OPTICAL SPOT SPRAYER
7000 LITRE DUAL LINE

www.croplands.com.au

CROPLANDS

STOP

BEFORE COMMENCING operation, ENSURE you read & understand this manual, its contents, and any additional information supplied!

WEEDit

Part No. BT-OMWEEDD-A - Rev 3

CONTENTS

WELCOME

Sean Mulvaney, General Manager of Croplands

Congratulations on the purchase of your new Croplands sprayer.

Croplands have been in the business of building and selling spraying equipment since 1972. For over 45 years we have been supplying sprayers to farmers, contractors, growers and all our customers involved in growing crops and in the control of pests and diseases.

Croplands is a wholly owned subsidiary of Nufarm Ltd, the largest supplier of crop protection chemicals in Australasia, and one of the fastest growing global suppliers world-wide.

At Croplands, we pride ourselves on our commitment to supplying machinery that is at the forefront of the industry's needs. We believe we can back up our products and through constant research and development, bring to you the best equipment you can find.

We welcome any feedback from you about our equipment.

On this page you will find our contact details, and locations where our staff can be reached during business hours.

After hours, you can e-mail us and expect a reply the following morning.

Please read this manual in its entirety before you operate your sprayer. This will ensure you have a trouble-free start up.

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

Yours sincerely

Sean Mulvaney
General Manager

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Croplands has taken steps to ensure this operator's manual is as current and as accurate as possible. Due to the ever-changing markets of cropping and farming, Croplands is constantly striving to be at the forefront of innovation and technology. While the information in this manual is considered accurate at the time of writing, Croplands reserves the right to change this information without notice.
Croplands will not accept liability for any inaccuracy in this publication, or changes forthwith.

IMPORTANT INFORMATION

About This Manual

This manual provides assembly, setting up, operating and maintenance instructions for the Croplands Optical Spot Sprayer 7000 litre Dual Line.

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.

This manual, BT-OMWEEDD-A - Rev 3, was published in December 2017.

Check online as there maybe more recent revisions of this manual.

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.
- **DANGER** - probability of death or serious injury if accident occurs.

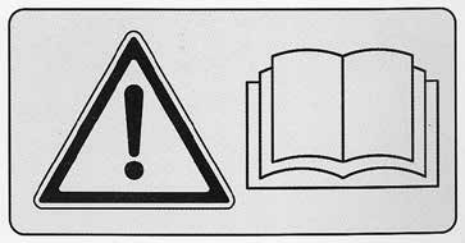
Before Operating Your Sprayer

1 Before attempting to use your sprayer, make sure you **read all Operator Manuals** for this sprayer including but not limited to:

- This Operator's Manual
- Transport, Unloading & Setup Guide, Part No. BT-OMWEED-TRANS
- Boom Parking, Quick Start Guide, Croplands Part no. BT-OMWEED-QSG
- WEEDit User Manual
- WEEDit Parts List,

and properly understand:

- All Safety Issues.
- Assembly & Installation instructions.
- Calibration of the sprayer.
- Sprayer Operation.
- Sprayer Maintenance.



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

2 Read and follow instructions on chemical manufacturers' labels.

3 Always wear applicable protective clothing.

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.

DANGER
Probability of death or serious injury if accident occurs.

Warranty & Pre-Delivery Booklet

Refer to your Croplands Warranty and Pre-Delivery Boolet supplied with your sprayer.

Always make contact with your Croplands Dealer first and foremost for warranty matters.

NOTE

For full conditons of warranty and warranty policy, please see the Warranty & Pre-Delivery Booklet provided with this sprayer.

Safety is the Operator's Responsibility

The Optical Spot Sprayer 7000 litre Dual Line is designed to meet the most demanding farming conditions, where large areas, uneven terrain, and weather-controlled deadlines set the toughest challenges.

It is capable of spraying a wide range of products and the operator must be aware of the hazards associated with the operation of this machine.

The dealer explains the capabilities, application and restrictions of the Optical Spot Sprayer 7000 litre Dual Line.

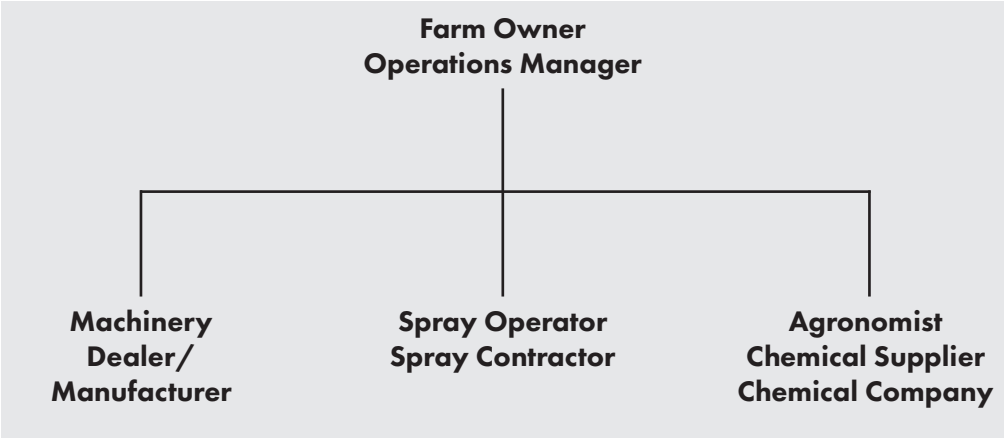
The dealer demonstrates the safe operation of this machine according to Croplands instruction material, which are also available to operator.

The dealer can also identify unsafe modifications or use of unapproved attachments.

The following publications provide information on the safe use and maintenance of the Optical Spot Sprayer and attachments:

- The Operator's Manual delivered with the Optical Spot Sprayer gives operating information, as well as routine maintenance and service procedures. It is a part of the Optical Spot Sprayer and must stay with the machine when it is sold.
- Replacement Operator's Manuals can be ordered from your Croplands dealer, Optical Spot Sprayer Part No: BT-OMWEEDD-A.
- The Optical Spot Sprayer has machine signs (decals) which instruct on the safe operation and care. The signs and their locations are shown in the Operator's Manual.

  Replacement signs are available from your Croplands dealer (as shown on pages 2.4, 2.5, 2.6).



Safe Operation Needs a Qualified Operator

A Qualified Operator Must Do the Following:

1 Understand the Written Instructions, Rules & Regulations

- The written instructions from Croplands are included in the Optical Spot Sprayer Operation Manual & on Sprayer Decals.
- Check the rules and regulations at your location. The rules may include any Federal and State safety requirements for the chemical applicator.

2 Have Training with Actual Operation

- Operator training must consist of a demonstration & verbal instruction. This training is given by your dealer before the Optical Spot Sprayer is delivered.
- The new operator must start in an area without bystanders and use all the controls until they can operate the Optical Spot Sprayer safely all conditions of the work area.

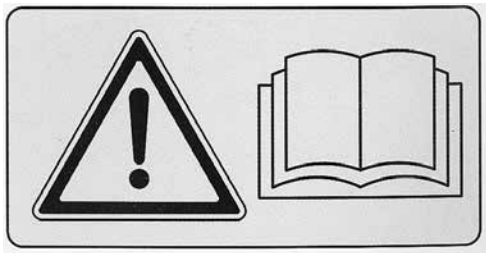
3 Know The Work Conditions

- The operator must know any prohibited uses or work areas. They need to know about excessive slopes and rough terrain.
- Wear protective clothing as recommended by the chemical manufacturer. Always wear safety goggles when maintaining or servicing Optical Spot Sprayer.
- For an operator to be qualified, they must not use drugs or alcoholic drinks which impair alertness or coordination while working.

  An operator who is taking prescription drugs must get medical advice to determine if they can safely operate a machine.

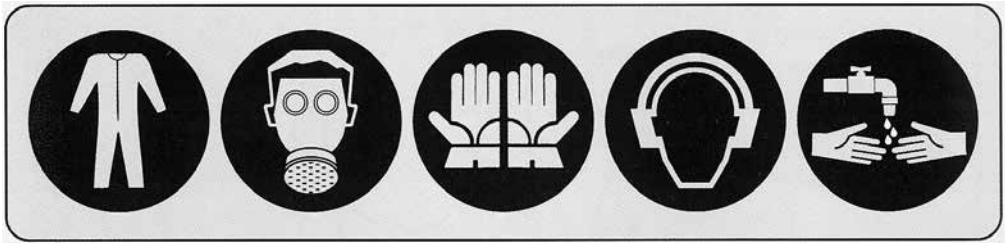
NOTE

There are accredited training programmes for spray application in each state. We recommend all operators have accredited training.




