



Attach product bar code here

RetraSpray

Retractable Reel Sprayers



Operator's Manual

Manual Part No: GP-OMRET-A

Welcome



Sean Mulvaney, General Manager of Croplands

Congratulations on the purchase of your new Croplands sprayer.

Croplands are in the business of building and selling spraying equipment and have been since 1972 (over 40 years). We supply sprayers to farmers, contractors, growers and others involved in growing crops & controlling pests and diseases.

Use our contact details here to contact our staff during business hours. After hours, e-mail us and expect a reply the following morning.

We trust you will get years of good use from your Croplands Sprayer.

Yours sincerely,

Sean Mulvaney

General Manager

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Read and understand this Operators' Manual before operating the CropPak sprayer.

About This Manual

This manual provides assembly, setting up, operating and maintenance instructions for the 12 Volt, retractable reel, RetraSpray units. These products are a part of the Croplands Optima range.

The types available are pictured on the front cover and/or in the Identification and Specification Chapter. Some model types may also have different options available.

Some features explained in this manual may not be installed on your sprayer.

Please pass on this manual with the sprayer at the time of resale for usage by the new owner.

NOTE

Refers to important and useful information which should not be overlooked.

Terminology

These terms/symbols used throughout this manual:

- **NOTE** - to convey useful operating information.
- **CAUTION** - to highlight potential injury or machinery damage.
- **WARNING** - to stress potential dangers and the importance of personal safety.



CAUTION

Highlights hazards, unsafe/unwise practices which could cause injury, damage to property, machinery or loss of crop yield if instructions are not followed.

Important Information

NOTE

For conditions of warranty and warranty policy, please see the Warranty & Pre-Delivery booklet provided with this sprayer.

Before Operating Your Sprayer

- 1 Before attempting to use your sprayer, make sure you **read the Operator's Manual** and properly understand:
 - All Safety Issues.
 - Assembly & Installation instructions.
 - Calibration of the sprayer.
 - Sprayer Operation.
 - Sprayer Maintenance.
- 2 Read and follow instructions on chemical manufacturers' labels.
- 3 Always wear applicable protective clothing.



WARNING

Indicates the strong possibility of severe personal injury or damage to machinery if instructions are not followed.

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Croplands serial number plate.



Honda serial number plate.



Pump serial number plate.

Product Identification

Where applicable, always use the Model and Serial Number of the RetraSpray unit when requesting service information or when ordering parts.

Early models or later models may use different parts, or it may be necessary to use a different procedure for specific service operations.

Sprayer Part & Serial Number

Always use the serial number of the RetraSpray unit/ Reel when requesting service information or when ordering parts.

Where a serial plate is not provided, please use the part number from the bar code affixed to this manual or the Warranty & Pre-Delivery booklet.

Pump Model & Serial Number

The Pump Model & Serial Number is located on the pump. This plate shows name of manufacturer, type & model of pump, serial number, maximum working pressure, oil type, etc.

For further information see the pump's manual or Croplands website > Sprayer Components.

NOTE

For further information on Croplands Sprayers, see www.croplands.com.au

NOTE

Please supply the pump model number as a reference when ordering pump spare parts.

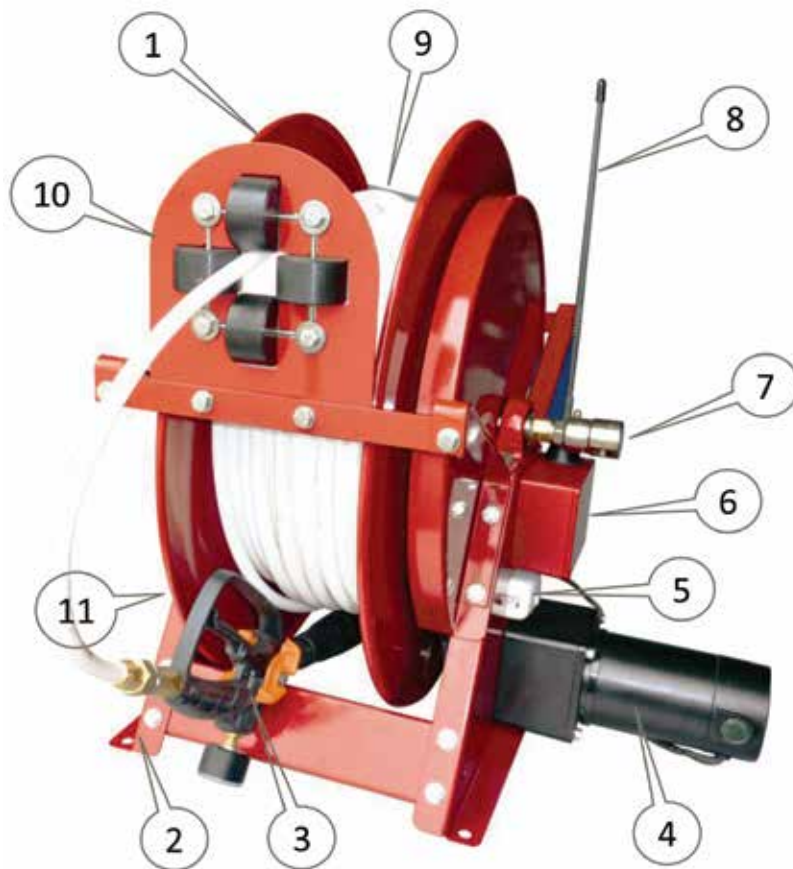


Retactable Reel Sprayers

The 12 Volt, retractable reel is the core component to the RetraSpray units. They are available in 2 lengths of hose, 50 & 100 metres, and with or without remote control.

For the RetraSpray 100 & 160 models, the spray guns are supplied as an item to be ordered separately.

