



# **OPERATORS MANUAL**

## **Greens Keeper**

**PLEASE READ THESE INSTRUCTIONS CAREFULLY  
BEFORE USE**

## ***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.

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

### ***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.*

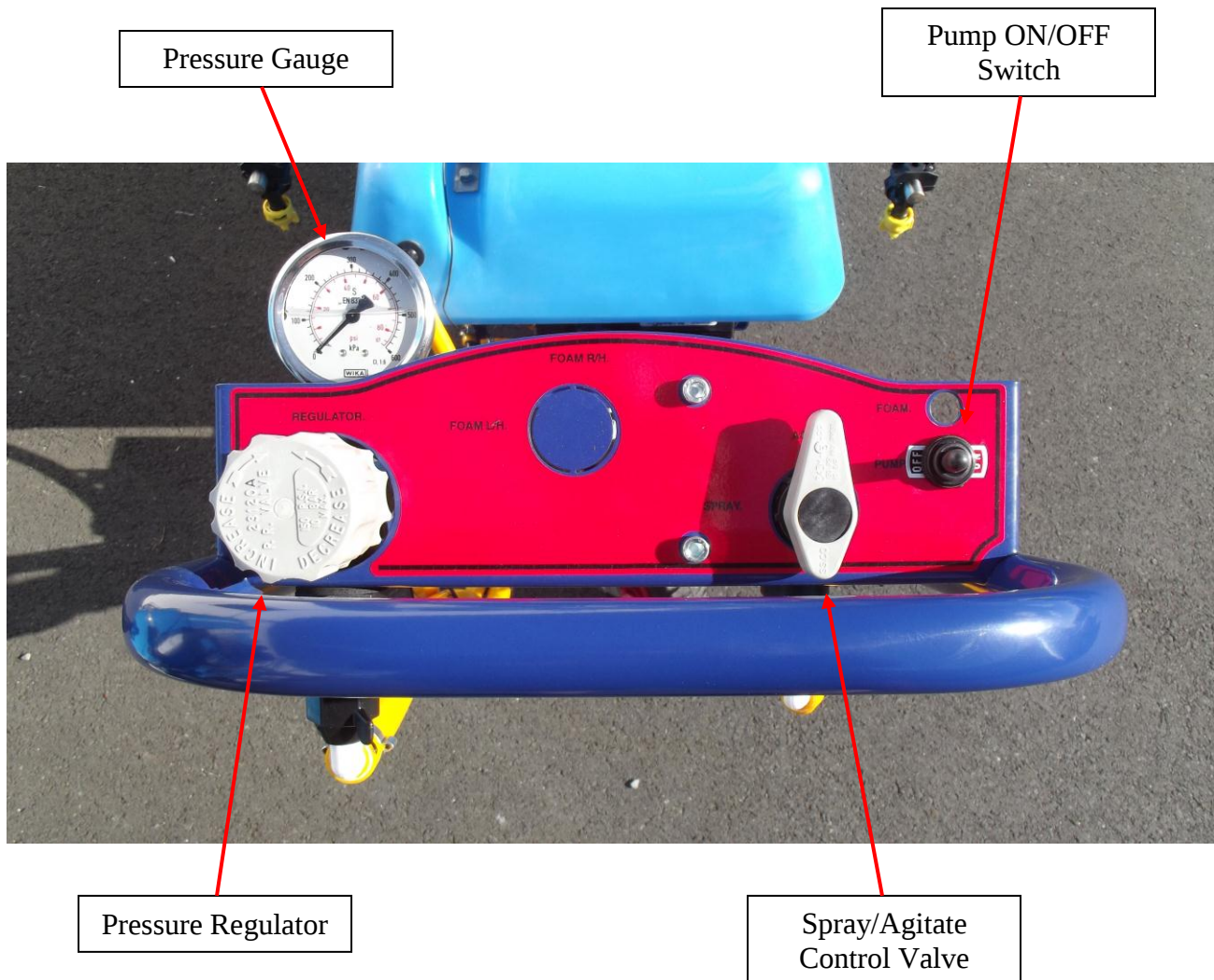
- This warranty is the only warranty applicable to Bertolini Australasia's new products and, to the maximum extent permitted by law, is expressly in lieu of any other warranties expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose.
- Bertolini Australasia 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.