Rules for Safe Optical Spot Sprayer Operation

- Always read your sprayer operator's manual thoroughly before operating. Accidents occur every year because of careless use of farm chemicals and farm machinery. You can avoid these hazards by observing these safety instructions.
- 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 could result in serious illness or faulty sprayer operation.
- Always use the proper application rate. To assure proper application rate calibrate sprayer correctly. The wrong application rate of a pesticide concentration that is too high may expose the operator and the environment to danger.
- Follow the chemical manufacturer's precautions before cleaning the sprayer. Exposure to chemicals could result in serious illness or death.
- Always wear gloves and wash the machine before doing any disassembly repair work. Chemical residues on the machine parts could contaminate operator or service personnel causing serious illness.
- Always relieve system pressure before doing any work on the machine. Failure to do so could cause operator to be exposed to high pressure spray of chemical resulting in serious injury or machine damage.
- Always be sure all safety guards are properly installed on machine before operating. Failure to do so could result in entanglement in moving parts resulting in serious injury to operator.
- Always keep PTO guard in place when sprayer is operating. Failure to do this may result in entanglement.
- Always wear relatively tight and belted clothing to avoid entanglement in moving parts. Failure to do so could result in serious injury.
- Always stay out from under the sprayer unless it is resting on the ground or supported on solid blocks. Hydraulics or jacks could fail letting the sprayer fall. This could result in pinning or crushing of personnel.
- Check the entire sprayer, prior to each use, for any loose bolts or mechanical connections. These precautions can prevent injury to personnel and damage to equipment.
- Only inflate tyres to rated pressures. Over inflating causes tyres to burst resulting in serious injury.
- Use only genuine Croplands parts for any necessary replacement. Special alloy steels are used in many parts which are important to the equipment design. Home made parts may look the same but might be dangerous in operation.
- Do not ride on machine when in motion. This is an unsafe practice and can lead to serious injury should the rider fall from the machine.
- Always replace warning decals when damaged and make certain operator understands proper safety practices.
- Always stand well clear of the sprayer when operating. The sprayer is capable of spraying chemicals 20-30 metres from the boom which may be hazardous to humans.
- Do not disconnect any hoses, nozzles or filters while sprayer is operating. Disconnecting components while under pressure will result in uncontrolled spray discharge which may be hazardous to humans.

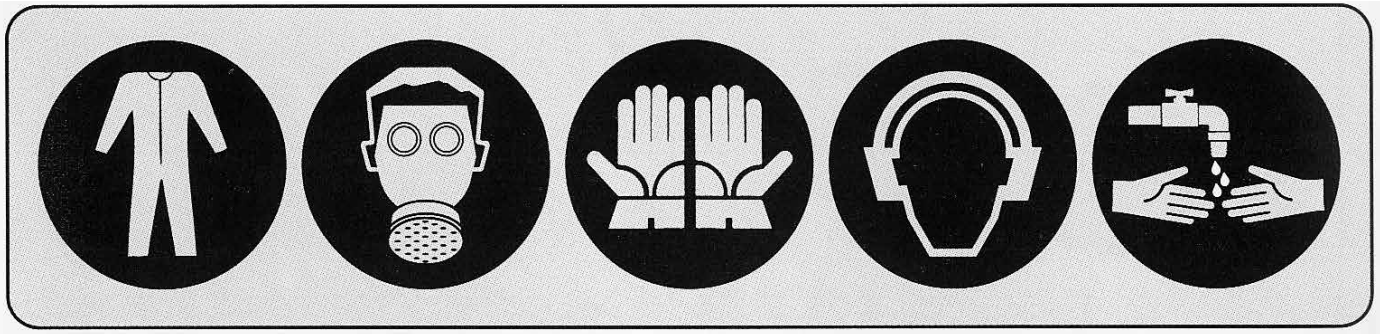


Rules for Safe Use of Chemicals

- Always read the label before using chemicals. Follow instructions from chemical manufacturer on how to select, use and handle each chemical. Note protection information each time before opening the container.
- Always observe all warnings on chemical products. Failure to do so could result in operator or others being exposed to toxic hemicals which could result in serious illness. Remember chemical manufacturers go to much research and expense to develop labels for your protection.
- Be sure you recognise the categories of toxicity and their key words.
- Verbal warnings must be given if written warnings cannot be understood by workers.
- Do not spill chemicals on skin or clothing. If chemicals are spilled, remove contaminated clothing immediately and wash skin (and clothing) thoroughly with soap & water.

  Wash hands and face with soap and water and change clothing after spraying. Wash clothing each day before reuse.
- The spray tank and system should be emptied of chemical mixture and flushed with clean water before servicing the spray system or spraying components. Clean the Optical Spot Sprayer of all chemical residue before servicing.
- Avoid inhaling chemicals. When directed on the label, wear protective clothing, face shield or goggles.
- Never smoke while spraying or handling chemicals.
- Cover food and water containers when spraying around livestock or pet areas.
- If symptoms of illness occurs during or shortly after spraying, call a physician or go to a hospital immediately.
- Follow label directions and advice to keep residues on edible portions of plants within the limits permitted by law.
- Keep chemicals out of the reach of children, pets and unauthorised personnel. Store them outside of the home, away from food and feed and lock them in a secure area.
- Keep bystanders away from spray drift.
- Always store chemicals in original containers and keep them tightly closed. Never keep them in anything but the original containers.

  Read labels for hazards about chemical reaction with certain types of metals.



Safety must be an Integral Part of Chemical Farming Operations

- **Not Just an After Thought!**

The Hazard

All agricultural chemicals or pesticides, as they are commonly called, are biologically active. When handled incorrectly or carelessly, they can be dangerous to all living organisms such as humans, birds, fish, bees, domestic animals and plants.

Method of Pesticide Entry

- ☞ **Oral** - Direct by drinking, splashing into mouth,eating and smoking with contaminated hands, eating sprayed produce, cleaning nozzles with mouth.
- ☞ **Inhalation** - Nose, mouth, but predominately the lungs.
- ☞ **Dermal** - Absorption through the skin. Increased when skin is broken or perspiring.

Rate of Absorption

While pesticides are absorbed more completely orally and by inhalation, greater exposure and more poisonings occur through skin (dermal) contact.

Hazard and Chance of Poisoning

The hazard and chance of poisoning is much higher when handling pesticides in concentrate form than in the dilute form.

Safe Handling

Know your Pesticides:

- ☞ **STOP!!** Read the label
- ☞ Is it the right pesticide?
- ☞ What is its poisons schedule or toxicity?
- ☞ What safety precautions are required?
- ☞ What is its persistence and withholding period?
- ☞ What is its mode of action?
- ☞ Will it be a hazard to neighbouring crops and people?
- ☞ What protective clothing and equipment is needed?
- ☞ Know the correct first aid/safety in case of poisoning.
- ☞ Seek medical advice if health is affected by chemicals.

Mixing the Product

- ☞ Reduce or eliminate operator contact by using closed loading systems, auto fillers, wettable powder mixtures or wettable dispersable granules.
- ☞ Use the right protective clothing when handling the concentrate. The user is at greatest risk when handling chemical in concentrate form.
- ☞ Open bags carefully. Cut to open, do not tear.
- ☞ Do not stir chemicals with hands or arms.
- ☞ Choose the mixing site carefully & the fate of the probable residues.
- ☞ Do not mix more spray solution than is needed and avoid needless disposal of unwanted chemicals.

Plan your Spray Route

- ☞ Observe weather conditions, especially wind direction & speed.
- ☞ Try to travel across wind and into untreated crop.
- ☞ Prevent double or over spraying.
- ☞ Prevent or minimise drift onto other crops, workers, etc.

Disposal of Unwanted Pesticides and Containers

- ☞ Calibrate correctly to ensure you do not have a large quantity of unwanted spray left over.
- ☞ Rinse empty containers and pour residue into the spray tank.
- ☞ Dispose of containers in the correct manner and where provided, use pesticide drum

Fresh water tap located at the front of the sprayer.

Fresh water tap located at the rear of the sprayer.

Protective gloves & measuring jugs.

Protective breathable overalls.

Decontamination

- ☞ Change out of protective clothing and shower as soon as possible after spraying.
- ☞ Wash before eating, drinking or smoking.
- ☞ Provide clean water at filling site and on sprayer in case of field contamination.
- ☞ Wash and clean respirators regularly.

Keep Sprayers and Safety Equipment in Good Working Condition

- ☞ Replace hoses and fittings when they leak.
- ☞ Clean sprayer regularly.
- ☞ Replace respirator filters regularly.
- ☞ Do not use worn, faulty or contaminated safety equipment.

