

Operator's Handbook

Spray Trailer

MODEL STT2LPVR – 50B



ASK YOUR DEALER ABOUT THE FULL RAPIDSpray RANGE AND OUR 48 PAGE CATALOGUE

**CUSTOMER
SERVICE
FREECALL**

1800 816 277

FROM MOBILE PHONES PLEASE CALL 03 5866 3266



RSP0008 OH

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READ YOUR OPERATOR'S HANDBOOK CAREFULLY BEFORE MOUNTING AND USING YOUR SPRAYER. KEEP YOUR HANDBOOK IN A SAFE PLACE.

Introduction

Congratulations on your purchase of a Rapid Spray ultimate ATV Spray Trailer, which has been designed for effortless spraying of herbicides and pesticides.

Warnings

- ! **1.** When mounting to any vehicle ensure that you have read the Vehicle Owner's Manual and that you comply with all the weight restrictions as specified by the vehicle manufacturer, as overloading can cause injury or death.
- ! **2.** To ensure your own safety and that of your employees if applicable you must comply with all relevant environmental, work place health and safety legislation and Codes of Practice.
- ! **3.** Select and wear appropriate Personal Protection Equipment in accordance with the label of the product you intend using and your own safe work practices.
- ! **4.** Once the spraying operation has been completed, decontaminate the tank and spray accessories. Dispose of tank rinsings in compliance with current environmental, work place health and safety regulations.
- ! **5.** Personal Protection Equipment must still be worn while decontaminating your sprayer as per warning at 3 above.
- ! **6.** Improper or careless use of this sprayer can cause serious injury. Minors should never be allowed to use this sprayer.
- ! **7.** You must be in good mental health to operate this sprayer and not be under the influence of alcohol or any drugs that could impair your vision, physical strength, dexterity, judgment, or other mental capacity

PRODUCT INFORMATION RISK ASSESSMENT SHEET – SPRAY TRAILER

Task	Hazards	Risk	Control Measures
1. Partially fill the tank with water, start the motor & test the spray unit	Manual handling; slips, trips or falls; petrol; fumes; fingers jammed	med	Concentrate on task; follow safe manual handling techniques:- don't lift on your own if > 20kg, bend knees & keep back straight; keep fingers clear; keep unit at least 8m away from overhead powerlines; fire extinguisher nearby; follow warning stickers on tanks; wear PPE for petrol & fumes-mask & gloves.
2. Check weather conditions & select the appropriate PPE to suit the chemicals to be used	Manual handling; slips, trips or falls	Low	Put on PPE as per the chemical requirements in the Material Safety Data Sheet-coveralls, gloves, safety footwear, glasses & respirator; follow safe manual handling techniques:-don't lift on your own if >20kg, bend knees & keep back straight.
3. Mix chemicals (if applicable) & fill spray tank	As above; spray drift, chemical spillage, emission of vapors or flammability; weather; untrained visitors	Med	As above; user trained in the state's chemical mixing & administration course eg Chem. Cert; follow the relevant Environment Protection Authority requirements; fire extinguisher present; keep visitors away from the job unless wearing full PPE.
4. Using spray unit	As above; loss of load; heat & cold; noise; exceed load limit of vehicle; hose entanglement; exhaust fumes; terrain & slopes; run over by unit	High	As above; wear clothes to suit heat & cold; wear hearing protection if noise > 85 dBa; follow the manufacturer's safe operation instruction for the vehicle and the spray unit; don't overload - water weighs 1kg for every 1 litre; secure load to vehicle; keep hose tidy; put unit brakes on.
5. Clean up, maintenance & storage	As above	Low	As above; continue to wear PPE for clean up: store unit in a dry, well ventilated area.