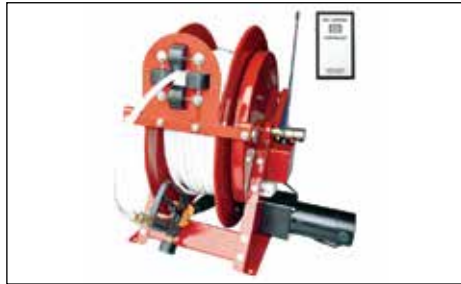
1	Reel
2	Base
3	Spray Gun, (shown here is Turbo 400 RG)
4	12V Motor, 1/5 HP
5	Connector Block
6	Control box (includes on/off switch on the rear side)
7	Liquid connection / swivel
8	Antenna for the remote control (remote version only)
9	Hose (2 options, 50 & 100 metres)
10	Hose bar & guide (remote version only)
11	Push Button for hose retraction <i>(not shown in this photo)</i>



Above: RSRL-100RC plus Turbo 400RG gun (Remote control transmitter not show).



RSRL-100.



RSRL-100RC.

12 Volt Retractable Reels

RSRL-50

RetraSpray single reel with 50 metre hose.
Spray gun not included (*ordered separately*).

RSRL-100

RetraSpray single reel with 100 metre hose.
Spray gun not included (*ordered separately*).

Remote Control Retractable Reels

RSRL-100RC

12 Volt retractable RetraSpray single reel with 100 metre hose and remote control. Very similar to the standard reel but with the addition of the remote control feature (inc hose guide etc).
Spray gun not included (*ordered separately*).

Dimensions & Weights Reels Only

RSRL-50/RSRL-100

Length: 560mm
Width: 570mm
Height: 600mm
Weight: 25kg (without hose)
30kg (with 50m hose)
34kg (with 100m hose).

RSRL-100RC

Length: 630mm
Width: 570mm
Height: 600mm
Weight: 29kg (without hose)
35kg (with 100m hose).

RetraSpray 100 models

- GX 120 Honda Motor with 3 year Honda warranty
- AR252 twin diaphragm 25 bar, 25 L/Min pump
- Robust, powder coated steel frame
- Pressure controller and pressure gauge
- 12 volt 1/5HP low rev motor powered reel
- Push button hose retraction
- 300 and 500 litre options
- Optional remote control



RS100-300-100RC

RS100-300

300 Litre sq tank, steel frame, 25 L/Min pump, Honda GX120 motor, retractable reel with 50 metre hose.

RS100-300-100RC

300 Litre sq tank, steel frame, 25 L/Min pump, Honda GX120 motor, retractable reel with 100 metre hose & remote control.

RS100-500

500 Litre sq tank, steel frame, 25 L/Min pump, Honda GX120 motor, retractable reel with 50 metre hose.

RS100-500-100RC

500 Litre sq tank, steel frame, 25 L/Min pump, Honda GX120 motor, retractable reel with 100 metre hose & remote control.

RetraSpray 160 models

- GX 160 Honda Motor with 3 year Honda warranty
- AR30 twin diaphragm 40 bar, 35 L/Min pump
- Pressure controller and pressure gauge
- 12 volt 1/5HP low rev motor powered reel
- Push button hose retraction
- 300 and 500 litre options in robust steel frame
- Optional remote control
- Choice of gun (add to order).



RS160-500T100RC.

RS160-300

300 Litre square tank, steel frame, 35 L/Min pump, Honda GX160 motor, retractable reel with 50 metre hose.

RS160-300-100RC

300 Litre square tank, steel frame, 35 L/Min pump, Honda GX160 motor, retractable reel with 100 metre hose. & remote control.

RS160-500

500 Litre sq tank, steel frame, 35 L/Min pump, Honda GX160 motor, retractable reel with 50 metre hose.

RS100-500-100RC

500 Litre sq tank, steel frame, 35 L/Min pump, Honda GX160 motor, retractable reel with 100 metre hose & remote control.

RS100-500-100RC

500 Litre sq tank, steel frame, 35 L/Min pump, Honda GX160 motor, twin retractable reel with 100 metre hose & remote control.

RetraSpray Tray Mount models

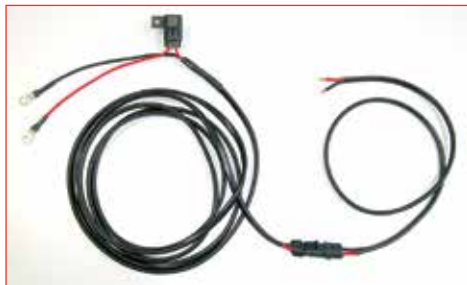
- GX 160 Honda Motor with 3 year Honda warranty
- AR30 twin diaphragm 40 bar, 35 L/Min pump
- Strong galvanised steel frame
- Pressure controller and pressure gauge
- 12 volt 1/5HP low rev motor powered reel
- 100 metre hose is standard
- Push button hose retraction
- 500 litre
- Remote control is standard
- Turbo 400 gun is standard.



US500-30-100RC.

RS500-30-100RC

500 Litre tank, galvanised steel frame, 35 L/Min pump, Honda GX160 motor, retractable reel with 100 metre hose. & remote control.



UP-459 power lead.



RS-RC Remote Control Reel Option.



B26.901.165MK2 (Turbo 400) spray gun.

Power Lead

UP-459

5 metre power lead with 8mm eyelets for the vehicle battery, 35 Amp fuse and a waterproof quick connection plug 1m from the reel connection end. This power lead may or may not be supplied as standard equipment. Also available as a spare part.

Remote Control Reel Option

RS-RC

Remote Control Retractable Reel Kit (includes hose bar and hose guide) – a retro-fit kit with 360° remote range, 915 MHz frequency control with dip switch coding. If using multiple reels they can be individually coded.

A standard option on the 100m reel (not sold as an option for the 50m reel).

Spray Guns & Lances

For all spray gun options, see the Croplands Optima Guide.

B26.901.165MK2 (Turbo 400)

Turbo 400 with metal grip and protected lever, 50 bar (725 psi). Best suits 160 & US models.

RL10

RL10 gun with 500mm steel lance & adjustable nozzle. Best suits 100 model.

RetraSpray 100**300 litre Tank**

Length: 900mm
 Width: 1190mm
 Height: 1070mm
 Weight: 115kg (without hose)
 Weight: 120kg (with 50m hose)
 Weight: 124kg (with 100m hose).

500 litre Tank

Length: 900mm
 Width: 1190mm
 Height: 1070mm
 Weight: 121kg (without hose)
 Weight: 126kg (with 50m hose)
 Weight: 130kg (with 100m hose).

