



# FIRE RANGER TRAILER

## OPERATORS HANDBOOK



### FIRE RANGER DUAL AXLE TRAILER ON-ROAD

1200L/1500L/2000L/2500L/3000L

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## INTRODUCTION

**Thank you for your purchase of a Rapid Spray Fire Ranger Dual Axle Trailer.** Used by councils and government bodies across Australia, the Fire Ranger is our most durable, tough fire fighting trailer, prepared for any on or off-road duties as needed.

## MODELS

Please note your unit may not have all the parts or accessories listed in this handbook. This handbook covers the following models (including any custom variations):

### FIRE RANGER DUAL AXLE TRAILER



ON-ROAD  
PRFQD1200LZ, PRFQD1500LZ, PRFQD2000LZ, PRFQD2500LZ, PRFQD3000LZ

**DISCLAIMER:** In line with our policy of continuous improvement, the weights, dimensions and design may change slightly from what is shown in this operators handbook.

**\*WARNING:** Always obey vehicle and UTV/ATV manufacturer instructions regarding loading and operation. Please check weight restrictions. Serious death or injury can occur from improper usage. Rapid Spray accepts no liability for the unsafe operation of this unit.

## WARNINGS

Read all warnings below and obey any instruction stickers or warnings on the unit. Failure to do so may result in serious bodily harm or death.

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. Remember that one litre of water weighs one kilogram. Ensure equipment is secure during transport.
2. To ensure your own safety and that of your employees or colleagues (if applicable) you must comply with all relevant environmental, work place health and safety legislation and codes of practice. In particular be aware of Rural Fire Service guidelines for safety when fighting fires or backburning.
3. You must be in good mental health to operate this unit and not be under the influence of alcohol or any drugs that could impair your vision, physical strength, dexterity, judgment or other mental capacity.
4. Improper or careless use of this unit can cause serious injury. Minors should never be allowed to use this unit. This unit should not be used when bystanders or animals are in the area. This unit should never be used while children are in the area.
5. Before using, check the electrical and fuel systems for damage and deterioration. Replace parts as necessary. Do not modify the equipment or use any attachments other than those specified by the manufacturer.
6. Select and wear appropriate Personal Protective Equipment (PPE) in accordance with the label of the product you intend on using and your own safe work practices.
7. Never leave the sprayer unattended without turning off the engine and relieving the line pressure.
8. All operators must be trained in safe use of this unit.
9. Carry out maintenance as per the recommendations. Ensure that the unit is cool and securely stabilised on a level surface before commencing maintenance.

PRODUCT RISK ASSESSMENT

TASK	HAZARDS	RISK	CONTROL MEASURES
Partially fill the tank with water, start the motor and test the fire fighting unit.	Manual handling; slips, trips or falls; petrol fumes; fingers jammed	Medium	Concentrate on tasks, 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 power-lines; fire extinguisher nearby; follow warning stickers on tanks; wear PPE for petrol and fumes (mask and gloves)
Check weather and ground conditions and 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 (MSDS) - coveralls, gloves and respirator; follow safe manual handling techniques: don't lift on your own if > 20kg, bend knees and keep back straight
Mix chemicals (if applicable) and fill fire fighting unit	As above; spray drift, chemical spillage, emission of vapours or flammability: weather; untrained visitors.	Medium	As above; user trained in the state's chemical mixing and administration course e.g. Chem Cert; follow the relevant Environment Protection Authority requirements, fire extinguisher present; keep visitors away from the job unless wearing full PPE
Use fire fighter unit	As above; loss of load; heat and cold; noise; exceed load; limit of vehicle; hose entanglement; exhaust fumes; terrain and slopes; run over by unit	High	As above; wear clothes to suit heat and cold; wear hearing protection if pump noise > 85 dBA; follow manufacturer's safe operation instructions for the vehicle and spray unit; don't overload - water weighs 1kg per 1L; secure load to vehicle; hose tidy
Clean up, maintenance and storage	As above	Low	As above; continue to wear PPE for clean-up, store unit in a dry, well ventilated area
Pump / Motor			See pump / motor Operators Handbook