Operating Instructions

- To commence spraying, connect the spray lance to the hose by tightening the hose cap to the lance grip. Do not cross thread or over tighten.
- When mounting to an ATV make sure the current size ball is used. Check that the spray tank is still secure after the first 15 minutes of operation and re-tighten if necessary.
- Partially fill the tank with clean water
- Connect the battery clips to a 12V DC power supply) red- positive terminal, black to negative terminal) ensuring sufficient current capability (amps) to suit the pump. The pump's maximum amperage requirement is shown on its name plate.
- In order to prime the system and enable the pump to reach full pressure, depress the hand lance trigger to release trapped air. The pump will automatically switch off when the hand lance trigger is released.
- Pump cycling may occur with insufficient nozzle delivery. This continual switching on and off will reduce battery and motor life. Should this occur, adjust the setting of the nozzle tip until the cycling stops.

Mixing and Filling

The following steps are given as a guide for mixing and filling your trailer sprayer.

- Read the product label and follow all directions carefully, taking special care with regard to the order in which the products are added to the tank.
- Calibrate the sprayer according to recognized calibration method using water only. Calibration must be done with the nozzle tip that has been selected for the spraying task.
- Measure out the correct quantities of pesticides, using clean measuring jugs used only for this purpose.
- Half fill the sprayer with clean water and then add the measured pesticide/herbicide.
- Rinse out the measuring jug and empty container and pour all rinsings into the spray tank. Agitate by stirring with a suitable round edged paddle.
- Top up the tank with water to the required level, ensure that the tank is not over-filled and the outside is clean and dry before handling.
- Safely dispose of empty containers in compliance with current regulations
- Mixing sites must be well away from watercourses and other environmental sensitive areas. Children and animals must be kept away.

Spraying

The following steps are given as a guide for spraying with your trailer unit.

- Before commencing spraying, plan the work effectively to reduce potential contamination to a minimum.
- Wind Direction and speed must be taken into account. Avoid spraying on hot and sunny days or when wind speed exceeds 6.5km/h
- Do not spray if the operator, bystanders, watercourses or any not targeted vegetation appears to be in danger from spray drift contamination.
- Drift can be reduced by lower nozzle height, lower pressures or by fitting larger nozzles.
- To commence spraying, squeeze trigger. Release the trigger to stop the spray – the regulator will automatically allow spray solution to bypass through the return line and back to the tank.
- Spray at a constant speed (as used during calibration) and shut off the hand lance trigger at the end of each swath or before changing direction.
- Work in parallel lines at the correct spacing when spraying large area – this is better than moving the hand lance from side to side in a swinging movement which causes damage by overdosing.