Horsepower: 3 hp
 Flow (Max): 25 Lpm
 Pressure (Max): 360 psi

RetraSpray 160**300 litre Tank**

Length: 900mm
 Width: 1190mm
 Height: 1070mm
 Weight: 125kg (without hose)
 Weight: 130kg (with 50m hose)
 Weight: 134kg (with 100m hose).

500 litre Tank

Length: 900mm
 Width: 1190mm
 Height: 1070mm
 Weight: 131kg (without hose)
 Weight: 136kg (with 50m hose)
 Weight: 140kg (with 100m hose).

Note: Add an extra 25kg for Twin Reel versions

Horsepower: 5.5 hp
 Flow (Max): 35 Lpm
 Pressure (Max): 580 psi

Tray Mount, US500**500 litre Tank**

Length: 1660mm
 Width: 1200mm
 Height: 1040mm
 Weight: 155kg (with 100m hose).

Horsepower: 5.5 hp
 Flow (Max): 35 Lpm
 Pressure (Max): 580 psi

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Unpack the sprayer.



Check & clean the suction filter.

Unpack the Sprayer

When unpacking your new RetraSpray unit, check thoroughly for any transport damage, and that all parts, accessories and extras are included.

- 1 Instruction Manuals.
- 2 Accessories as ordered (spray gun etc).
- 3 Aerial (if applicable).
- 4 Transmitter (if applicable).

NOTE

Whilst all precautions are taken in assembly and testing, it is possible that some tank fillings remain in the lines. These will accumulate in the suction filter when first used. Therefore, clean the filter out after initial use.

Check the Filter & Hoses

Check and clean (if necessary) the suction filter.

Check all hose connections for tightness.

Check motor and pump connections (consult the relevant manuals for these items).

Check the drain plug is installed (US model).

Check tank straps are tight (US model).

Connect the spray gun.



WARNING

Ensure your vehicle is rated for the weight of the sprayer when full of liquid.

Failure to do this may cause instability and injury.

Tip for RetraSpray 120 & 160

These models do not have a drain plug fitted to the tank. Draining the tank can only be accomplished via the spray gun operation.

A faster method of draining can be produced by fitting a 3 way ball valve (plus another (dump) hose) in the bypass line of the pump.

NOTE: This must be a “continuous flow” ball valve.

The operator can choose to either run the system as normal, bypassing the tank whilst spraying or by turning the valve can change the bypass to the dump hose and run until the tank is empty.

This will remove almost the entire chemical from the tank. There may be about 5 or 10 mm of fluid left in the tank sump which can be further diluted with water and pumped out.

NOTE: The tray mount sprayers have a drain valve in the bottom of the tank hence do not require this feature.



Hard wire to the reel's connector box.

12 Volt Power Connection

Connect the unit to a 12 volt power source – normally the 12 volt battery of the vehicle carrying the unit. For best results use a fully charged heavy duty battery, 70 AH or larger.

The RetraSpray power loom, part number UP-459, if not supplied as standard, is available as a separate component.

The UP-459 power lead comes with a 35 Amp fuse, do not replace with a heavier duty fuse.

It is recommended that you consult an auto-electrician to assist wiring up your RetraSpray unit.

Fitting the Aerial

CAUTION (If applicable); Fit aerial to mounting base – tightening only finger tight and then just a nip more. See photos on pages 9 & 10 for position.

If the aerial is over tightened a break in the coaxial cable may result the remote control range diminishing to only 20 metres.



CAUTION

The leads must be connected to a 12 Volt battery. Failure to connect leads to a battery of the correct voltage will cause damage to the electric motor.

Programming the remote

(Where applicable), the remote is delivered pre-tuned from the factory. At some point it may be necessary to re-tune the system or select a new operating frequency.

Both the remote unit (transmitter) and control box (receiver) have a bank of dip switches. These switches can be moved to either the up or down position.

Make sure that both the radio receiver dip-switch code and the radio transmitter dip-switch code exactly match.

CAUTION: Always keep No 1 in the ON position.

When changing the 9 Volt battery in your radio transmitter make sure not to bump any of the dip-switch codes. This would render your remote control feature unusable until the dip-switch code was put back into its original position.



If two or more 915 MHz systems are in use in the near vicinity make sure that the dip-switch codes from one system to the other are different.

If they are too close in dip-switch combination radio interference or cancellation can occur from one unit to another.

Notes

A low power or voltage battery remote will cause weak or intermittent operation of the units motor.

This can cause damage to the radio relay.

Always insure that the 9 volt battery in the transmitter is replaced every 3 months and that the 12 volt power supply is charged on a regular basis and putting out optimal voltage.

The working range of RetraSpray® Radio Transmitters is affected by the many factors that typically affect all 915 MHz Transmissions. These include operating in the vicinity of high tension power lines, buildings and other obstructions, other radio transmitters, and certain other atmospheric conditions.

A range of 100 meters or more can be achieved under ideal conditions.

Fitting a RetraSpray Reel

Securely mount the RetraSpray reels in a vertical orientation by bolting through all mounting lugs located on the base frame of the unit, using M10 high tensile bolts.

Ensure a minimum of 50 mm clearance from all sides to prevent damage.

Mount in a position which enables clear access to controls and free run of the hose.



Fitting a RetraSpray 100 & 160

Securely mount the RetraSpray 100 or RetraSpray 160 by bolting through all mounting lugs holes located on the base frame of the unit, using a minimum of 4 @ M10 high tensile bolts.

Fitting a RetraSpray Tray Mount

Re the US500, if there are no holes in the base frame, they will need to be drilled before mounting can be accomplished(as per the RetraSpray 100 & 160 units).

Never operate without the unit being properly secured.



WARNING

When using a sprayer on a vehicle, always adhere to the vehicle manufacturer's load carrying specifications. Failure to do this could result in serious damage and injury.

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Turbo400 gun.

Spot gun 300.



AA30L-1/4 gun.

RL10 gun.

Retraspray Calibration

Retraspray reels are most commonly used for spot spraying using a hand gun with a single cone nozzle.

Precise application rates are not usually achieved with hand guns because the application rate is entirely dependent on the operator.