## TROUBLESHOOTING

CONDITION	CAUSE	REMEDY
Pump will not prime / draw water	<ol style="list-style-type: none"> <li>1. Insufficient motor RPM</li> <li>2. Air leak on suction plumbing</li> <li>3. Blocked/ restricted intake hose</li> <li>4. Filter cap disengaged</li> <li>5. Filter gasket damaged / missing</li> </ol>	<ol style="list-style-type: none"> <li>1. Increase motor RPM until pump primes</li> <li>2. Tighten/ replace fittings and hose clamps. Verify suction hoses are in good condition.</li> <li>3. Remove blockage from suction line, ensure line is not kinked.</li> <li>4. Lock filter cap into position.</li> <li>5. Replace filter gasket.</li> </ol>
Pumps runs but will not develop pressure	<ol style="list-style-type: none"> <li>1. Residue on pump valves</li> <li>2. Worn regulator</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove and clean pump valves</li> <li>2. Install regulator service kit</li> </ol>
Pressure drops / fluctuates during standard operation	<ol style="list-style-type: none"> <li>1. Restriction on suction line</li> <li>2. Pump sucking air</li> <li>3. Plugged filter</li> <li>4. Damaged regulator</li> </ol>	<ol style="list-style-type: none"> <li>1. Inspect tank and suction lines and remove restriction</li> <li>2. Tighten fittings</li> <li>3. Remove and clean filter mesh and housing</li> <li>4. Remove regulator stem and inspect for broken parts / pieces</li> </ol>
Pressure gauge not registering	<ol style="list-style-type: none"> <li>1. Plugged with debris</li> </ol>	<ol style="list-style-type: none"> <li>1. Unthread, check and clean pressure gauge</li> </ol>
Oil in pump or gearbox appears white and murky after operation	<ol style="list-style-type: none"> <li>1. Water or chemical has contaminated oil.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check pump valves, seals and pump oil breather cap. Replace / fix if needed.</li> <li>2. Replace oil if needed.</li> </ol>
Hand gun loses pressure	<ol style="list-style-type: none"> <li>1. Debris in hose or nozzle</li> <li>2. Pump losing prime</li> <li>3. Pump pressure dropping / fluctuating</li> </ol>	<ol style="list-style-type: none"> <li>1. Unthread nozzle tip and clean</li> <li>2. See 'Remedy' for 'Pump will not prime'</li> <li>3. See 'Remedy' for 'Pressure drops / fluctuates during standard operation'</li> </ol>
Pump / Motor		See pump / motor Operator's Handbook

# HITCHING TRAILER TO VEHICLE

When mounting to any vehicle/tractor, 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.

1. Line the trailer up with the tow ball of the vehicle. Have the trailer higher than the height of the tow ball so that you can lower the trailer down onto the tow ball rather than lift up.
2. Lower the coupling down gently, ensuring that it is lining up correctly and in the right position to sit squarely over the tow ball. Once the coupling has dropped down onto the ball securely, ensure the locking latch is dropped down into position. The trailer is now securely locked to the tow ball.
3. While releasing the locking lever, pull the brake lever back toward to trailer to release the trailer brakes. The emergency brakes are now disconnected.
4. Using D shackles, hook the chain through and screw the bolt into the shackle to secure. Do not tow the unit without the safety chain set up correctly.
5. Ensuring you have the correct adapters if needed and that the electric cable is long enough to suit the trailer and tow vehicle, connect the clip in securely and clip the latch to secure the connection.
6. Wind the jockey wheel back in. Fold the jockey wheel up and latch in place.
7. Before operating, double-check all the connections to ensure the lights work as they should.





## OPERATING INSTRUCTIONS

### BEFORE BEGINNING OPERATION

1. Check all hoses, connections and hose clamps to ensure that the unit has been delivered to you without transportation loss or damage.
2. Before attempting any fire fighting with your new unit, operate it to familiarise yourself with its features and capabilities and to ensure that your unit has arrived in a safe working condition. Please contact your dealer immediately should anything appear to have been damaged.
3. Position the trailer on level ground and securely connect it to the towing vehicle using the appropriate hitch and safety chains. Ensure all components, including hoses and fittings, are properly secured and free from obstruction. Do not place any straps or restraints over the pump or engine. Keep all hoses and securing straps clear of hot engine parts, exhaust systems, and exhaust fumes.
4. Familiarise yourself with the MOTOR and PUMP instruction / operators handbook (supplied with the unit) and ensure you follow all warnings and instructions contained within.