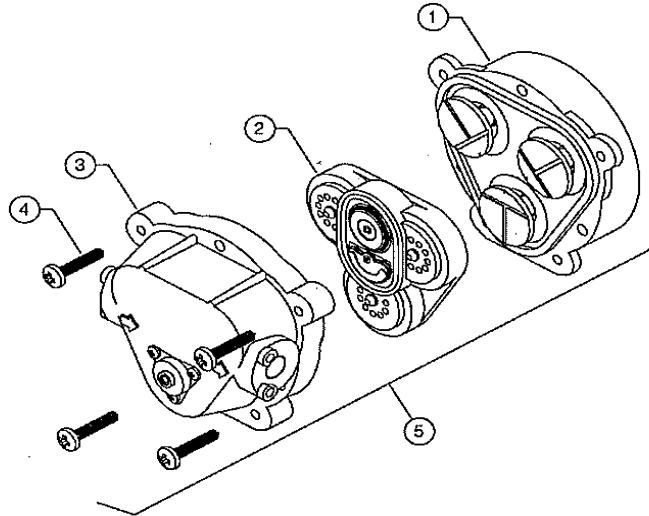
Maintenance

The following steps are given as a guide to maintain your trailer sprayer

- After use, the sprayer must be thoroughly decontaminated including tank, pump, hoses and hand lance to avoid damage to crops from harmful spray residue and to the sprayer from corrosion or abrasion.
- After spraying, flush the tank, hose and hand lance by running it with clean water plus a recommended cleaning fluid. It is best to clean sprayers in the field or area just treated.
- The suction strainer attached to the pump suction line should be cleaned periodically. Lift the strainer from the base of the tank and brush off with a soft brush.
- Nozzle filters (if fitted), nozzle tips, nozzle caps and gaskets should be cleaned by soaking in water, brushing with a nozzle brush and allowed to dry. Never blow through nozzles with your mouth, not use wire or pins to clear any blockages.
- Unscrew the hand lance grip and remove the filter screen and clean in the same way as described for the suction strainer. Ensure that the o-rings do not become displaced during cleaning. Re-assemble the hand lance correctly.
- Aligning the filter screen in the handle body before the hand lance grip is screwed back.
- Check tyre pressure.
- When storing your sprayer ensure that it is clean and dry and kept in a well ventilated place.