Three steps are recommended for calibrating a spot sprayer:

- 1 Choose a gun to suit your pump size & model.
- 2 Choose the appropriate nozzle to suit the handgun you are using, and the application required.
- 3 Check the nozzle operates correctly.

Step 1.

Choose a Gun to Suit your Pump Size & Model.

The following spray guns are available for purchase from Croplands:

- Turbo400 gun
- Spot gun 300
- RL10
- AA30L-1/4

CAUTION

Do not operate a sprayer without calibration or before calibration has been completed. Failure to calibrate a sprayer before operating may result in ineffective or crop damaging spray application.

Model	Pump Fitted	Pump Specifications	Recommended Pump Pressure	Recommended Gun Options	Standard Nozzle & Flow
RS100 models	AR252	25 L/min*, 25 bar**	10 - 20 bar	RL10, AA30L-1/4	
RS160 models	AR30	32 L/min*, 40 bar**	20 - 30 bar	Turbo400 or Spot 300 gun	
US500/30/100RC	AR30	32 L/min*, 40 bar**	20 - 30 bar	Turbo400 or Spot 300 gun	

Pump specifications and recommended spray gun options.

Step 2

Choose the Appropriate Nozzle

The nozzle used should be appropriate for the application. The standard nozzle supplied with a handgun such as the Turbo400 or RL10 (see below more information) should suffice for most applications such as smaller gorse, broom and other woody weeds, around buildings or fence lines and spot spraying of thistles or other problem weeds in pasture.

A larger nozzle may be required for larger woody weeds – contact Croplands or your Croplands dealer to discuss other nozzle options.

Follow the chemical manufacturer's recommendation for any specific nozzle or application rate requirements as per the manufacturer's label.

Pump Specification

The nozzle chosen must be within the flow capability of the pump on your Retraspray unit.

If you purchase either an RS100 model, RS160 model, or the US500/30/100RC skid mount model, we recommend using a gun the same as, or similar to those described in the table above.

If you purchase a Retraspray reel only, ensure your existing pump has at least the flow and pressure to match those of the Croplands options in the table (above).

Step 3

Check the Nozzle Operates Correctly

- 1 Fill the sprayer tank with clean water making sure the lid filter is in place.
- 2 Connect the reel power leads to a 12 volt battery (see battery connection instructions in chapter 2).



CAUTION

Always only use clean water when calibrating or checking a sprayer. Never calibrate with and toxic chemical present in the tank. Failure to follow this instruction can lead to poisoning and serious illness.



Turbo400 spray gun with wide-cone adjustment for excellent coverage in close-up work.

Turbo400 spray gun with narrow cone adjustment for spraying targets further away, such as down a bank or gully.

- 3 Start your pump and engage the pressure lever on your pump control unit (PRV).
- 4 Hold down the hand grip on your gun to spray and check:
 - The nozzle is working for the type of spray pattern you require

- The pump pressure is sufficient to achieve the spray application - adjust your control unit as required
- If your gun has a variable-type cone jet (most do), adjust the cone to make the spray pattern required. The Turbo400 gun has a lever on the side for that purpose; the RL10 has an adjustment option on the nozzle itself.

- 5 Release the hand grip lever to stop spraying.
- 6 Turn off your pump or release the bypass lever on the pump control unit
- 7 If necessary, make any adjustments and recheck.

When the nozzle operates correctly, the sprayer is ready for operation.

NOTE

Nozzle spray patterns and spray angles should be visually checked for accuracy and the nozzle replaced if not spraying correctly.

NOTE

Check the current Croplands Optima Buyers Guide for Nozzle information.

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Pre-Operation Check

- 1 Spray Gun connected.
- 2 Unleaded Fuel in Motor, refer to Engine Manual.
3. Oil Level in Motor, refer to Engine Manual.
- 4 Oil Level in Pump, refer to Pump Manual.
- 5 Oil level in Gearbox, refer to Pump Manual.
- 6 Pressure Lever in By-Pass Position, refer to Pump Manual.
- 7 All Nuts, Bolts and Screws are tight.
- 8 Unit is in an open area. Exhaust Gas is poisonous!
- 9 All maintenance has been completed.
- 10 Safety Guards and Shields are in place.
- 11 Operator Safety Gear is at hand.



CAUTION

Children and pets must be kept away from the area of operation.



CAUTION

Know how to stop the engine quickly.



CAUTION

Make sure fuel cap is closed securely.

SAFETY FIRST

IMPORTANT: Heed all these **WARNINGS** as failure to do so may result in serious and/or permanent bodily harm

- 1 **DO NOT** let any person near the unit while it is operating.
- 2 **DO NOT** start the unit until you have read this manual carefully.
- 3 **DO NOT** start motor with the pressure lever in the “press” position.
- 4 **DO NOT** pull the hose out too fast as the reel may “run on”, causing the hose to become tangled.
- 5 **DO NOT** alter the equipment in any manner. If repairs are necessary, use only genuine factory repair parts.
- 6 **DO NOT** leave the unit running unattended at any time.
- 7 **DO NOT** operate the unit if there are any leaks from hoses, fittings, etc. Fluids under high pressure can penetrate the skin.
- 8 **DO NOT** operate near powerlines, as contact could result in electrocution.
- 9 **DO NOT** refuel the engine until it has been stopped and cooled. If any fuel has been spilled, make sure that the area is cleaned & dry before starting the engine.

**WARNING**

Heed all SAFETY WARNINGS as failure to do so may result in serious and/or permanent bodily harm.

**CAUTION**

Do not add chemical to the tank until you have checked the unit is fully operational.

Standard RetraSpray Reel

Ensure all set-up instructions are complete.

When you are ready to operate the reel connect the unit to the 12 Volt power source.

The reel will free-wheel out to the desired distance.

CAUTION: Do not pull hose out too fast, as the reel may “run on”, causing the hose to become entangled.



CAUTION

Do not pull hose out too fast, as the reel may “run on”, causing the hose to become entangled.

When you are ready to retract the hose, press the push button on the unit. Keep tension on the hose when rewinding to enable the hose to slip into the low spot on the reel drum.