**WARNING!** Motor is shipped without oil or fuel. Before operation, fill the motor with the correct oil and fuel as advised in the MOTOR instruction / operators handbook.

### OPERATION

1. Fill tank from appropriate water source. Open ball valve on suction hose at bottom of tank. Start motor and allow to warm up. Bypass valve is fitted to top of pump and should be adjusted to allow bypass for warm up period.
2. Unlock hose reel to allow hose to be pulled out. When using fire fighter adjust nozzle to desired spray pattern.
3. Increase engine speed and adjust bypass to achieve desired flow rates. When job is finished turn engine off, rewind hose onto reel and lock reel to prevent unwinding. Close ball valve on suction hose.
4. Please note this unit is designed for fire fighting and washdown or tree watering use and not for chemical spraying. Please consult the manufacturer for further information.

**WARNING!** Be sure the pump is filled with water before starting the engine as advised in the PUMP instruction / operators handbook.



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## CLEANING & MAINTENANCE

Maintenance to pump and engine should be carried out regularly. Refer to pump and engine handbooks for Maintenance Schedule.

### PUMP MAINTENANCE

**Check pump Operators Handbook for maintenance schedule and further instructions.**

- Check to make sure that all screws are tightened and that no parts are missing.
- Check to make sure there are no loose connections on hoses, nozzle, or valves.
- Thoroughly clean the nozzle.

**INSPECT THE ENGINE** - *All repairs to be carried out by certified Honda dealer.*

**Check engine Honda Owners Manual for maintenance schedule and further instructions.**

- Check to make sure there are no loose or missing screws in any part of the engine.
- Clean the air filter regularly - particularly if working in a dusty environment.
- Clean and adjust the spark plug as necessary.
- Clean the cooling fan, air intake opening and parts around the muffler.
- Check the engine oil and change it as necessary.
- Inspect the fuel line filter, check for fuel leaks.

### LONG TERM CLEANING & STORAGE

- When storing the unit, ensure that it is clean and dry and kept in a ventilated place where it will not be subject to freezing temperatures. Frozen water may crack metal components and void warranty.
- Completely drain any fuel from the tank and water from the pump. (Check pump instruction manual)
- Wipe off water on the pump using dry cloth. Cover the pump and store indoors in a storage area with low-humidity.
- If operating in areas where freezing occurs we recommend leaving anti-freeze in the pump, regulator/bypass valve and handgun/nozzle while not being used to prevent possibility of frost damage.

CLEANING & MAINTENANCE cont.

MAINTENANCE SCHEDULE

Maintenance of your fire fighting unit should be carried out regularly. See below table for suggested guidelines in ensuring your unit stays at optimum performance.

ITEM	FREQUENCY	TASK
PUMP & GEARBOX	Daily	Perform visual inspection of pump: ensure screws are tight and no parts are missing.
	Daily	Check oil level in sight gauge - top up if necessary (see pump Operators Manual for oil specifications).
	As needed	Replace pump and gearbox oil (see pump Operators Manual for oil specifications).
ENGINE	Daily	Perform visual inspection of engine: ensure screws are tight and no parts are missing.
	Daily	Check oil level on dip tube - top up if necessary (see engine Operators Manual for oil specifications).
	Daily	Inspect the fuel line and filter, check for leaks or contamination.
	Weekly	Clean air filter in accordance with engine manufacturers instructions (see engine tab).
	As needed	Replace engine oil (see engine tab for frequency and oil specifications).
HOSE REEL	Daily	Check hose and fittings for leaks or excessive movement. Replace damaged fittings and clamps.
	Every 6 months	Swap hose reel end for end to spread wear and increase hose lifespan.
GENERAL FITTINGS	Daily	Clean suction filter in warm soapy water using filter brush.
	Daily	Check hose and fittings for leaks or excessive movement. Replace damaged fittings and clamps.
	Daily	

FIRE RANGER TRAILER BREAKDOWN & PARTS

Please consult with your local Rapid Spray dealership or contact the Rapid Spray service team on 1800 011 000 before replacing / altering parts.

