

EZI-SPOT TRAILED SPRAYER



Bertolini Australasia Warranty Policy

Bertolini Australasia warrants the owner that it will repair or replace without charge parts found defective or malfunctioning in accordance with the warranty limitation and adjustment schedule below.

<u><i>All products</i></u>	
Private Domestic Use	12 months
Private and Commercial Agriculture	12 months
Agricultural Contractors	6 months
All Non-Agricultural Applications	3 months
This warranty period will begin on the date the product is delivered to the first retail purchaser.	

This Warranty covers

- Only conditions resulting from defects in workmanship or material under normal use and service.

This warranty does not cover

- Conditions resulting from misuse, negligence, alteration, accidental damage or failure to perform normal maintenance services.
- Any product which has been repaired by an unauthorised Bertolini Australasia service outlet which adversely affects its performance and reliability in any way is the sole and absolute judgment of Bertolini Australasia.
- The replacement of lubricating oil, filters and belts made in connection with normal maintenance services.
- Lost time, inconvenience, loss of use of the product or other consequential damages.

The repair of defective products qualifying under this warranty will be performed by any authorised Bertolini Australasia service outlet within a reasonable time following the delivery of the product at the cost of the owner, to the service outlets place of business. The product will be repaired or replaced using new parts sold by Bertolini Australasia.

The owner is responsible for the performance of regular maintenance services as specified in the owner's operator manual applicable to the product.

- **This warranty is the only warranty applicable to Bertolini Australasia's new products and, to the maximum extent permitted by law, is expressly in lieu of any other warranties expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose.**
- **Bertolini Australasia does not authorise any person to create for it any other obligation or liability in connection with these products.**
- **Bertolini Australasia shall not be liable for incidental or consequential damages resulting from a product performing in breach of the written warranty.**
- **Given continuous product development, Bertolini Australasia reserves the right to change specifications and design without notice.**

EZI-SPOT TRAILED SPRAYERS

By Bertolini Australasia

Bertolini Ezi-spot portable sprayers are available in 30, 50, 100 and 200 litre versions

Whether you are a commercial grower or home gardener, you will find many uses for this unit. The tank, pump and wand fittings are corrosion resistant and are suitable for applying weedicides, herbicides, insecticides, fungicides, miticides, and green formulations. The unit is designed for spot-spraying but may be used in conjunctions with a boom for boom spraying.

Please read the safety instructions on page 2 before installing or operating the Ezi-spot sprayer

Specifications

Pump

Shur-flo 8000 series, 12 DC electric, 6.8 litres per minute open flow, on demand electric pressure switch.

Hose

6 metre delivery hose standard.

Lance

Lightweight lance with adjustable nozzle pattern.

Tank

The 30, 50 and 100 litre blue translucent tanks are made from UV stabilized and impact resistant polyethylene. The screw on lid incorporates an anti-spill breather.

Filtration

Teejet AA122 line strainer.

Controls

On/Off power switch. The pump is fitted with an automatic electric pressure sensing switch which automatically starts the pump when the pressure falls below 40 psi and stops the pump when the pressure reaches 60 psi.

Regulator and tap

Three way for operator to choose gun or boom spraying. Pressure regulator to enable correct pressure setting when boom spraying

Trailer

Robust steel construction, Powdercoated (BAT100) or galvanised finish. Large pneumatic wheels, mudguards and 1 7/8" to coupling (excludes BAT100)

Connection to 12 volt DC supply

The sprayer requires 12 volt DC power source.

A 2 metre loom is provided to allow the sprayer to be connected to the 12 volt DC available. The red wire is positive and the black is negative. An on/off switch is fitted to the sprayer to allow the sprayer to be disconnected from the 12 volt source to prevent accidental drain of power. The switch also allows the pump to be shut down when the tank is empty preventing overheating and damage to the pump. It is recommended that if installing the sprayer on an ATV or any vehicle that a 10 amp fuse be installed to prevent any potential damage to the electrical system on the vehicle. Consult your vehicle instruction manual for the correct electrical connection.