Storage

- ☞ Store pesticides in a locked, well ventilated store.
- ☞ Do not pour pesticides into other containers, especially not drink containers.

Pesticide Free Tractor Cabs

- ☞ Ensure the cab filter is adequate for the pesticide used.
- ☞ Be careful not to contaminate the cabin environment.
- ☞ Cabin filters alone are not adequate when the operator is required to leave the cab to refill the sprayer. Safety equipment used outside the cab should not be stored in the cab.

Protective Safety Equipment

The amount and type of protective clothing and equipment is determined by the type of chemicals, degree and duration of exposure, weather conditions and application equipment used.

Read and follow the direction on the label.

Over protection can be uncomfortable and unnecessary.

A respirator left hanging around your neck is useless.

Measuring

- ☞ Croplands' calibrated, easypour 1, 3 and 5 litre measuring jugs and 25 litre chemical mixing bucket are practical, easy to clean, U.V. resistant and chemical resistant.

Clothing

- ☞ Cover as much of the body as possible, especially the neck, chest and forearms. Use washable fabric overalls, disposable overalls or preferably waterproof clothing especially when coming in contact with large quantities of pesticides. Wear the trouser legs outside the boots.

Gloves and Boots

- ☞ Never use leather or cloth materials because they absorb pesticides and provide a constant source of contamination. Gloves should be un-lined for this reason.

Croplands Nitrile Chemical Handling Gloves are recommended.

Kasco helmet.

Protective respirators.

Sample of Agrichemical Manual.

Read the Chemical Label

Head & Face

☞ Hard hats, washable hats, goggles, spray helmets and face shields are important when handling concentrates.

Croplands Spray Goggles feature sealed, anti-fog, double lens goggles for practical, comfortable eye protection. Croplands Kasco Spray Hood is fully approved by D.I.R.

Respirators

☞ Choose the correct type and have the correct cartridge fitted. Replace cartridges regularly and write the date on each cartridge.

Ensure there is an adequate fit to the face.

Croplands' respirators are recommended for most spraying applications.

Operator Safety

When handling pesticides, always use elbow-length gloves, long clothes and above all, a respirator.

If you and your clothing become contaminated with spray, DO NOT CONTINUE WORKING.

Stop work, remove clothing and wash affected areas thoroughly with soap and water. Put fresh clothing on before starting again.

Ensure that contaminated clothing is washed thoroughly before being used again.

Don't guess when choosing protective equipment. Feel free to call Croplands and make use of our safety database for comprehensive information on safety, handling and storage exposure levels, symptoms, health effects, first aid and personal protection.

Spraying Precautions

Agricultural chemicals applied under unfavourable weather conditions or from poorly adjusted and operated equipment can cause damage due to run-off and/or drift problems.

Crops and pastures are more susceptible to spray drift of herbicides while people, stock and water supplies are generally more susceptible to insecticide drift.

Pollution, crop damage and the potential health hazards are something agriculture can ill afford. It is simply not acceptable , socially or environmentally.

Additionally, pesticide which drifts or runs Off the target reduces the efficiency of the pesticide on the target. Spray failures are a waste of money and effort.

NOTE

A full agri-chemical manual is available in Australia and New Zealand. Talk to your local Agronomist for more information.

☞ **Be SURE** the equipment is functioning correctly. Check that nozzles are in good condition. Check all other aspects of machine operation are correct.

☞ **Be SURE** pesticides are mixed thoroughly and according to the label.

☞ **Be SURE** the recommended registered pesticide is used for the job at hand.

☞ **Be SURE** pesticides are applied at recommended rates.

☞ **Be SURE** only target plants are sprayed.

CAUTION

Do not disassemble or service electrical motors. Disassembly or attempted repairs accomplished incorrectly can create electrical shock hazard. Refer all servicing to qualified service agents.

Always check electrical loom for fraying and any signs of wear, damage or defects.

WARNING

An electrical device should never be left unattended when plugged in.

Always unplug an electrical device immediately after use and store in dry place.

DANGER

Do not use an electrical device in or near explosive atmospheres or where aerosol (spray) products are being used.

Do not pump anything other than atmospheric air with an electric compressor device.

Electrical Safety

Caution:

- Do not disassemble or service electrical motors. Disassembly or attempted repairs accomplished incorrectly can create electrical shock hazard. Refer all servicing to qualified service agents.
- If a three pronged plug is supplied with the electrical device ensure the unit is connected to a properly grounded outlet only. Electricity and proper grounding work togeter for safety.
- Always check electrical loom for fraying and any signs of wear, damage or defects.

Warning:

- An electrical device should never be left unattended when plugged in.
- Always unplug an electrical device immediately after use and store in dry place.
- Do not use an electrical device in or near an area where it may fall or be pulled into water or other liquids
- Do not reach for an electrical device that has fallen into liquid. Unplug the device immediately.
- Never operate an electrical device outdoors in the rain or in a wet area.

Danger:

- Do not use an electrical device in or near explosive atmospheres or where aerosol (spray) products are being used.
- Do not pump anything other than atmospheric air with an electric compressor device.
- Do not pump combustible liquids or vapours with an electrical device or use in or near an area where flammable or explosive liquids or vapours may exist.
- Do not us an electrical device near flames.
- Always check for overhead power lines when using, raising or lowering farm machinery.
- Never touch uninsulated electical wires or contacts.
- In case of of an electrical fire, shut off the power and use a suitable fire extinguisher. Never use water to put out an electrical fire. Water used on an electrical fire may result in fatal shock.

Battery Safety Tips :

- Keep sparks & flames away from batteries. Inspect batteries in natural light.
- Remove wrist watches, which may form electrical contact & create sparks.
- Wear safety goggles or a face shield when inspecting or cleaning batteries.
- If acid enters an eye, immediately flood the eye with running water for at least 30 minutes. See a doctor as soon as possible.
- If acid contacts the skin, wash the affected area immediately with plenty of water.
- Avoid chemical burns by not rubbing eyes or skin while working with the battery.
- Wash your hands immediately after completing the job.
- Clean up all acid spills and flush clothing with a water and baking soda solution.
- Vent caps should be tight and level. Placing a damp cloth over vent caps when charging may act as a flame arrester.
- Keep batteries away from children.
- Smoking or open flames should never be present in a battery area, and ventilation is important.
- Store batteries in a cool, dry place. Storage temperature should be between 0°C and 27°C (32°F and 80°F).
- Don't make live connection directly to the battery. Explosive gases can be set off by a match, incorrect connection of battery looms, and careless use of tools around the battery.
- Use proper lifting techniques when moving batteries. Batteries are small, but heavy and often awkward to lift.

Agricultural work near overhead power lines

Power line hazards occur where work is being conducted at rural workplaces and that which a person is operating or holding could contact overhead power lines or come closer than recommended approach distances.

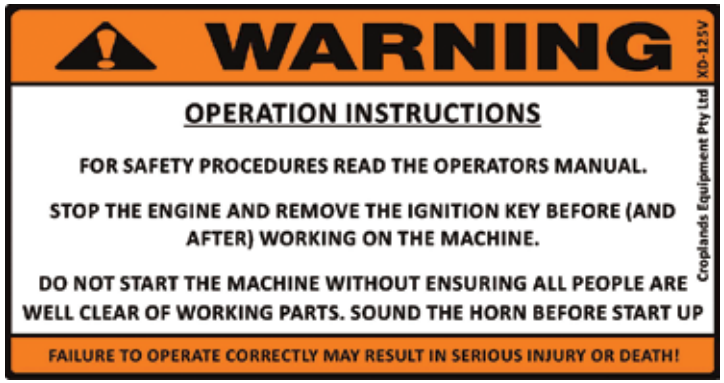
Operators of agricultural equipment must be aware of the design height and the mobile height of the plant they operate.

Risk assessment

If a hazard involving overhead power lines has been identified, a written risk assessment must be undertaken to determine the risk of any part of the agricultural plant or equipment coming near or into contact with the overhead power lines. This step will help to determine the level of risk associated with the identified hazards and establish a priority list based on the level of risk.