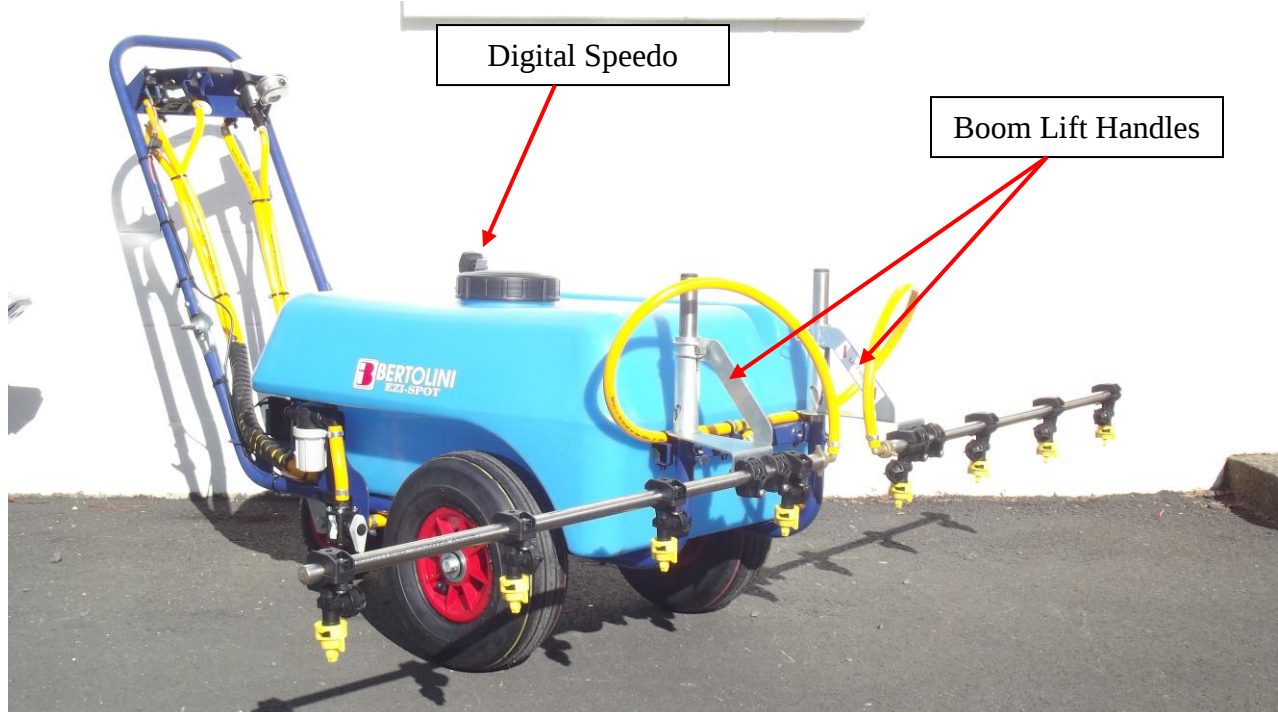
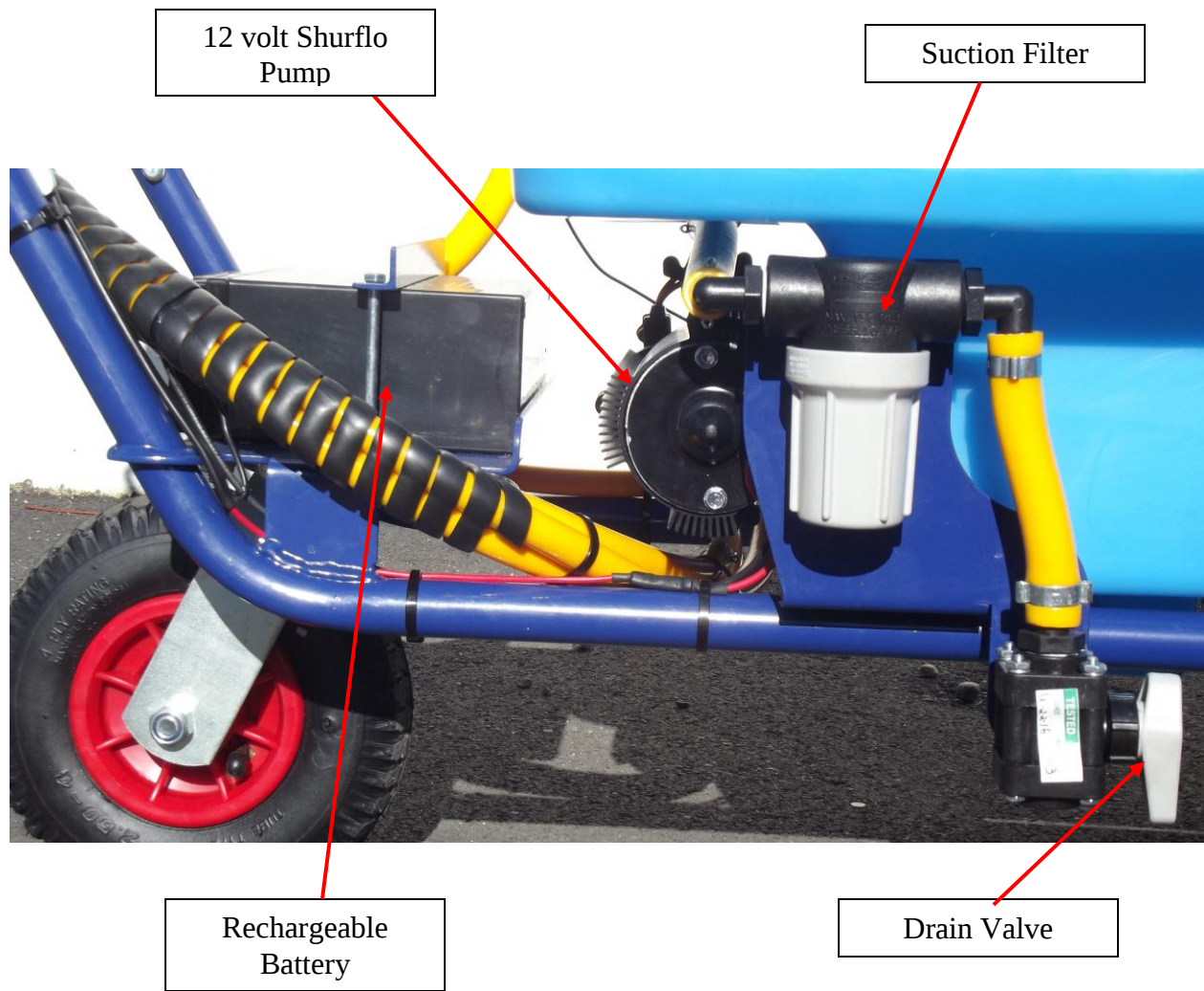
# GREENS KEEPER