Any unauthorized alteration, modification, attachments or repair to equipment may void the warranty as offered on Rapid Spray product or other componentry.

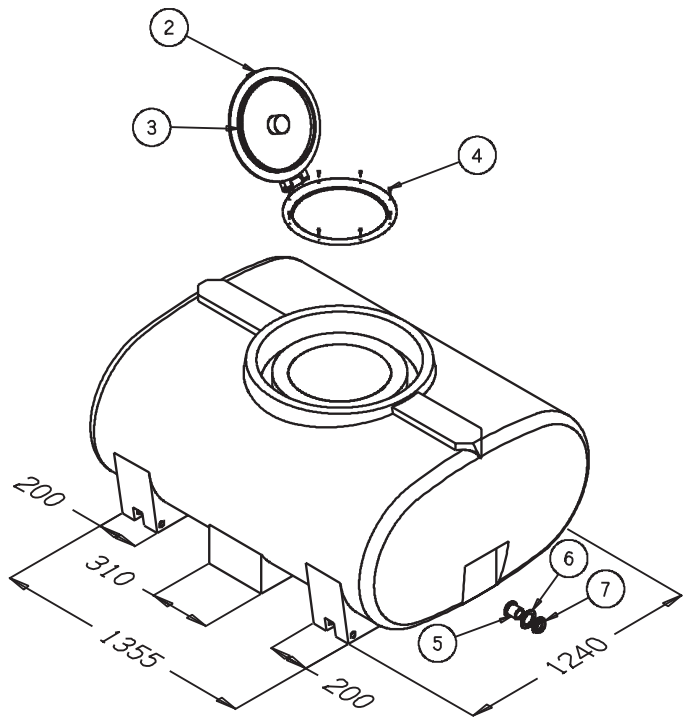
Please read the Rapid Pro Fire Pump Operators / Instruction Manual and Warranty Policy. All repairs should be carried out by a licensed dealer or maintenance shop, or by any engine repair establishment or individual using parts that are “certified” to EPA standards.

Attempting to repair your pump/engine may void the warranty if engine not correctly repaired / altered.

Remember that an authorised servicing dealer knows your engine best and is fully equipped to maintain and repair it. To ensure the best quality and reliability, use only genuine parts or their equivalents for repair and replacement.



1200L CARTAGE TANK



#	Parts No.	Description
2	ARLP450VSR	Ø450 Lid assembly
3		Ø450 Lid Seal only
4		Stainless screws
5, 6, 7	ARFP038	1 1/2" MBSP Fitting poly

POLY FIRE FIGHTING HOSE REEL



#	Parts No.	Description
1	ASR10B	Base mount frame for fire hose reel
2	AMATH100MYE	Bare hose reel
3	CFBE25M20B	1" BSP to 20mm tail brass elbow
4	CFSPB25M25F	1" BSPM to 1" BSPF brass swivel
5	CFBL25F2	Swivel end brass nut for hose reel
6	CFBT25M25F247	Outer Nut & Joiner Pipe
7	CUF14519MMX36N	36m length x 19mm fire hose with nozzle
8	CHHRB10M080	Rotating handle M10 x 80 for hose reels
9	Mounting Pack	4 x M10 Nyloc nut zinc, 4 x M10 3/8 flat washer zinc, 4 x M10 x 30 4-6 zinc set screw (not pictured)
10	CNAFP20F	Brass 3/4" adjustable fire fighting nozzle

## BOTTOM FILL KIT (Optional Upgrade)

### CONTENTS

- 6m x 38mm suction hose
- Camlock fittings
- Foot strainer
- 3-way ball valve

Aussie Pumps are designed for sucking water directly out of dams or water sources. The bottom fill kit is a quick, environmentally safe way of sucking up water to fill the water tank.