Decals - Please order replacements if required

Make sure all boom safety decals are clear and in place. Replace them if damaged



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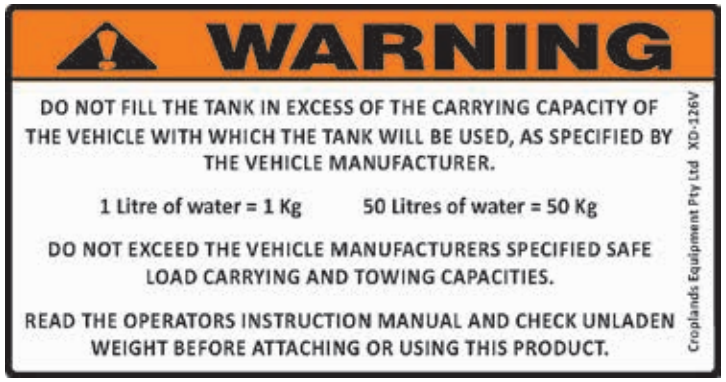

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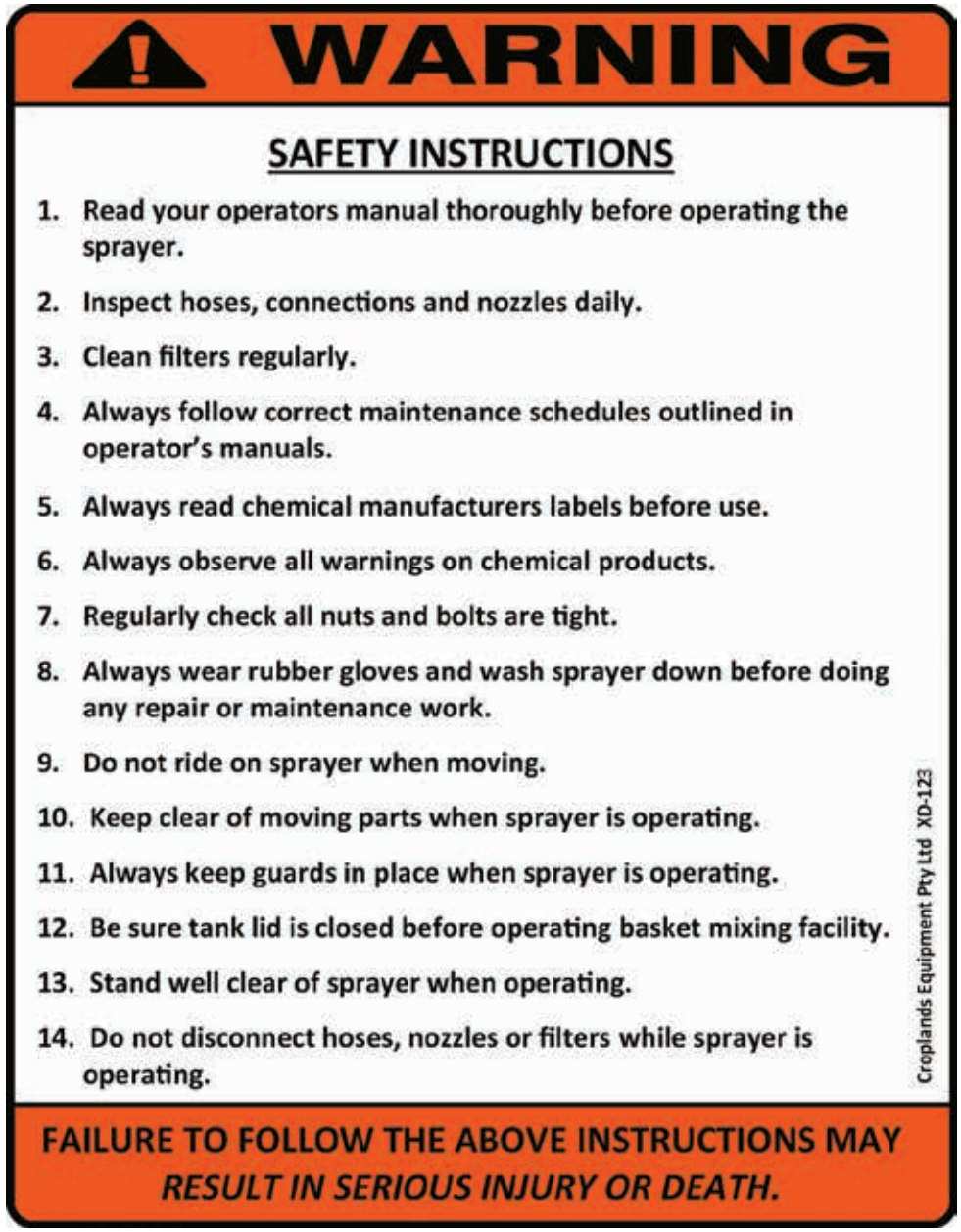
Part No: XD-124V

Part No: XD-185

Part No: XD-123



Decals - Please order replacements if required

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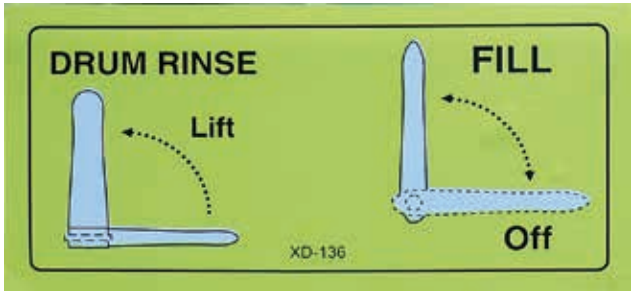
Part No: XD-182



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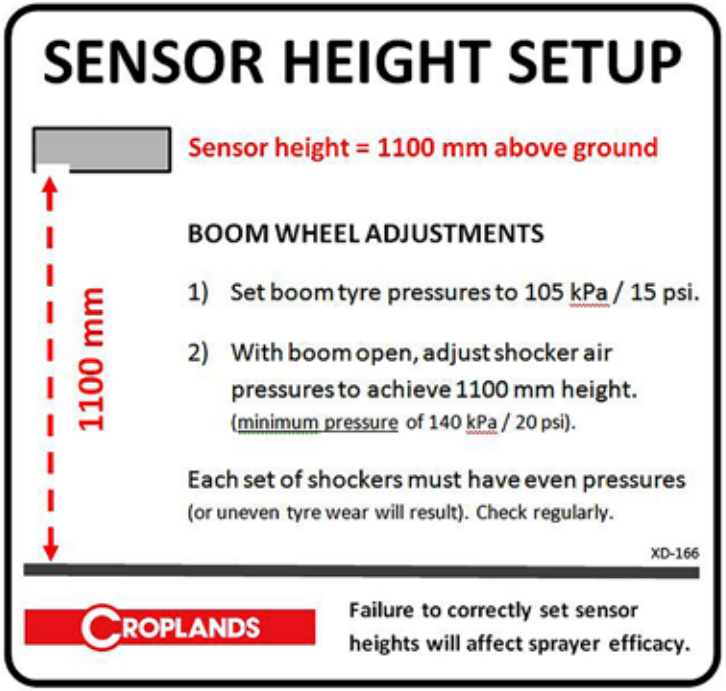
Part No: XD-125

Part No: XD-166



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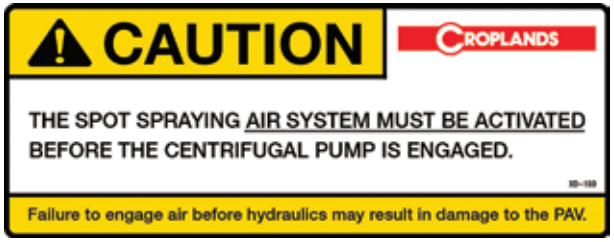
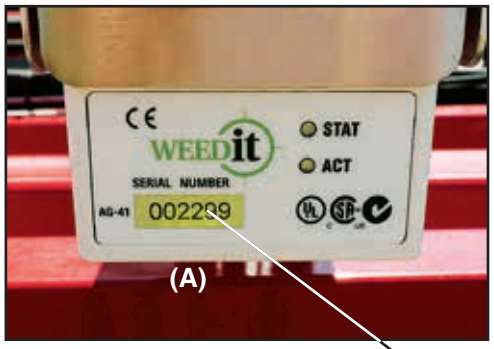
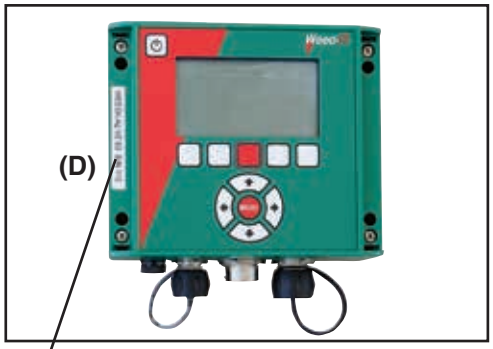
Part No: XD-180



Sprayer's Serial Number Identification plate.