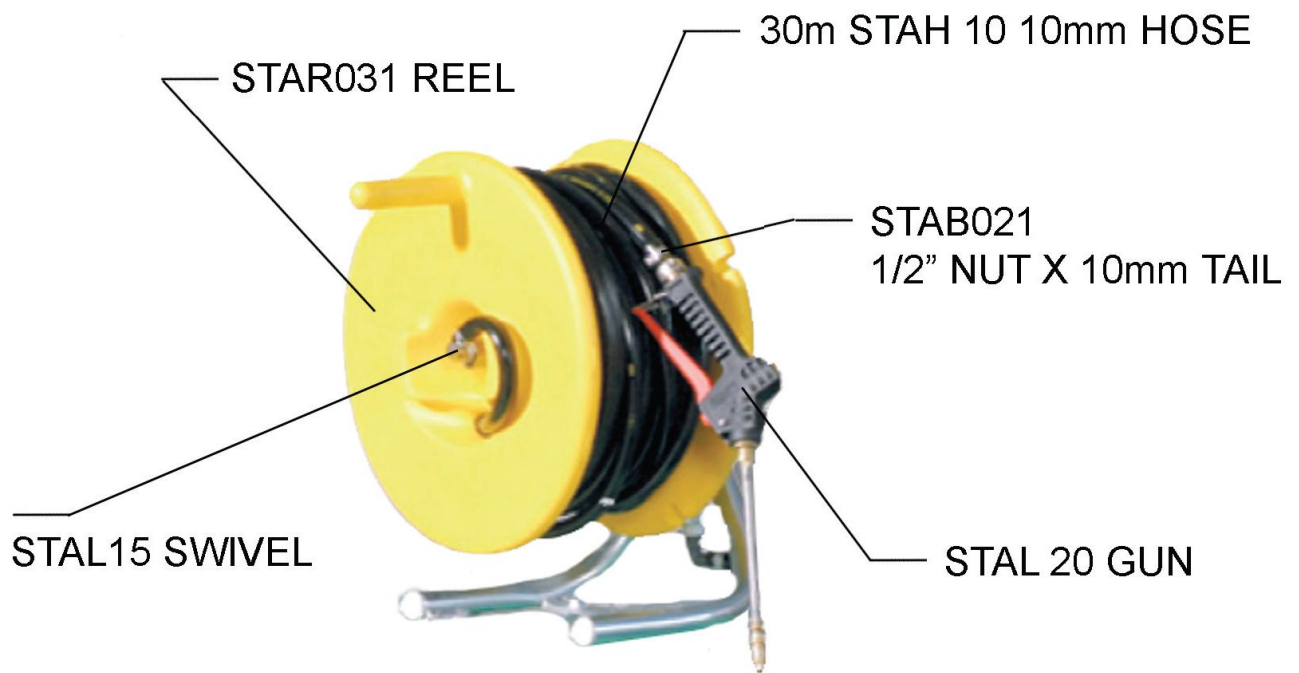
Replacement Parts

PowerFlow Models 7801 & 7802

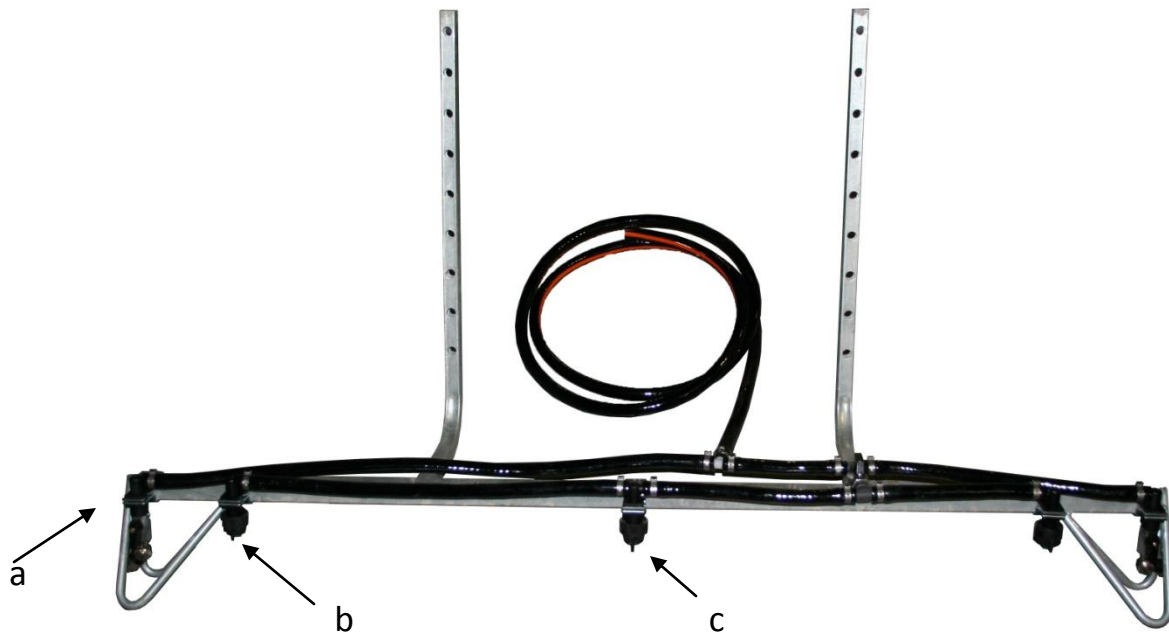


Item #	Description	Part Number	Qty
1	Lower Housing		1
	7801 Demand	LHA-7863-5F77	
	7801 Bypass	LHA-7863-6I77	
	7802 Demand	LHA-7863-7F77	
	7802 Bypass	LHA-7863-8I77	
2	Valve Assembly		1
	7801 & 7802 Demand	VHA-7863-7F77	
	7801 & 7802 Bypass	VHA-7863-8I77	
3	Upper Housing		1
	7801 & 7802 Demand	UHA-7863-7F77	
	7801 & 7802 Bypass	UHA-7863-8I77	
4	Mounting Bolts	MB-7863-1	4
5	Complete Pump Head		1
	7801 Demand	7863-5F77	
	7801 Bypass	7863-6I77	
	7802 Demand	7863-7F77	
	7802 Bypass	7863-8I77	
6	12 VDC Motor		1
	7801 no Switch, no Connector	M12-781A	
	7801 no Switch, 2-pin Connector	M12-781B	
	7801 Switch, 2-pin Connector	M12-781C	
	7802 no Switch, no Connector	M12-782A	
	7802 no Switch, 2-pin Connector	M12-782B	
	7802 Switch, 2-pin Connector	M12-782C	