Remote Control RetraSpray Reel

Ensure all set-up instructions are complete.

When you are ready to operate the reel connect the unit to the 12 Volt power source. Ensure to carry the transmitter with the operator.

The reel will free-wheel out to the desired distance.

CAUTION: Do not pull hose out too fast, as the reel may “run on”, causing the hose to become entangled.



CAUTION

Do not pull hose out too fast, as the reel may “run on”, causing the hose to become entangled.

When you are ready, press and hold the transmitter button to retract the hose back to the unit. Always ensure the hose is in front of the operator.

To operate the transmitter for retraction, the operator must be at least 2-3 meters away from the unit.

Use the manual button on the radio receiver box to retract any slack hose within 2 meters of the unit.

WARNING: Be ready to release the radio transmitter button when approaching the reel, as injury may result.

CAUTION: This unit has been designed to operate in a continuous start/stop mode without damage to the unit. Keep light tension on the hose when rewinding to enable the hose to slip into the low spot on the reel drum.

Hints

If the hose becomes entangled or caught, release the retraction button immediately or damage to the motor could result.

Keep the unit under cover when not in use.



WARNING

Be ready to release the radio transmitter button when approaching the reel, as injury may result.



CAUTION

This unit has been designed to operate in a continuous start/stop mode without damage to the unit. Keep light tension on the hose when rewinding to enable the hose to slip into the low spot on the reel drum.

Adding Chemical to the Spray Tank

Chemical should only be added to the spray tank after initial start up procedure is complete.

The steps for adding chemical to the tank are:

- 1 Calculate the amount of chemical required by reading the product label.
- 2 Part fill the spray tank with water.
- 3 Measure and pre-mix the chemical.
- 4 Add the pre-mixed chemical to the tank.

Step 1

Calculate the Amount of Chemical Required

To add the correct amount of chemical to a tank, it is necessary to calculate the amount of chemical required.

The method of calculating the amount of chemical required for the sprayer tank is dependent on the chemical rate recommendations. Use the information supplied on the chemical label to determine the tank mix concentration.

If you are unsure of the mix required, **ALWAYS** check with a qualified advisor or the supplier of the chemical you intend to use.

Step 2

Part Fill the Spray Tank with Water

Part fill the sprayer tank with clean water. Use fresh water (preferably rainwater), free of suspended organic matter or clay. Some chemicals are deactivated when they contact these materials.

Ensure water quantity is sufficient to allow correct product blending.

Step 3

Measure & Pre-Mix the Chemical

Read and follow the instructions on the chemical manufacturers label before mixing & adding chemicals to the spray tank.

Chemicals should be accurately measured and thoroughly premixed in a separate container before adding to the spray tank:

- 1 Measure out the required liquid chemical in a graduated measuring cylinder or bucket.
- 2 Add chemical to a small volume of water in a container and thoroughly mix the chemical.
- 3 If you are using an adjuvant, spreading agent or wetter/sticker, ensure you read the label carefully to ensure it is mixed at the correct rate and added to the tankmix in the correct order.

Tank Agitation

The pump bypass provides agitation of the tank mix. We recommend that you use a reputable brand of product with clear label instructions – most reputable chemical manufacturers produce products that will remain in suspension with minimal agitation.

Fertiliser mixes can be more difficult to mix and keep in suspension so we recommend ensuring they are thoroughly mixed before commencing spraying.

If the tankmix is left to stand for a period of time, ensure you leave the pump running with the bypass engaged for 15 minutes or so before spraying.



CAUTION

Do not add chemicals to the spray tank until the initial start-up or daily start-up procedure has been carried out. This avoids having a tank full of toxic chemical and then finding a sprayer problem.

NOTE

Be sure to mix only enough spray mixture to cover the area required. Mixing too much chemical creates unnecessary waste and costs.

Step 4

Add the Chemical to the Tank

Always make sure the filling basket is in place when adding water or chemical to the tank.

To add the premixed chemical to the tank:

- 1 Add the pre-mixed chemical to the tank, thoroughly rinsing the chemical pre-mix container and adding the rinse to the tank.
- 2 Top up the tank with water to the required volume.
- 3 Close the tank lid securely.



CAUTION

Always follow chemical label instructions.

Step 5

Operating the Hand Gun

After chemical has been added to the tank, the sprayer is ready for operation.

To operate the hand gun:

- 1 Have your pump running and engage the pressure control lever on your pump control unit to provide your preset pressure to the gun
- 2 Squeeze the lever on the gun - ensure your spraygun is aimed at the target, and adjust the pattern as needed.



CAUTION

Should chemical come in contact with skin immediately rinse off with water. Always follow chemical label safety instructions.

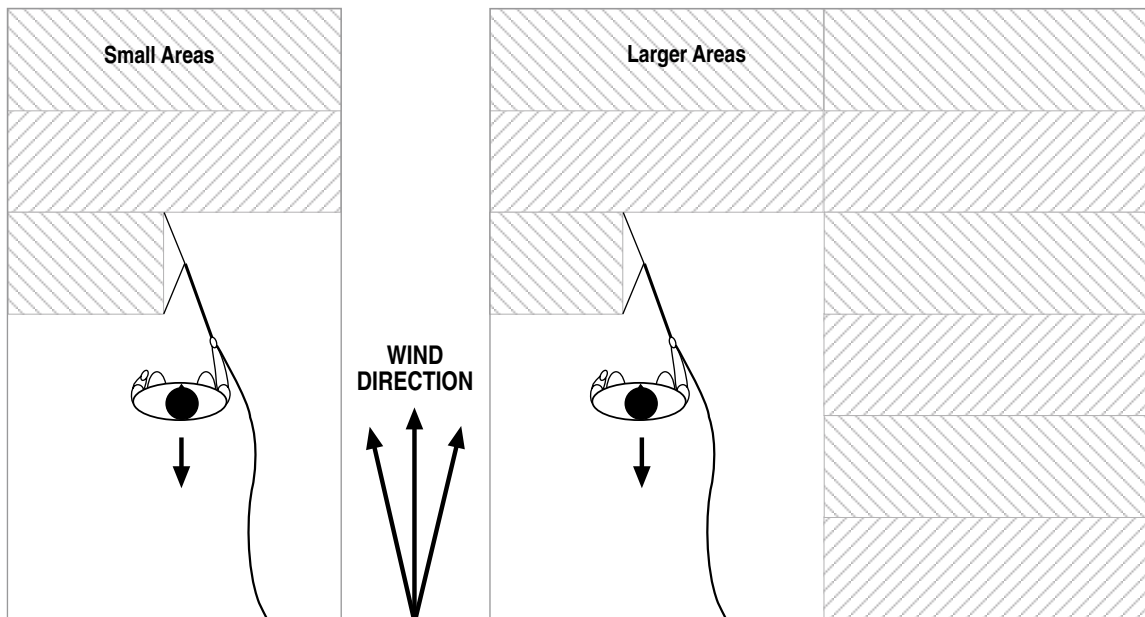
- 3 Move the nozzle as required to completely spray the target. Use the hand gun trigger to turn the spray On & Off as required.
- 4 When spraying is finished, switch off the pump.
- 5 Ensure you thoroughly clean out the sprayer by flushing fresh water and/or tank cleaner through the unit so it is ready for your next use.