WEEDit Unit Serial Number



WEEDit Controller Serial Number.

Shipping Information

The following shipping information is provided but variations can occur without prior notification.

Approx Weight

Model	Approx Dry Weight	
7000 litre	? kg	(36m boom)

Maximum Towing Speed

Do not exceed 25 kph when towing on roads. Maximum speed is limited by boom wheel oscillation, which will vary depending on road conditions.

Dimensions (Approx)

Length (no boom):	8.12m
Length (boom in delivery mode):	19.2m
Length in road travel mode:	??
Length in spray mode:	??
Width (3.0m axle):	3.62m
Height:	3.05m
Drawbar Weight (empty):	510 kg
Drawbar Weight (full):	?

Product Identification

Always use the serial number of the Optical Spot Sprayer when requesting service information or when ordering parts.

Early or later models (identification made by serial number) may use different parts, or it may be necessary to use a different procedure for specific service operations.

WEEDit Unit Serial Numbers

Each WEEDit unit has a Serial Number located on the back of the unit **(A)**.

Controller Serial Number(s)

The WEEDit Controller Serial Number is located on the side of the console **(D)**.

If using a dual spray model, a second Spray Controller Serial Number is located on the second console**.**

CAUTION

Do not road transport at night.

NOTE

See the Transport Guide (page 2.12).

Optical Spot Sprayer 7000 litre Dual Line.

Dual line boom.

WEEDit Ag fully automatic controller.

Visio Flowmeter.

General Description & Specifications

7000 litre Main Tank

7000 litre polyethylene lank, fitted with hinged lid and controlled overflow plumbing, filling strainer, top fill and fully draining sump. Comes standard with dual agitators, direct chemical induction, tank rinsing facility and drain outlet. UV and chemical resistant.

Special tank shape helps control foaming issues. Main tank has calibration marks.

Can be filled with a fire-fighter through the standard 2" fill coupling and controlled with the directional fill valve. This can be used to fill the main tank, spot tank & flush tank

An optional 3" direct to main tank coupling can be fitted for filling from nurse tanks.

1500 litre Spot Tank

1500 litre polyethylene tank, fitted with dual lids and controlled overflow plumbing. Top fill and fully draining sump. Red tank for reduced algae issues. UV and chemical resistant. Easy to see sight gauge.

800 litre Flush Tank

800 litre polyethylene tank, fitted with dual lids and controlled overflow plumbing. Bottom fill and fully draining sump. Red tank for reduced algae issues. UV and chemical resistant. Dual hand wash taps. Easy to see sight gauge.

7000 litre Chassis

Heavy duty fabricated chassis with easy access walk over platform designed for maximum accessibility and safety. Easy access to main tank lid. Fitted standard with wide, low dust 24.5 x 32 tyres & wheels. Standard axle is 3.0m with airbag suspension and mudflaps. ARDS (airbag suspension), heavy duty adjustable drawbar hitch with swivel cast eye and heavy duty jack stand. Integral Optical Spot Sprayer boom connection points. Drum rack on right hand side below the hot tank. Optional: Hydraulic jack version; LED Lighting for fill station.

Boom

Trailing 24, 30 & 36 metre booms, constructed of high quality steel. Finish is epoxy-coat paint for chemical resistance. Outer boom wings feature hydraulically adjusted steering wheels & castor wheels.

Chemical Handling

60 litre Chem-e-Flush hopper with drop down leg for the Main tank. Fixed Arag Niagra 30 litre hopper for the spot tank. Integrated suction probes (for each tank) transports chemical into the main tank, without putting neat chemical through the pump (probe included standard). Ag Runner chemical transfer pump optional.

Dual Line Plumbing (Optical & Blanket Spraylines)

Main tank/blanket line via Hypro centrifugal pump. This traditional 5 section blanket line can be used with and without the Optical Spot Sprayline. The blanket line only draws chemical from the main tank, but can be shut off when not required. The blanket line has traditional 110° nozzles at 50cm spacings.

Spot tank/Optical Spot Sprayline via Hypro centrifugal pump. The Optical Spot Sprayline targets actively growing weeds and can be used on its own or in conjunction with the blanket line The Optical Spot Sprayeline can draw chemical from either tank depending on the application and has 40° nozzles at 20cm spacings.

Optional: Stainless steel pump. Fenceline nozzles.

Fill & Filtration

3 way, 2" fill via control panel (Main, Spot & Flush tanks). Direct fill via hydraulic drive pump. Flowmeter standard. Optional main tank direct fill via 3" camlock.

Multiple filtration points:
Two x Fill filters 32 mesh; 3 x Pressure filters 80 mesh; Multiple 100 mesh boom in-line filters fitted to blanket line

Controls

Easy to use main control panel suitably positioned between both chemical hoppers. Hinged for easy access to plumbing.

Electric compressor with large air reservoir for airbag suspension to main axle, ARDS drawbar and Optical Spot Sprayline PAV (Pressure Accumulator Valve). Remote air fitting at the rear of the sprayer for easier air access to boom wheels & shock absorbers.

The Blanket sprayline is controlled via a Bravo 180S controller and can be integrated with existing guidance or controller. The Optical Spot Sprayline is controlled via a WEEDit controller system.

Machine specifications are subject to change without prior notification.

See the separate WEEDit Transport Unloading & Setup Guide (part number BT-OMWEED-TRANS).

CROPLANDS

WEEDit

Transport, Unloading & Setup Guide

WEEDit SPOT-ON SPRAYING

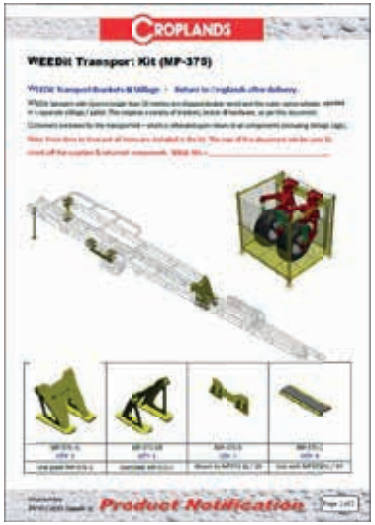
STOP
BEFORE COMMENCING operation, ENSURE you read & understand this manual, its contents, and any additional information supplied!

Part No. BT-OMWEED-TRANS - Rev 1

WEEDit Transport Unloading & Setup Guide - (as shown for a 36 metre boom)

Items required for assembly and set up.

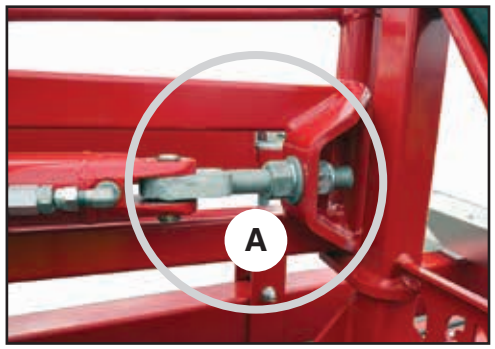
- Suitable lifting equipment to remove upper 6 meter boom from the transport position, (approximate weight of the 6 meter boom is 500kgs).
- Tension wrenches capable of 800 Nm and 250Nm tension.
- Tyre inflation equipment and pressure gauge to suit.
- WEEDit Transport Kit (MP-375) information sheet (2 pages) (should be in the red box with controllers etc).



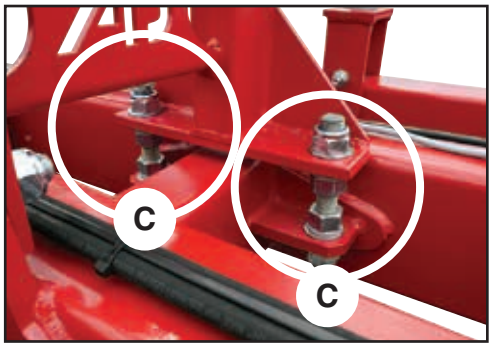
(1) Prepare to unload from the truck. Remove all tie downs etc.

(2) Connect suitable size tractor to WEEDit unit and tow off the truck - slowly and carefully. Check the clearance between the spray rails and truck ramps as the machine is unloaded.

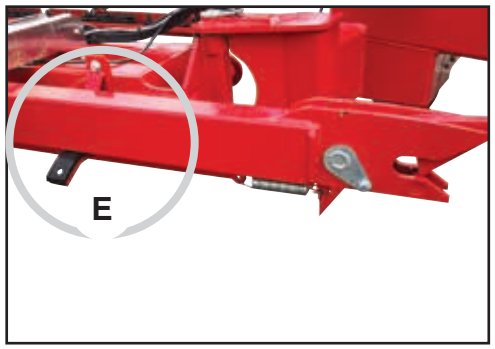
Maximum transport distance of 1 km below 5 KM/H until upper boom is removed.