Fitting instructions

Position the sprayer so as to minimize contamination of the operator. With the pump away from the operator the risk of contamination due to hose failure can be minimized. It is recommended that the sprayer be securely attached to any ATV or other vehicle with the tie down straps provided (BAM30 and BAM50 models only). When fitted, these should be firmly secured to approved attachment points on the ATV or other vehicle. The sprayer should be mounted centrally as near to the centre of the gravity of the ATV as possible. It should protrude so as to not cause an obstruction. Refer to manufacturer's instructions for appropriate load limits and fitting instruction. Never fill the tank to beyond the vehicle's weight limits.

Ezi-Spot Installation and Instruction Sheet

Operating Instructions

Fill the sprayer with clean water.

Check suction line strainer for dirt or damage.

Connect pump and ensure it primes correctly, holding the spray lance trigger on until it sprays steadily.

Check all pipes, hoses, hose clamps and connections for leaks or damage.

Gun Spraying

When gun spraying ensure the three way tap is turned to hand gun position, turn on pump. While gun spraying the pump operates on a pressure switch. When outlet pressure drops (gun trigger open) below the preset limit, the switch will close and the pump operates until the shut-off (gun trigger closed) high pressure is achieved. Depending on nozzle setting, cone pattern or straight jet the pump may cycle on and off, this is normal pressure switch operation. The shut-off pressure is set to factory calibrated standards and should not be re-adjusted.

Shutdown and Storage

Check the chemical manufacturer's label for disposal of chemical. Drain the excess material from the tank. Select an appropriate place (one that will not endanger animals or the environment) for cleaning and flushing the system.

Flush tank, pump and hose until they flow clean. This prevents build up of residues in hoses and pump valves. If heavy frosts are experienced, run the pump to make sure pump and spray lines are dry. This will prevent water freezing in the pump or spray lines and damaging the sprayer.

Boom Spraying

To ***apply chemical accurately*** is the key to getting the job done correctly without under or over applying, and thus saves you money.

Step one is ***knowing your real vehicle speed***. To measure your real vehicle speed do the following

- Measure a distance of 50 metres using a tape measure.
- Mark these points so they can be clearly seen when driving past in your vehicle. The starting point should be far enough so that you are at spraying speed as you pass the start point.
- Time how long it takes in seconds to travel between the start and finish points.
- Divide 180 by the number of seconds it took to pass between the start and finish points, this last figure is your speed.
- Eg. $180 \div 18 \text{ seconds} = 10$ Your spraying speed is 10 kmp/h.

- Once you know your correct spraying speed you can ***look at the nozzle chart***.
- To read the chart look first along the top to select your vehicle speed. Eg 10kmp/h
- Then come straight down the column below the selected speed to the volume in litres per hectare you wish to apply eg. 115 l/ha.
- Look to the left of this figure (eg115) till you are below the column marked “ \odot Bar”, you will see that you need to spray at 2 bar pressure (30psi).
- Look left again and you are looking at a box with nozzle types (DG, TP, XR etc). For this example it works out that any of these nozzles in size ...03 is the correct nozzle to use at this required rate per hectare at 10 kmp/h.
- For normal pasture spraying the nozzle should be 500mm (1/2 metre) off the ground.
- The lower the pressure the better as you will get less spray drift – 2 bar (30psi) is standard practice.
- Remember that 10 % difference in speed means either under or over applying chemical.
- Nozzles should be replaced as routine maintenance at the end of the spraying season.
- For information on spray drift, droplet size, or specialist spray information please ask your Bertolini Dealer for a current *TeeJet Spray Products Catalogue*. Assistance on how to read the chart will be given if required. If you don't have a Bertolini Dealer close by please call Bertolini on 07 847 7950 and ask for a catalogue to be sent out.

Care and Maintenance

Always fill the sprayer from a clean water source. The line strainer should be checked and cleaned if necessary each time the tank is filled. Appropriate protective equipment should be used whenever maintenance is carried out.

Shutdown and Storage

Check the chemical manufacturer's label for disposal of chemical. Drain the excess material from the tank. Select an appropriate place (one that will not endanger animals or the environment) for cleaning and flushing the system. Flush tank, pump and hose until they flow clean. This prevents build up of residues in hoses and pump valves. If heavy frosts are experienced, run the pump to make sure pump and spray lines are dry. This will prevent water freezing in the pump or spray lines and damaging the sprayer.