Correct flushing will extend the life of your sprayer by up to 3 times.



CAUTION

Always wear approved safety clothing and protective respiratory equipment when spraying.



In small areas, spray across the area & move back toward the wind.

In larger areas, divide the area into smaller segments & move back toward the wind keeping track of the area sprayed to avoid under or overspraying.

Hand Gun Spraying Method

It is always preferable to spray with your back toward the wind direction so that the wind carries spray away from the operator.

The operator should where possible, avoid walking on previously sprayed areas to avoid unnecessary fumes and contamination.

Operate with the sprayer situated behind the operator so that the hose from the sprayer can be kept on unsprayed areas.

This is important because the operator usually has to handle, extend and rewind the hose many times, as he shifts from area to area.

If the hose is kept relatively free from spray contamination there is less exposure to chemical contamination.

NOTE

It is recommended to keep the hose from the sprayer on unsprayed ground & uncontaminated from the spray. This minimises contaminants on the hose minimises exposure to chemicals when handling and rewinding the hose.



Pump in by-pass & closed position (levers up).



Pump in operating & open position (levers down).



Pressure controller lever - pressure adjustment.

Using 100, 160 & Skid Series

Ensure pre-operation checks are complete.

Fill tank to desired level.

CAUTION: Never fill tank with the lid closed.

Ensure the pump is in the “By-pass” / levers up position before starting the engine.

CAUTION: Never start with the pump in pressure as this cause stress to the internal components of the pump.

Consult the engine’s operator manual for starting and operating the engine.

Initially run engine for at least 30 seconds until all air has been removed from the plumbing lines to prime the pump.

With the pump primed, depress (or turn) the pressure controller lever to the levers down / “pumping” position.

Adjust working pressure as required.

Open the 2 way ball valve to reel/s.

To Stop

To stop the pump:

- 1 Reset the pressure controller lever into the “By-Pass” position.
- 2 Close ball valve to reel(s)
- 3 Adjust the working pressure knob back down to zero.
- 4 Turn fuel valve to the “off” position (consult engine operators manual for more information).

CAUTION

Never fill the tank with the lid closed.

CAUTION

Never start with the pump in pressure as this cause stress to the internal components of the pump.



Safe Sprayer Operation

- Always read your sprayer operator's manual thoroughly before operating.
- Dispose of all chemical containers as per instructions on label. Failure to do so could result in contaminating the environment with chemicals.
- Inspect hose and hose connections daily. Always wear rubber gloves when tightening connections. Damaged, loose or worn hoses could result in operator being exposed to toxic chemicals which could result in serious illness or faulty sprayer operation.
- Follow the chemical manufacturer's precautions before cleaning the sprayer. Exposure to chemicals could result in serious illness or death.
- Always use the proper application rate. To assure proper application rate calibrate sprayer frequently. The wrong application rate of a pesticide which is too high may expose the operator and the environment to danger.
- Always wear gloves and wash the sprayer before doing any disassembly repair work. Chemical residues on the sprayer parts could contaminate operator or service personnel causing serious illness.
- Always relieve system pressure before doing any work on the machine. Disconnecting components while under pressure will result in uncontrolled spray discharge which may be hazardous to humans. Failure to do so could cause operator to be exposed to high pressure spray of chemical resulting in serious injury or machine damage.
- Check the entire sprayer, prior to each use, for any loose connections.
- Use only genuine Croplands parts for any necessary replacement. Home made parts may look the same but might be dangerous in operation.
- Do not disconnect any hoses nozzles or filters while sprayer is operating.
- Always clean the sprayer before doing any repairs.

WARNING

Accidents occur every year due to careless use of farm machinery and farm chemicals.

You can avoid these hazards by reading and following the instructions in this operator's manual and observing operating safety.

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Daily

Check the battery condition, water level and voltage (12 volt). Make sure all safety guards and decals are in place.

Inspect all nuts and bolts for missing or loose items and check all hoses and hose fittings for damage or leaks. Insure the aerial (if fitted) is a little more than finger tight to the base and in good condition.

20 Hourly

Remove the belt drive guard and check the belt tension.

Grease the reel swivel if needed. Do not over grease as damage will occur to the swivel.

200 Hourly

Replace the 9 volt transmitter battery.

Grease all bearings if needed and do not over grease.

The motor brushes must be checked by an auto electrician.

Batteries

A low power or voltage battery will cause weak or intermittent operation of the units motor. This can cause damage to the radio relay.

Always insure that the 9 volt battery in the transmitter is replaced every 3 months and that the 12 volt power supply is charged on a regular basis and putting out optimal Voltage.