Boom arm folding adjustment.



Boom arm height adjustment.



Boom stay arm docking support.

Boom Adjustments

1 Connect to the tractor, refer page 2.14.

2 Level the drawbar, refer page 2.25.

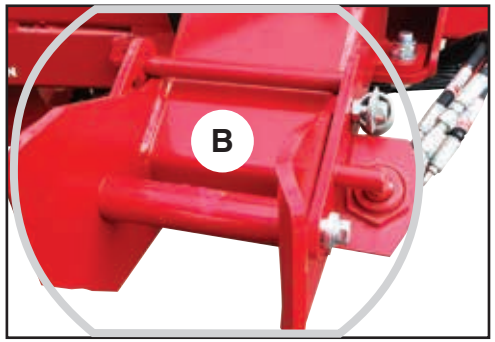
3 Open the stay arms and adjust bolt (A) until the docking latch is (fore & aft) near the docking position (B), on the forward edge of the docking station.

4 Adjust the boom arm height bolts (C) until the docking latch is at the correct height of the docking bar.

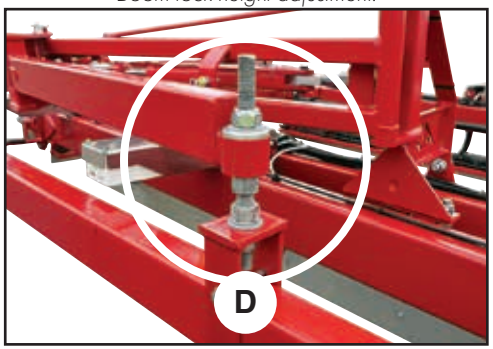
5 With the boom in road travel position, fold the stay arm back alongside the boom.

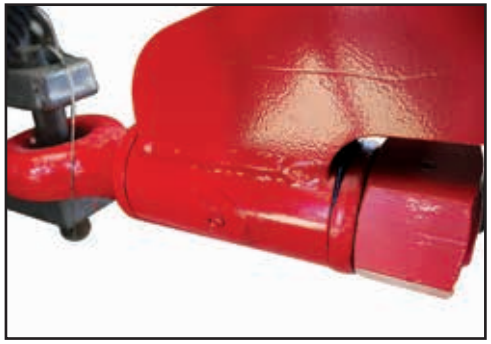
Adjust the height adjustment bolt (D) until the stay arm parks in the correct position (E).

Boom stay arm docking station.



Boom lock height adjustment.





Connect the sprayer to the tractor.

Connect the Sprayer to the Tractor

The Optical Spot Sprayer 7000 litre Dual LIne utilises an hydraulic-drive for two centrifugal pumps.

Please read the set-up procedure instructions for the drives carefully.

Five steps are required to hook up the Optical Spot Sprayer 7000 litre Dual Line to your tractor.

1 Connect the Sprayer hitch to the tractor drawbar.

2 Connect hydraulic hoses to the tractor for the:
- Trailed boom fold & operation, and
- Hydraulic pump drive.
- Set the Hydaulic Pump Drive.

3 Fit the Controllers:
- WEEDit Controller
- Bravo Controller
- Visio Controller
- Trailing Boom Controller
- Other optional controller(s).

4 Connect all power leads direct to the battery.

After the completing the tractor sprayer hook-up and connections, check & adjust the Optical Spot Spray Boom Height.

Using the hitch jack, adjust the hitch tongue to the level of the tractor drawbar.

1 Connect the Sprayer Hitch to the Tractor

To connect the Sprayer hitch to a suitable tractor:

1 Connect the Sprayer hitch to the tractor drawbar.

If the Sprayer hitch is higher or lower than the tractor drawbar, adjust the height of the Sprayer hitch to match the tractor drawbar height.

Rotate the hitch jack until it locks into the transport postion.

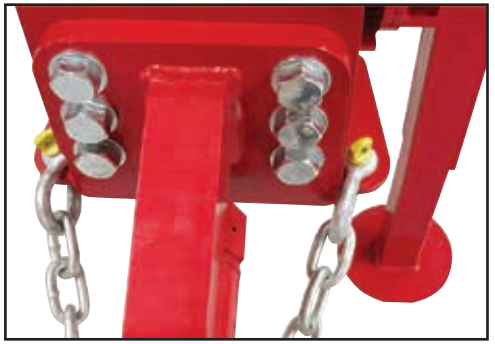
2 Lower the Sprayer hitch onto the tractor drawbar:

a) Rotate the jack handle until the Sprayer fully rests on the tractor drawbar and the hitch jack base plate is raised off the ground.

b) Release the spring loaded lock pin and rotate the hitch jack until it locks into the transport postion.

Ensure the drawbar pin is locked-in.

c) Ensure the drawbar pin is locked-in place..



The transport safety chain must be fitted.

3 Fasten the safety chain securely to both the Sprayer hitch and the tractor for transporting the sprayer.

Hydraulic pump & overrun check valve assembly.

2 Connect Hydraulic Hoses to the Tractor

The Optical Spot Sprayer Sprayer uses:

- Hydraulic drives for two Centrifugal pumps.
- Hydraulic folding and locking of the Trailed Boom for operation and transport.

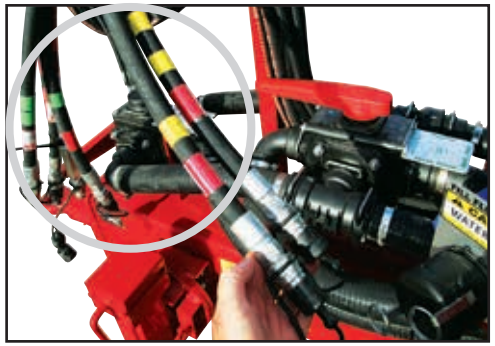
Connect to the tractor the:

1 Pump drive hydraulic hoses, and

2 Trailing boom hydraulic hoses.

NOTE

Please read the following page to ensure you know if your tractor has open or closed centre hydraulics.
This is VERY important to ensure your pump drive works correctly.



Connect the hydraulic hoses to the tractor.

Connect the Trailed Boom Hydraulic Hoses

To connect the hydraulic pressure and return lines of the Trailed Boom to the tractor remotes:

1 Select the Trailing Boom hydraulic hoses. These hoses are identified by the red coloured bands located near the end of the hoses.

2 Remove the dust caps and clean the connectors with a clean cloth.

3 Select the Pressure line which has a cable-tie next to the connector and 2 coloured bands (red).

4 Connect the Pressure line to the pressure line of the tractor remotes.

5 Connect the Return line to the return line of the tractor remotes.

6 Join the male & female dust caps together, to keep the caps free of dirt.

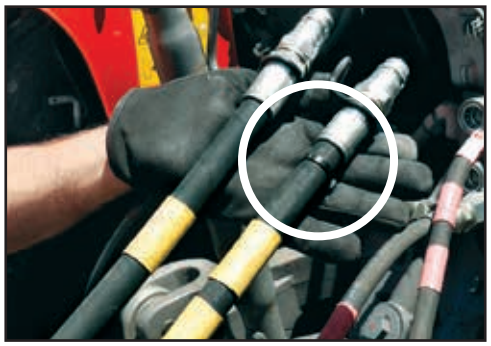
NOTE

Ensure the marked hydraulic line is designated as your pressure line (see picture above).

CAUTION

During initial set-up and if boom shock absorbers lose all pressure, DO NOT attempt to inflate the shock absorbers without first lifting the boom wheels completely off the ground.

Damage to shock absorbers will occur if inflation is attempted without taking all weight off the wheels.



The Pressure Line hoses are identified by two coloured bands and a cable-tie.

Connect the Pump Drive Hydraulic Hoses

To connect the hydraulic pressure and return lines of two Centrifugal Pump drives to the tractor remotes:

1 Select the pump hydraulic hoses:

- Primary pump (1500L) hydraulic hoses have yellow bands (pressure line has 2 colour bands & a cable-tie), and is closest to the chassis rail
- Secondary pump (700L) hydraulic hoses have green bands (pressure line has 2 bands & a cable-tie), and is closer to the middle of the sprayer.