Hose Reel



Versatile Boom



No. Code	Description
a	STAB039 Off centre end jet kit with tap
	STAB023 1/4" Male/Female ball valve tap
	STAB012 Brass offset end nozzle OC-04 TeeJet
	STAB011 Single swivel nozzle holder with cap 1/4" BSPM
	Nozzle holder with 1/4" BSPF thread - elbow
	STAB009 10mm barb
b	STAB001.5 Nozzle 110 degree SF.015 Green
	STAB005 100# Filter
	STAB006 Nozzle holder elbow
	STAB010 Cap and washer
c	STAB007 Nozzle holder - Tee

Spraying

For effective spraying ensure you have taken the following factors into account

1. Work Rates

- Speed of operation
- Water points or nurse tanks
- Rate of travel
- Swath width
- Spray volume applied

2. Wind and drift

- Wind Speed
- Wind Direction
- Airspeed at boom height

Avoid spraying on still warm days as convection currents may cause drift in unpredictable directions.

Optimum wind speeds are between 3km/h to 7 km/h

- Wind direction and drift is controlled by;:
- Reducing nozzle height
- Reducing pressure and using larger nozzles
- Fit low-drift nozzles producing larger droplets

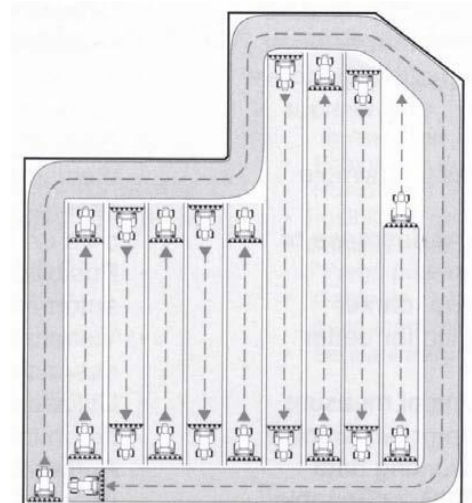
3. Field Work (See diagram below)

Swath marking and spraying

- Mark out to ensure proper pass matching – use flags foam markers or tramlines
- Where large obstructions exist in the middle of an area to be sprayed, mark out and spray the area like a separate headland.
- The perimeter of the field should be sprayed first. The width of two swaths will give adequate turning space at the ends of spray runs.
- Never spray while turning.

4. Speed

Maintain a constant speed when spraying. Should you need to increase your spraying speed, larger delivery nozzles must be fitted. Re-calibrate as required



Calibration

Accurate calibration is an essential element of any spraying function as it ensures that the pesticide is applied at the rate of the product label. Application in excess of the recommended rate is prohibited, can damage crops and is uneconomical.

Calibration must always be carried out:

- When spraying for the first time with new spray equipment
- At the beginning of each season
- After changes of nozzle tips, spraying pressure or speed
- After every 100 hectares of spraying

When calibrating a sprayer, a minimum of coverall, gloves and boots must be worn. A face shield and PVC apron may be included depending on the task and the cleanliness of the sprayer.

Calibration Procedures

The following table gives a step-by-step guidance on the standard method of sprayer calibration.

BOOM SPRAYERS HYDRAULIC NOZZLES		EXAMPLE
Read the LABEL	Spray VOLUME Product Dose Spray QUALITY	200 Litres / hectare 50 Litres / hectare Medium
Measure TIME per 100 Metres	Measure time in seconds over land similar to that to be sprayed	41.9 seconds
Calculate SPEED	SPEED = 360 divided by TIME km/h seconds	360/41.9 = 8.6km/h
Measure nozzle SPACING	Normally .5 metres (50cm)	.5 metre
Measure TIME per 100 Metres	OUTPUT = VOLUME X SPEED X SPACE / 600 litres/min litres/hectare km/h metre	200 X 8.6 X 0.5 / 600
Select NOZZLE	Refer to nozzle manufactures data charts or other sources and select the size and type of nozzle that will produce the calculated OUTPUT and required spray QUALITY	41.9 seconds