### WARNINGS

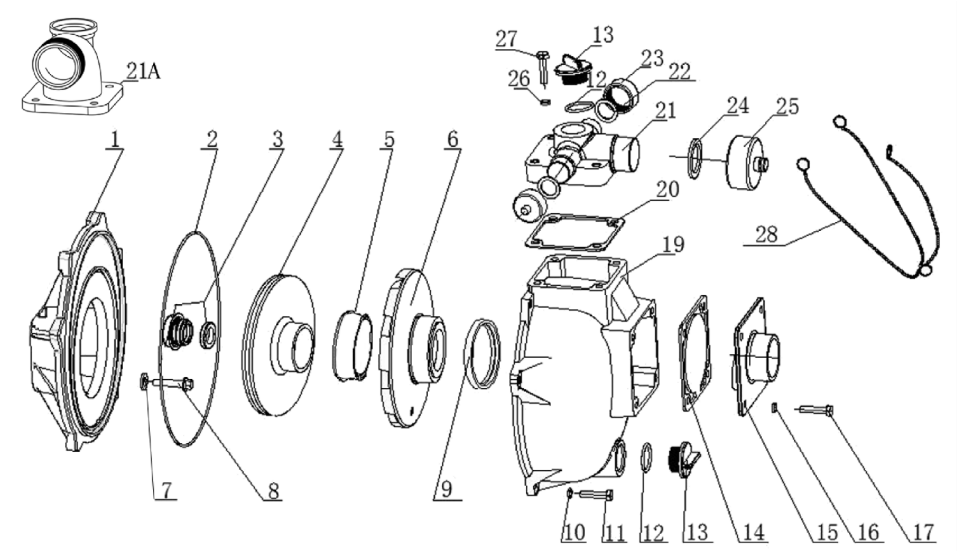
Do not change hoses while engine and pump are operating. Observe all precautions listed in Fire Fighter Operator Manual. Be aware of hazards working near water sources particularly dams and rivers – slipping, falling, drowning and use safe work practices at all times.

### OPERATION / PROCEDURE

1. Turn off engine.
2. Set the 3-way ball valve to the bottom fill position.
3. Ensure the suction hose is connected to the pump and the bottom fill inlet. (No need to detach and reattach hoses manually.)
4. Place the foot strainer and hose into the water source – ensure the strainer is in clean water, free of sludge or debris.
5. Open the ball valve at the bottom of the tank.
6. Start the engine and operate the pump until the tank is full.
7. When the tank is full, turn off the engine.
8. Close the ball valve at the bottom of the tank.
9. Reset the 3-way ball valve back to its original position for normal operation.
10. The unit is now ready for use.

**Important Note:** Always open the ball valve to the tank before operating to allow proper water flow and avoid potential pump damage.

RAPID PRO FIRE PUMP BREAKDOWN | APFR4500Z



Parts List			
#	Parts No.	Description	Qty
1	85.572.564	Back cover	1
2*	85.572.565	Body O-ring	1
3*	85.572.566	Mechanical seal	1
4	85.572.568	Impeller	1
5*	85.572.569	Volute bush	1
6	85.572.571	Volute	1
7		Washer	4
8		Mount bolt	4
9*	85.572.572	Volute seal	1
10		Washer	6
11		Body bolt	6
12	85.572.573	Priming/Drain O-ring	2
13	85.572.573	Priming/Drain cap	2
14*	85.572.575	Check valve	1
15	85.572.576	Suction cover	1
16		Washer	4
17		Bolt	4
19	85.572.577	Pump body	1
20*	85.572.578	Outlet gasket	1



Parts List			
#	Parts No.	Description	Qty
21	85.572.579	3-way outlet	1
21A	85.572.587	2" Outlet elbow (opt.)	1
22	85.572.580	1" Cap seal	2
23	85.572.580	1" Cap	2
24	85.572.581	1.5" Cap seal	1
25	85.572.581	1.5" Cap	1
26		Washer	4
27		Bolt	4
*	85.572.584	Seal kit inc items*	1
*	85.572.586V	Viton seal kit inc items*	1
	85.572.563	Wet end complete	1



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# WARRANTY

The following warranty is the only warranty applicable to RAPID SPRAY products, and to the maximum extent permitted by law, overrides any other conditions or warranties expressed or implied on RAPID SPRAY products.

Other than legislative obligations to the contrary, RAPID SPRAY will not be liable for and incidental or consequential damages arising from the ownership or use of a product. No person, including any dealer or representative of RAPID SPRAY is authorized to make any representation or warranty on behalf of RAPID SPRAY in addition or inconsistent with these provisions. Purchasers to whom these provisions apply agree to hold RAPID SPRAY not liable for claims by their customers in excess of the obligations of RAPID SPRAY expressly set forth herein.