By Bertolini Australasia

Whether you are a commercial greens keeper or home gardener, you will find many uses for this unit. The tank, pump and fittings are corrosion resistant and are suitable for applying weedicides, herbicides, insecticides, fungicides, miticides, and green formulations.

*Please read the operators instructions on page 4 before operating the Greens Keeper sprayer*





# ***Greens Keeper Operator Instructions***

## ***Pump***

Shur-flo 2088 series, 12volt, 11.3 litres per minute open flow, on demand with electric pressure switch complete with a Teejet pressure relief valve.

## ***Tank***

The 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.

## ***Nozzle Bodies***

Comes standard with Teejet AIXR low pressure air induction nozzles for ultimate in drift control and spray coverage.

## ***Controls***

On/Off pump power switch. Spray and agitate valve. Pressure Relief valve. Foam Marker left/right control and Foam Marker compressor ON/OFF power switch where fitted.

## ***Charging the 12 volt battery***

The battery comes charged but may need topping up before the first use. Connect the leads to the terminals on the battery and plug the charger into a 240 volt power point and turn on.

At the end of each spraying session connect the charging leads to the Greens Keeper battery and turn on. SEE SUPPLIED CHARGER INSTRUCTION BOOKLET.

## ***Foam Marker Option – where fitted***

The optional foam marker allows you to keep track of the spraying process particularly in larger areas by dropping a “dob” of foam every so often. Applying one cap of commercially available foam marker concentrate into the contents of the Foam Marker Tank will last for approximately 1.5 hrs of continuous use.

## ***Operating Instructions for the Greens Keeper***

Position the sprayer so as to minimize contamination to the operator or any bystander or to any part of the environment not being involved.

Fill the tank with the desired amount of clean water and turn the pump on to check all fittings and hoses for any leaks. Adjust the pressure relief valve to your

desired pressure. Turning the pressure relief valve knob clockwise will increase the pressure and anti-clockwise will reduce the application pressure. Ideal pressure is around 3 bar when using the Teejet AIXR low pressure air induction nozzles.

After flowing all safety precautions and the chemical manufacturers label regarding application rate and mixing instruction you can introduce the spraying product to the tank.

Position the Greens Keeper where you wish to commence spraying. Grasp and lift the boom handles and open each side of the boom and position in place.

Turn the “Spray/Agitate Control Valve” to “Agitate” and turn the pump switch on. Allow the pump to recirculate and mix the product in the tank for a couple of minutes before spraying.

IF a Foam Marker is fitted, turn the “Foam Marker Control Valve” to the desired operating side and turn the Foam Marker switch on. This may take a short time for the foam to come through to the foam dropper on the end of the boom.

Once you are ready, turn the “Spray/Agitate Control Valve” to “Spray”. The nozzles will start spraying and you can commence your spraying operation.

Take note of your speed via the digital speedometer so you maintain as close to your desired speed as possible. This will avoid over and under application.

## ***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 but definitely after each time you use it. Appropriate protective equipment should be used whenever maintenance is carried out. Adhere to the chemical manufacturer’s safety recommendation.

## ***ShurFlo Pumps***

To facilitate assessments and rectifications of any pump faults, see the Trouble Shooting section of this manual.

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.

### ***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.
- Unless you have been trained to spray using an ATV.
- With wind below 3kph (possible inversion layer pattern) or above 16kph a condition which could cause off target spray damage.

### **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.

- This sprayer is designed and manufactured solely for the purpose of applying agricultural chemicals. Under no circumstances may it be used for any other purpose.
- Prior to sprayer usage, all users and operators **must have** read and fully understood the contents of this operator's manual.
- Refer to the chemical manufacture labels for correct use and safe handling instructions of chemicals before use.
- Never allow inadequately trained personnel to operate the sprayer.
- Before carrying out any maintenance work wash the sprayer thoroughly. Remove all toxic chemicals that may contaminate the machine.
- Adhere to Safe Working practices.

### **Bertolini Australasia**

32-36 Ellis St  
P O Box 5272  
Hamilton 3242  
**NEW ZEALAND**

Phone: (07) 847 7950  
Fax: (07) 847 7960

## ***Trouble shooting for 12 volt Shurflo Diaphragm Pumps***

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