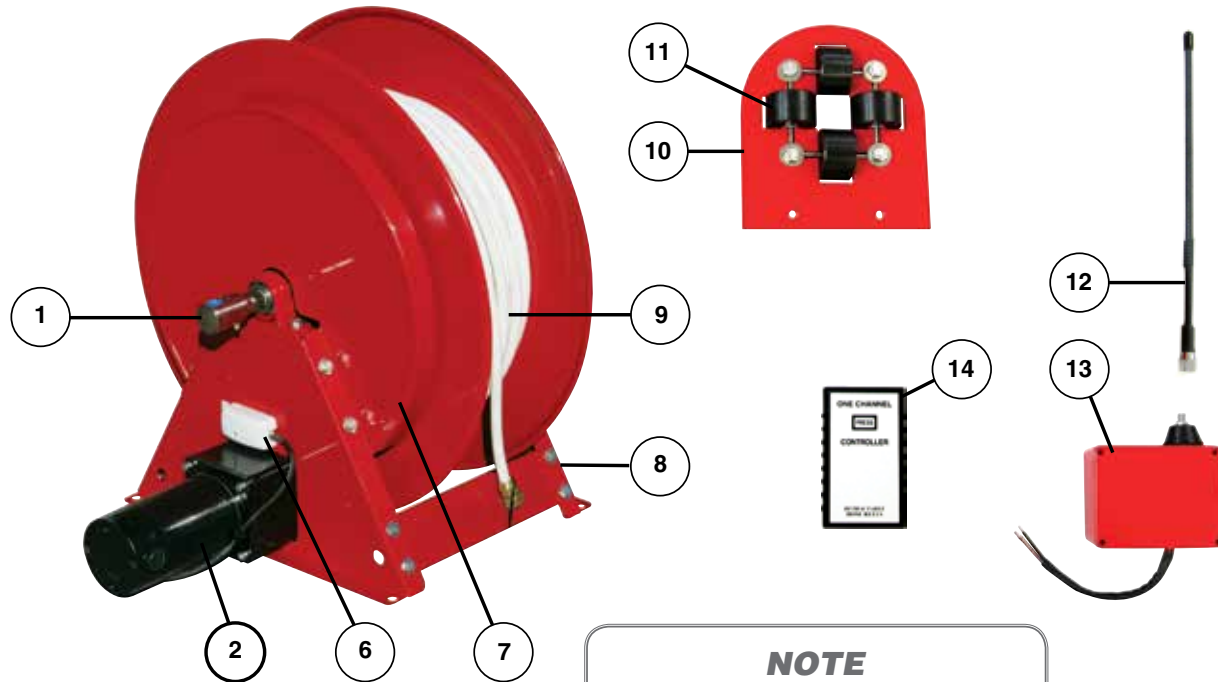
Winter

For winter storage, if freezing conditions are expected, empty pump completely and flush with a mixture of water and antifreeze to prevent unrepairable damage to your unit.

PROBLEM	PROBABLE CAUSE	REMEDY
Reel does not retract and manual button does not work.	<ul style="list-style-type: none"> • On/off switch not “on” or faulty. • Discharged 12volt battery. • Loose Connection on 12 volt battery. • Blown fuse. 	<ul style="list-style-type: none"> • Switch on or replace. • Re-charge battery. • Fix loose connection. • Replace fuse.
(If Remote control Retractable) Reel does not retract and manual button works.	<ul style="list-style-type: none"> • Discharged 9 volt transmitter battery. • Faulty radio receiver board, pre regulator board, or transmitter. • Dip-switch not synchronised. 	<ul style="list-style-type: none"> • Replace 9 volt battery. • Return radio receiver to factory with transmitter for testing and repair (CALL FIRST FOR PROCEDURE). • Re-match dips-witch codes.
(If Remote control Retractable) Reel only retracts at close distance.	<ul style="list-style-type: none"> • Discharged 9 volt transmitter battery. • Aerial broken or loose on base. • Coax cable broken inside the aerial base. • Discharged 12 volt battery. • Faulty receiver board or transmitter. • Aerial braid not connected to negative supply. 	<ul style="list-style-type: none"> • Replace 9 volt battery. • Tighten or replace. • Repair or replace coax cable and aerial base. • Recharge or replace. • Return radio receiver to factory with transmitter for testing and repair (CALL FIRST FOR PROCEDURE). • Reconnect.
Pump does not deliver pressure (If good flow is being achieved from by-pass back to the tank)	<ul style="list-style-type: none"> • Pressure Controller regulator not set for pressure. • Damaged or worn seat or spring in pressure regulator. • Sticking pressure regulator slide. • Spray nozzle worn, missing or exceeding pump capacity. 	<ul style="list-style-type: none"> • Set lever to “Press” and adjust the knob. • Replace with Pressure Controller repair kit or new spring. • Remove slide and lubricate with marine grease. • Replace spray nozzle with correct size.

PROBLEM	PROBABLE CAUSE	REMEDY
<p>Pump does not deliver pressure (If irregular flow is being achieved from by-pass back to the tank)</p>	<ul style="list-style-type: none"> • One or more of the pump valves not seated correctly. • Sucking air through the suction line, suction fittings or filter. • Air has not been entirely evacuated from the pump. • Blocked suction filter or ball valve closed. • Ruptured Spray Hoses or Fittings. 	<ul style="list-style-type: none"> • Clean or replace valves. • Examine & repair. • Run pump in the “By-pass” mode until all air is evacuated. • Clean filter or open ball valve. • Repair or replace.
<p>Pump delivers insufficient pressure (If hoses are jumping)</p>	<ul style="list-style-type: none"> • One or more of the pump valves not seated correctly. • Sucking air through the suction line, suction fittings or filter. • Air has not been entirely evacuated from the pump. • Diaphragm split (Oil will be milky in colour). • Oil level is low. 	<ul style="list-style-type: none"> • Clean or replace valves. • Examine & repair. • Run pump in the “By-pass” mode until all air is evacuated. • STOP PUMP, replace all diaphragms. • Top up with AE30 or 10W30.
<p>Pump delivers insufficient Pressure (If hoses are not jumping)</p>	<ul style="list-style-type: none"> • Damaged or worn seat or spring in pressure regulator. • Sticking pressure regulator slide. • Spray nozzle worn, missing or exceeding pump capacity. • Leaking hoses or fittings. 	<ul style="list-style-type: none"> • Replace with Pressure Controller repair kit or new spring. • Remove slide and lubricate with marine grease. • Replace spray nozzle with correct size. • Repair or replace.
<p>Pump is noisy</p>	<ul style="list-style-type: none"> • Oil level is low. • Sucking air or air in the pump. • Blocked Filter. 	<ul style="list-style-type: none"> • Top up with AE30 or 10W30. • Examine or repair. • Clean Filter.
<p>Oil is changing colour to white or oil in the spray hose</p>	<ul style="list-style-type: none"> • One or more diaphragms are split. 	<ul style="list-style-type: none"> • STOP PUMP, replace all diaphragms.