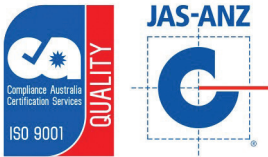
NOTE: All tank and spray systems must have their warranty activated by returning the warranty card located at the end of this document within 21 days of purchase by the end user.

## The Warranty

All products sold by RAPID SPRAY are guaranteed to be free from defect in materials workmanship or manufacture for a period of 12 months from the initial date of purchase, excepting the following exclusions;

Any parts/products found by RAPID SPRAY to be defective, either in material or workmanship will be replaced or repaired within this period, at no cost to the initial purchaser if following conditions are met:

- The item has been operated in accordance with all instructions and warnings provided
- Item is still owned and operated by the original purchaser - proof of purchase is required to obtain warranty



[WWW.JAS-ANZ.ORG/REGISTER](http://WWW.JAS-ANZ.ORG/REGISTER)

FOLLOWING THINGS ARE EXPRESSLY EXCLUDED FROM THE ABOVE WARRANTY.

ABUSE	Failure as a result of neglect, such as improper operation. Lack of maintenance or continued operation after discovery of a defect that leads to further damage
ALTERATIONS	Any unauthorized alteration, modification, attachments or unauthorized repair to equipment.
CLEAN-UP TIME	RAPID SPRAY does not pay for cleaning of products, parts or accessories or work area before or after the warranty repair.
DAMAGE	Damages or machine/component failure caused by carelessness/recklessness or accidental damage, improper operation, excessive speed, inappropriate storage or transportation.
ENVIRONMENTAL CONDITIONS & APPLICATION	Deteriorated or failed components such as o-rings, diaphragms, hoses, seals and connections damaged by corrosive chemicals, dirt and sand, excessive heat, moisture or other environmental impacts. Warranty determination on these type of failures will be made by RAPID SPRAY, only after inspection of the failed component.
INABILITY   UNSUITABILITY	In no event shall RAPID SPRAY be liable to any person for indirect or consequential damages or for injury or commercial loss resulting from any use or inability to use any RAPID SPRAY product.
MAINTENANCE	Component failure due to failure to perform maintenance services such as, oil and grease changes/ top-ups, failure to clean tanks, pumps filters, nozzles and spray lines. Failure to tighten or replace loose or missing bolts, nuts, fittings, shields and covers.
NON-GENUINE PARTS	Use of parts other than RAPID SPRAY parts for repair of warranted items will automatically negate any warranty. Warranted components must be replaced with genuine parts.

# WARRANTY REGISTRATION

You can register online at [www.rapidspray.net/resources/warranty-registration](http://www.rapidspray.net/resources/warranty-registration) or complete all the details below and post this form back to:

**Rapid Spray, PO Box 3119, Singleton NSW 2330**

Model ..... Serial No .....

Purchased From .....  
(Dealer Name & Town)

Purchaser's Name .....

Purchaser's Address .....

.....

Purchaser's Phone Number .....

Disclaimer: If you don't want us to keep you informed of new products, please tick the following circle: ☐

**To help us help you further, please complete the following:**

**Purchaser's Age**

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

**Principal Usage**

- ☐ Commercial farm
- ☐ Hobby farm
- ☐ Industrial
- ☐ Other.....
- ☐ Town council
- ☐ Hire company
- ☐ Home

**What influenced you to purchase a Rapid Spray product?**

- ☐ Received Catalogue
- ☐ Newspaper advertisement
- ☐ Magazine advertisement
- ☐ Dealer recommendation
- ☐ Friends recommendation
- ☐ Better features than competitor product
- ☐ Quality & reliability
- ☐ Price
- ☐ Past experience with Rapid Spray products
- ☐ Other.....

**What other Rapid Spray products do you use?**

- ☐ Spray tanks
- ☐ Cartage tanks
- ☐ Diesel tanks
- ☐ Fire fighting
- ☐ Boom sprayers
- ☐ Bertolini pumps & controllers
- ☐ Inter knapsacks | Compression sprayers
- ☐ Other.....



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## NOTES

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Call us on 1800 011 000 or  
visit [www.rapidspray.net](http://www.rapidspray.net)

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**Rapid Spray Liquid Management Systems**

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