General Guidance

Do Spray:

- Only after reading this instruction manual carefully and following the advice given.
- With pump pressures as low as possible consistent with chemical container label conditions and nozzle type.
- With nozzles that reduce spray drift to a minimum.
- With booms as close to the ground as practicable.
- With the wind at right angle to the direction of travel and turn into the wind so as to reduce spray drift to a minimum.
- Using the correct personal protective equipment specified on the chemical containers label.

Don't Spray:

- With booms higher than is necessary, and no more than about one metre above the ground.
- In a figure eight or similar pattern.
- Unless you have been trained to spray using an ATV.
- Holding the spray lance while driving the ATV.

Warnings

You need to read carefully and take note of the following warnings before attempting to operate or install this sprayer. Failure to comply with these warnings may result in serious injury or death.

Warning!!! This sprayer is designed and manufactured solely for the purpose of applying agricultural chemicals to crops. Under no circumstances may it be used for any other purpose.

Warning!!! Prior to sprayer usage, all users and operators must have read and fully understood the contents of this operator's manual.

Warning!!! Refer to the chemical manufacture labels for correct use and safe handling instructions of chemicals before use.

Warning!!! Never allow inadequately trained personnel to attach or operate the sprayer.

Warning!!! Read this entire instruction manual together with the installation procedures before attempting to install or operate the sprayer.

Warning!!! Before carrying out any maintenance work wash the sprayer thoroughly. Remove all toxic chemicals that may contaminate the machine.

Warning!!! Do not exceed the vehicle or tractor manufacturer's specific safe load carrying and towing capacities.

Warning!!! Do not point the spray gun at a human's body as high pressure spray may cause serious bodily harm.

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TROUBLE SHOOTING FOR 12 VOLT SHURFLO DIAPHRAGM PUMPS

Problem	Probable Cause	Remedy
Pump starts but doesn't prime	Low Voltage No liquid / low liquid	Check electrical connection Food filter (if fitted) not fully submerged. Check liquid level Check suction hose for kinks
	Air leak in inlet line Damaged / sticky valves Debris in pump	Check fittings and o ring Replace / clean valves Clean filter Check for debris in bottom of tank
	Blocked Filter Worn or dislodged valve Suction / delivery line	Clean / replace Replace o rings Fit lines to correct ports or fitted vice-versa.
External leak from pump head	Ruptured diaphragm Piston screw loose Piston screw cross threaded	Replace diaphragm Tighten piston screws Re-thread and fit new screw
Suction Leak	Pinched diaphragm Cracked upper housing Inlet fitting loose Cracked valve housing	Replace diaphragm Replace upper housing Tighten fitting Replace valve housing
Pump running rough or noisy	Faulty motor Loose body screws Broken magnet inside motor housing Damaged bearing	Replace motor Tighten screws Replace motor Replace bearing
Low Performance	Blocked filter Improper voltage Worn / damaged valves Loose fasteners	Clean / replace Check wiring and connections Replace valves Tighten fasteners
Pump will not start	Motor faulty Loose / contaminated connection Failed pressure switch Damaged / worn brushes / broken brush spring Blown main fuse No power to pump	Replace motor Check all connections Replace broken pressure switch Replace brush housing assembly Replace fuse Check power source and all connections

SERVICE BULLETIN

SHURFLO PUMPS

A number of 12 volt diaphragm pumps are being returned to Bertolini for repair and / or suspected warranty replacement.

In many instances the problems identified were minor and could be easily rectified.

To facilitate on the spot assessments and rectifications, the above Trouble Shooting information has been provided for your use.

These checks need to be performed prior to submission of suspected warranty claims or requests for replacement pumps.

If further assistance is required please contact our customer service staff on 07 847 7950.

OTHER USEFUL INFORMATION

PRESSURE OPERATION SWITCH (IF EQUIPPED)

The pressure switch reacts to outlet pressure and interrupts power at the preset shut-off pressure indicated on the pump label. When outlet pressure drops below the preset limit, the switch will close and the pump operates until the shut-off (high) pressure is achieved. The shut-off pressure is set to factory calibrated standards and shouldn't be re-adjusted.

MOUNTING

The pump may be mounted in any position. However, if mounting the pump vertically the pump head should be in the down position so that in the unlikely event of a leak, fluid will not enter the motor.