Reels	40
RetraSpray 100 & 160 Models	42
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NOTE

*For further parts information refer www.croplands.com.au
or Customer Support on
1800 999 162*

No	Part Number	Description
1	QS-4900000	Swivel
2	QS-3394700	Motor S4 Gearbox 12V/ 450RPM,
3	QS-2980000	Coupler, hose to reel 3/8" (not shown)
4	QS-325000	Nylon hose stopper (not shown)
5	QS-1125200	Bearing 1 H/Reel - UC205-16 (not shown)
6	RS2260000	Junction Box, Clipsal 559/2 12V,
7	RS4741200	Reel Side Pully (fibreglass),
8	RS4890000	Push Button Switch,
9	RS-HOSE	50m Hose 3/8 inch,
	RS-HOSE-100	100m Hose 3/8 inch,
10	QS-3256700	Hose Guide & Rollers (complete)
11	RS4741079	Roller (only)
12	QS1031700	Aerial, part
13	RS4476950	Control Box kit, inc remote,
14	QS-4441200	Remote



Part Number	Item Description	Additional Information	300 Lt	500 Lt
RS 4741400	SM/RS Tank Frame Bottom	Tank Frame Bottom (1185mm x 870mm)	1	1
RS 4741450	SM/RS Tank Frame Top	Tank Frame Top (1185mm x 880mm)	1	1
RS 4741500	SM/RS Tank Clamp Bracket Long	Tank Clamp Angle	2	2
RS 4741550	SM/RS Tank Clamp Bracket Short		2	2
RS 4592000	Rod Threaded Zinc M10 x 3000	Tank Rod	1.3m	2.1m
RS 7082000	Tube 16mm x 1.6 Aluminium	Tank Rod Tube	1.2m	2m
RS 4931000	Tank PTO500 Lid Ring Kit	Tank Lid Ring	1	1
RS 4931500	Tank PTO500 Strainer Filter	Tank Strainer Basket	1	1
RS 4741090	SM/RS Motor / Pump Base Plate	Motor / Pump Base Plate (Folded 151 x 325mm)	1 (RS160)	1 (RS160)
RS 3685000	Pump AR30 Gearbox & Cont 30622		1 (RS160)	1 (RS160)
RS 3435000	Motor Honda GX160UT1 QXU		1 (RS160)	1 (RS160)
RS 2618000	Controller GI40 900/977		1 (RS160)	1 (RS160)
RS 3684000	Pump AR252 W/Gearbox & Cont		1 (RS120)	1 (RS120)
RS 3406000	Motor Honda GX120 QXU		1 (RS120)	1 (RS120)
RS 2619000	Controller GR30 #879		1 (RS120)	1 (RS120)
RS 4918310	Tank Poly 300 white Croplands	300 Litre Poly Tank - (1190mm x 900mm x 390mm)	1	n/a
RS 4918710	Tank Poly 500 white Croplands	500 Litre Poly Tank - (1190mm x 900mm x 590mm)	n/a	1
<i>This bill of materials is not a complete list of components. For further information see the web site or contact customer support.</i>				

NOTE

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Part Number	Item Description	Additional Information	Pieces
GX200QX	MOTOR	Motor 5.5hp Honda	1
RSRL-100RC	HOSEREEL	RetraSpray Reel, 100m with remote	1
AR30-CRGI	PUMP	Pump AR30 Gearbox & Cont 30622	1
B26.901.165MK2	GUN	Gun Turbo 400 metal grip & lever	1
BP-221BA	CHASSIS	Colt skid chassis 550L	1
AR30BRKT	STAND	AR30 Motorised pump stand	1
P600-RAW	RAWTANK	Tank 550L Poly Raw, w/out fittings	1
XSTRAP1800	STRAP	Tank Strap 1800mm	2
A454234	BALLVALV	Ball Valve, Poly 1" 3 Way	1
A300120	FILTER	Filter basket medium 254mm deep	1
A3244043	FILTER	Filter 1" 50 mesh female thread	1
A220040	OUTLET	Tank outlet 1"	1
A3510040	LIDRING	Lid / Ring kit 355mm	1
A118215	PIPE	Pipe 1/2 x 1/2 single piece 90	2
B163.604.13	ELBOW	Elbow, 1/2" c/w Hex nut 1/2"	1
BJHB100-90	ELBOW	Elbow 1" NPT x 1" barb	3
TFEL14MF45DEG	ELBOW	Elbow 1/4" M/FM 45 degree	1
TFA3812	TAIL	Tail, brass 3/8" BSPM x 1/2" tail	1
A205040	BACKNUT	Back nut 1"	1
AG40002	FLATSEAL	Flat Seal 1/2" EPDM	2
AG40004	FLATSEAL	Flat Seal 1" EPDM	1
TR1HC	CLAMP	Hose clamp 25mm, 1" worm drive	4
TR34HC	CLAMP	Hose clamp 20mm, 3/4" worm drive	6
XC-101	CLAMP	Clamp Bandit JS202	2
HPW25	HOSE	Hose, 25mm 250 psi	3
HPW12/40	HOSE	Hose 12mm, 40 bar	1
GP-OMRET-A	MANUAL	Operators Manual	1

This bill of materials is not a complete list of components. For further information see the web site or contact customer support.



AR252



AR30



Part Number	Description
AR252-CRGI	Pump, AR252 w/gearbox & Cont
AR30-CGI	Pump AR30 Gearbox & Cont 30622
<i>Consult the Croplands Web site for exploded drawings, part numbers, etc.</i>	

Part Number	Description
GX200QX	Motor 5.5hp Honda
RS 3435000	Motor Honda GX160UT1 QXU
RS 3406000	Motor Honda GX120 QXU
<i>Consult your local Honda dealer for service & Spares.</i>	

NOTE

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or Customer Support on
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