2 Remove the dust caps and clean the connectors with a clean cloth.

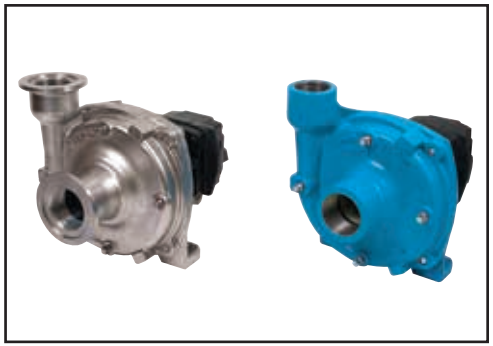
3 Select the Pressure lines which have a cable-tie next to the connector and 2 coloured bands.

4 Connect the Pressure lines to the pressure lines of the tractor remotes.

5 Connect the Return lines to the return lines of the tractor remotes.

6 Join the male & female dust cap ends together, to keep the caps free of dirt.

Join the male & female dust caps together.



Hydraulically driven centrifugal pump.

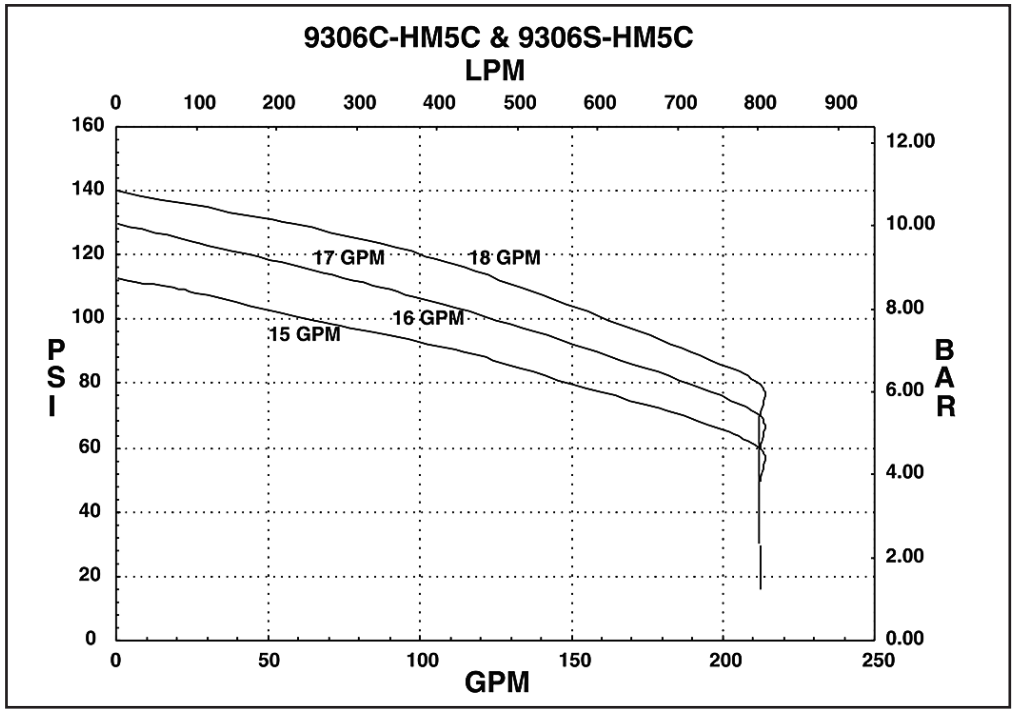
Hydraulic Motor Driven Centrifugal Pumps - 9306C-HM5-BU & 9306C-HM5C-BU

Recommended for use on the following hydraulic systems:

- Pressure Compensating Closed Center
- Load Sensing or Pressure Flow Compensating Closed Center
- Open Center up to 214 l/min.

NOTE

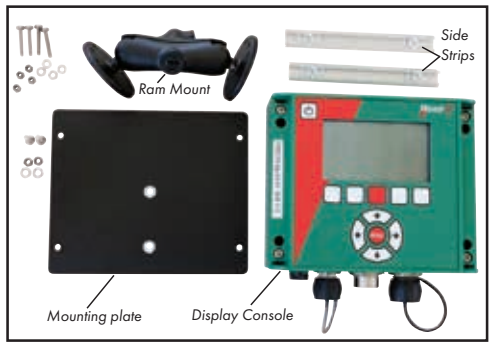
The pump used on your sprayer may not be the same as shown.
Always refer to the pump manual shipped with your sprayer.



Performance Chart of the Centrifugal Pump - 9306C-HM5 (HM5-BU & HM5C-BU models).

Specifications:

- Open Center up to 214 l/min
- Maximum Pressure 150 psi
- Suction 2" / Discharge 1½"
- Integral Needle Valve bypasses up to 214 l/min on Open Cente systems
- Standard Ceramic seal or Optional Silicon Carbide Seal
- Chemical Resistant Nylon or Optional Polypropylene or XT Impeller
- Stainless Steel Shaft and Wear Ring.



The WEEDit Controller Console components.

3 Fit the Controllers:

- WEEDit Controller
- Bravo Controller
- Visio Controller
- Trailing Boom Controller
- Other optional controller(s).

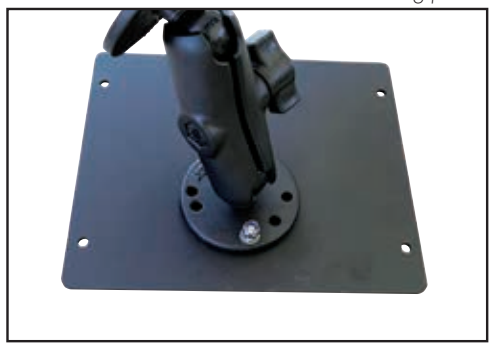
Fit the WEEDit Controller

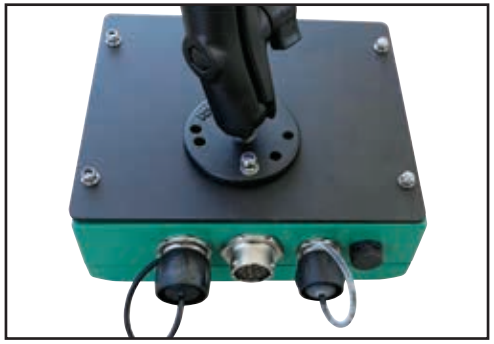
To fit the WEEDit Controller:

1 Unpack the Controller Console and mounting components.

2 Attach the ram mount to the Console mounting plate using the screws, washers and nuts provided.

Attach the ram mount to the Console mounting plate.





Fix the mounting plate to the Console.

3 Fix the mounting plate to the Console using the screws, washers and nuts provided.

4 Fit the side covers to the Console.

5 Position the Console in the tractor cab so that it is:

- Easily-reached for operating
- Easily-read

6 Firmly fix the ram-mount base to the tractor.

Align the loom connectors & push them together.

7 Connect the Console loom to the Console:

a) Align the female loom connector to the male Console connector and push them together.

b) Rotate the ring-lock clockwise to lock the connectors in place.

8 Run the other end of the Console loom to the rear of the tractor.

Align the Console loom connectors & push them together.

9 To connect the Console loom to the Optical Spot Sprayer loom:

a) Remove the dust caps from the connectors of the Console & Sprayer looms.

b) Align the female connector with the male Console and push them together.

c) Rotate the ring-lock clockwise to lock the connectors in place.

d) Lock the male & female dust caps together, to keep them clean.

The WEEDit Power Loom.

Fit the WEEDit Power Loom

To fit the WEEDit Power Loom to the tractor:

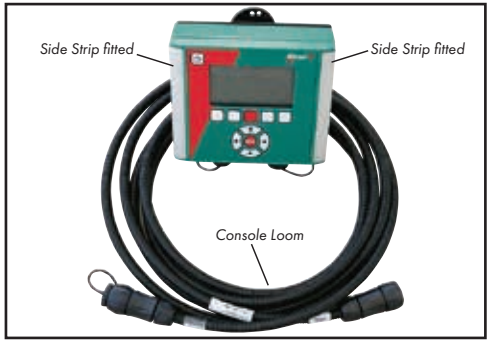
1 Unpack the WEEDit Power Loom.

2 Fix the loom connector bracket to the rear of the tractor.

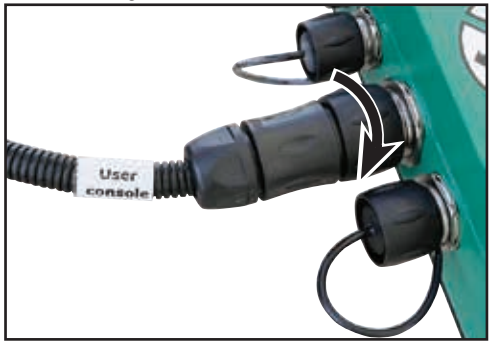
3 Connect the Sprayer WEEDit Power loom to the tractor Power loom connector:

a) Align the sprayer male loom connector to the tractor female loom connector, then, push them together.

