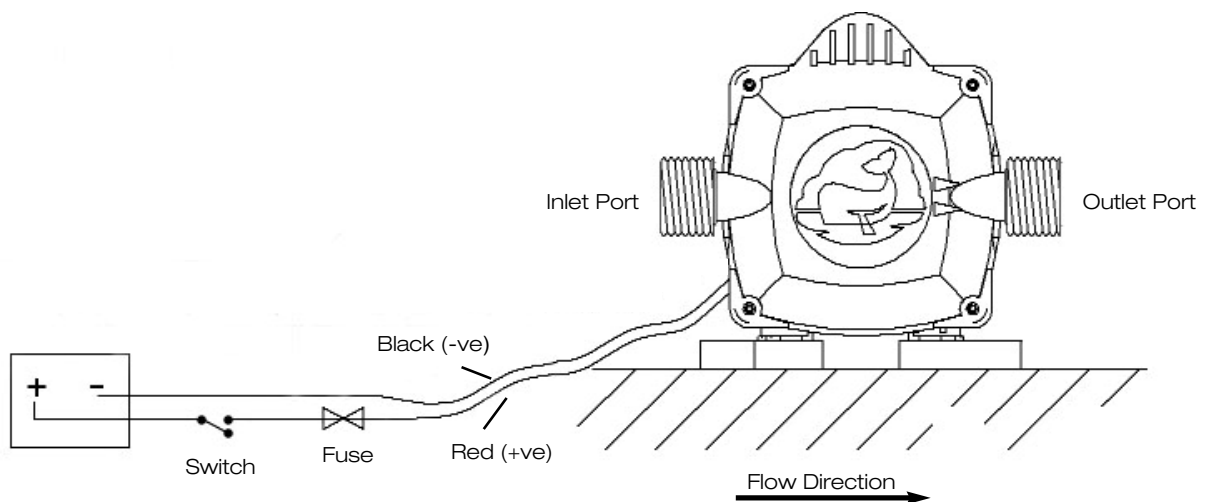


Fig 1 - Typical Installation

Plumbing

- Ensure that a strainer is fitted to the inlet side of the pump. The minimum required mesh size is 20.
- Check that the flow direction is as indicated on the body.
- Never use pipe sealant or sealing tapes on threaded adapters, as these may enter the pump and cause a failure.

Warning: Fire hazard. Wiring must comply with applicable electrical standards and include a properly rated fuse or circuit breaker (12V d.c. system - 10 Amp automotive fuse, 24V d.c. system - 5 Amp automotive fuse).

Warning: Improper wiring can cause a fire resulting in injury or death.

Note: Switch off the power prior to making connections.

11. MAINTENANCE

WARNING: Ensure that the pump is disconnected from electrics and plumbing during maintenance.

Pump Life

The duty cycle of the motor is dependent upon motor load (amp draw) and ambient temperature. A maximum motor shell temperature of 150°F (70°C) must not be exceeded for continuous use.

Use of orifices/nozzles in the spraying system that are too small will cause the pump pressure switch to cycle on/off too often, which creates a pulsating flow from the pump. This can cause damage to the switch and/or motor, and should be avoided. Failure to flush the pump out after use is a common cause of a non-functioning pump. This happens because the last solution used can create a sticky residue on the valves and/or diaphragm which affects the performance of the pump.

A planned maintenance schedule of regular inspection is recommended. Rubber components are perishable and susceptible to damage over time. Spares kits are available.

12. STORAGE, CLEANING AND WINTERIZING

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

13. TROUBLE SHOOTING

Fault	Cause	Solution
Pump does not run	No power to pump	Check power supply Attach leads/clean connections
	Fuse has blown	Replace fuse
Pump runs but no fluid appears	No fluid getting to pump	Check that tank is not empty Check strainer is not blocked Check all connections from tank to inlet of pump are secure - any air leaks will prevent prime.
	Blockage in pipework	Check pipework for kinks
	Fluid leaking at outlet side of pump	Check pipework/fittings for leaks and repair Check system drain plugs are closed
Pump runs but will not switch off	Fluid leaking at outlet side of pump	Check pipework/fittings for leaks and repair Check system drain plugs are closed
	No fluid	Check fluid supply level
Pump cycles on and off	Fluid leaking at outlet side of pump	Check pipework/fittings for leaks and repair
Noisy operation	Pump drawing air	see cause 'No fluid getting to pump' (see above)
	Noise created by vibration	Check pump is secured to solid surface Check pump body is not in contact with hard surfaces Locate away from interfering surfaces Check pipework is securely supported

For installation or service advice please contact Whale® customer support:

14. SERVICE SUPPORT DETAILS

Tel: +44 (0)28 9127 0531
Email: info@whalepumps.com
www.whalepumps.com

15. EU DECLARATION OF CONFORMITY

We herewith declare, under our sole responsibility, that the enclosed equipment complies with the provisions of the following EC Directives.

Electromagnetic Compatibility Directive 2004/108/EC on the approximation of the laws of the member states relating to electromagnetic compatibility.

Low Voltage Directive 73/23/EEC amended by 93/68/EEC on the harmonization of the laws of the member states relating to electrical equipment designed for use within certain voltage limits.

CE mark affixed: 1/5/10

Basis on which conformity is declared

The above equipment complies with the protection requirements of the EMC Directive and the principal elements of the safety objective of the Low Voltage Directive.

Standards applied

ISO10133:2000	Extra-low voltage DC installation
EN55014-1:2006	EMC emissions
EN55014-2:1997+A2:2008	EMC immunity
EN28846:1993	Ignition protection
ABYC-H23	Installation of potable water

Signed



Richard Bovill
Engineering Director

16. PATENTS AND TRADEMARKS

WHALE®, is a registered trademark of Munster Simms Engineering Limited, Bangor, Northern Ireland trading as Whale.

17. WARRANTY

This Whale® product is covered by 2 years warranty. Please see the enclosed document for details of our statement of limited warranty.

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