Now, check the calibration on the sprayer

Check Nozzle OUTPUT	With water, check outputs of 4 or more nozzles using a calibrated jug or flow meter. Check all nozzles are aligned correctly and spray patterns	Average output = 41.9 litres/minute
Calibrate SPRAYER	SPEED = 360 divided by TIME km/h seconds	1.4 x 600 / 0.5 / 8.6

As the nozzle output and therefore the spray volume are less than target figures, increase the pressure to, say 2.5 bar and repeat the calibration to achieve 200 litres / hectare

Now, record the details as calculated

Nozzle fitted	11004 - RED
Spray Volume	200 litres/hectare
Spray Pressure	2.5 bar
Spray Quality	Medium
Forward Speed	8.6 km/h



After Season Care

NOTE: It is important that when cleaning the sprayer one wears proper safety equipment. See your chemical or fertilizer package for this information.

1. After spraying chemicals run water through the tank, pump, and all hose hookups. If wettable powder dries out in the system it is very difficult to put back into suspension and can cause malfunction, damage or injury.
2. Disassemble the tips and rinse with water or cleaning solution (ie one appropriate for the chemical sprayed).
3. Clean the tip opening with a wooden toothpick. Never use wire or a hard object that could distort the opening.
4. Water rinse and dry the tips before storing.

Be sure to dispose of all unused chemicals or solutions in a proper and ecologically sound manner.

Warranty

Your sprayer is guaranteed free from defect in materials, workmanship or manufacture for 12 months from the date of purchase. Any parts which appear to us to be defective either in material or workmanship will be replaced or repaired at no cost to the purchaser, subject to the following conditions:

1. The registration card enclosed in this handbook must be returned to us within 7 days of purchase.
2. The guidelines in this handbook have been adhered to in every respect.
3. In the unlikely event of sprayer failure this should be reported to your dealer who will act on your behalf to resolve the issue to your satisfaction.
4. Any defective parts will be returned by your dealer within 7 days of failure, together with a report describing the failure and conditions in which the failure occurred.
5. The following are specifically excluded from the terms of warranty:
 - Fair wear and tear to pump moving parts and diaphragms
 - Fair wear and tear to nozzles and nozzle bodies
 - Damage caused by neglect or lack of lubrication
 - Damage caused by misuse or abuse
 - Damage caused while the sprayer is in transit
6. Transport and consequential costs or losses are excluded



Manufactured by:
Rapid Spray Southern
Murray Valley Hwy
Nathalia VIC 3638
AUSTRALIA
FREECALL: 1800 816 277

Whilst every care has been taken in the preparation of these instructions, no liabilities can be accepted with regard to errors or omissions. Product specifications are subject to change in line with our commitment to continuous improvement.





WARRANTY REGISTRATION CARD

To validate your warranty, please complete all the details below and post this card.
I have read and understood these instructions.

Sprayer Model _____ Date purchased ____/____/____

Serial Number _____

Purchased from _____

(Dealer Name and Town)

Purchaser's Name _____

Purchaser's Address _____
_____ p/c _____

Purchaser's Signature _____

To help us help you further please complete the following –

Purchaser's Age

- Up to 25
- 25 – 40
- 41-55
- Over 55

Principle Usage

- Commercial Farm
- Hobby Farm
- Industrial
- Home
- Town Council
- Hire Company
- Other

What influenced you to purchase a Rapid Spray product?

- Catalogue received
- Newspaper Advertisement
- Dealer recommendation
- Friend's recommendation
- Better features than other sprayers
- Quality and reliability
- Price
- Past experience with Rapid Spray product

What other Rapid Spray/Rapid Plas products do you use?

- Animal Feeders/Waterers
- RainWater Tanks
- Spray Tanks
- Diesel Tanks
- Inter Knapsacks
- Boom Sprayers
- Bertolini Pumps and Controllers
- Fire Fighters

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