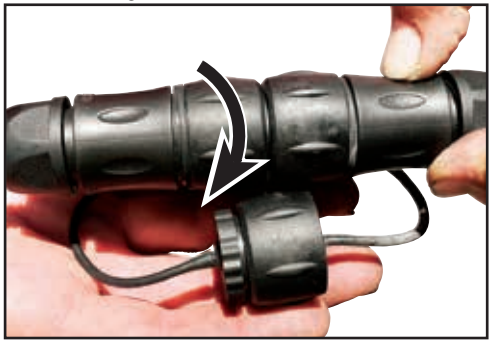
Assembled Console & loom ready for tractor installation.



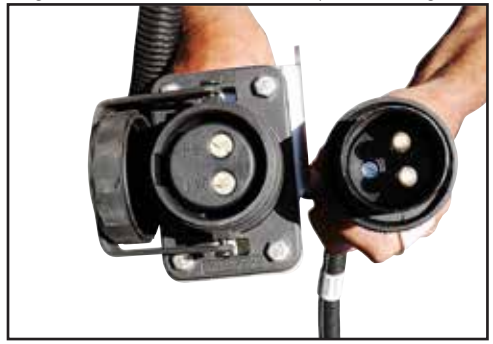
Rotate the ring-lock clockwise to lock the connectors.

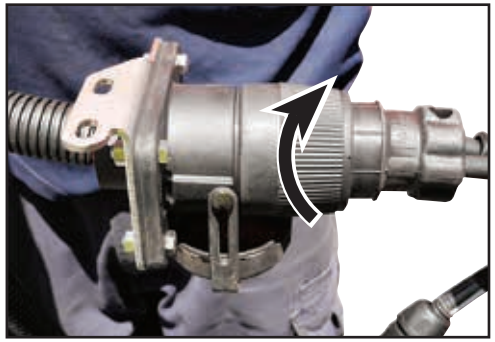


Rotate the ring-lock clockwise to lock the connectors.



Align the Power Loom connectors & push them together.





Rotate the ring-lock clockwise to lock the connectors.

b) Rotate the ring-lock clockwise to lock the connectors in place.

4 Run the other end of the Power loom to the tractor battery.

Unpack the Bravo Console, looms & mountings.

Fit the Bravo Controller

To fit the Bravo Controller:

1 Unpack the Bravo Console, looms and mounting components.

2 Position the Console in the tractor cab so that it is:

- Easily-reached for operating
- Easily-read

3 Firmly fix the Console mount to the tractor with the screws & nuts provided.

Fit the loom connectors to the Console.

4 Fit the loom connectors to the Console:

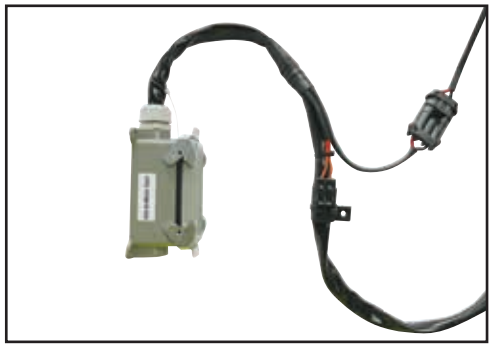
a) Align the loom connector to the Console's base connector & push them together.

b) Rotate the ring-lock clockwise to lock the connectors in place.

c) Align the loom connector to the Console's side connector & push them together.

d) Rotate the lock clockwise to lock the connectors in place.

5 Connect the power loom connectors of the Console.



Run the other end of the Console loom to the rear of the tractor.

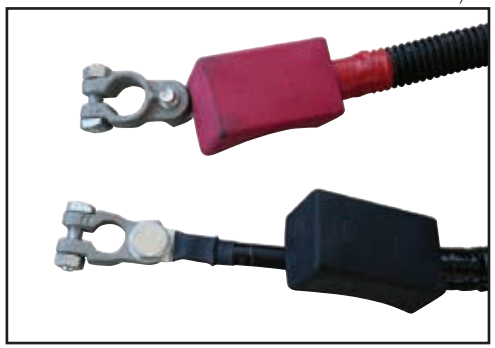
6 Run the other end of the Console loom to the rear of the tractor.

7 At the rear of the tractor, connect the Console & Sprayer looms:

a) Remove the dust caps from the Console & Sprayer looms.

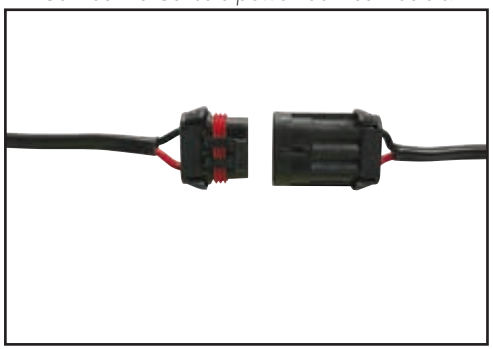
b) Align the female connector with the male connector & push them together.

Run the other end of the Power loom to the battery.

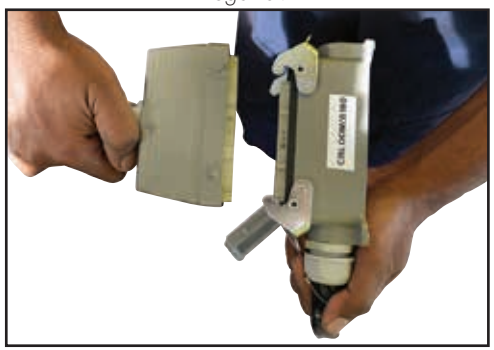


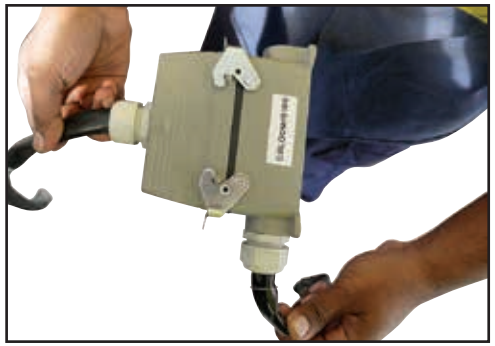
Position the Console in the tractor cab & fix the mount.

Connect the Console power loom connectors.



Align the female & male connectors & push them together.





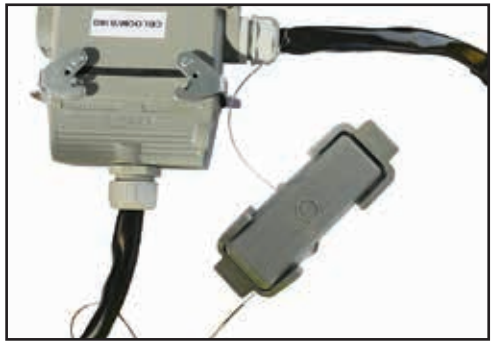
Rotate the clips & lock the connectors in place.

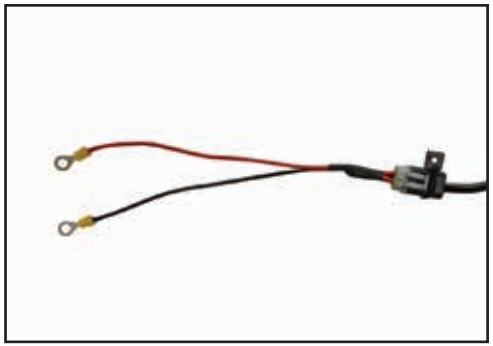
c) Rotate the clips and lock the connectors in place.

d) Lock the male & female dust caps together, to keep them clean.

8 Firmly fix the loom connector base to the the rear of the tractor

Lock the male & female dust caps together, to keep them clean.





9 Run the Console Power loom to the tractor battery.

Unpack the Visio Console, looms & mountings.

Fit the Visio Controller

To fit the Visio Controller:

1 Unpack the Visio Console, looms and mounting components.

2 Position the Console in the tractor cab so that it is:

- Easily-reached for operating
- Easily-read

3 Firmly fix the Console mount to the tractor with the screws & nuts provided.

Position the Console in the tractor cab & fix the mount.

4 Fit the loom connectors to the Console:

a) Align the Power loom connector to the Console Power connector & push them together until the clip locks in place.

CAUTION: A RED cable-tie is fitted to the Power connector. Ensure this connector is fitted to the Power connector. Damage will occur to the controller if fitted incorrectly.

b) Align the loom connector to the Console's loom connector & push them together until the clip locks in place.

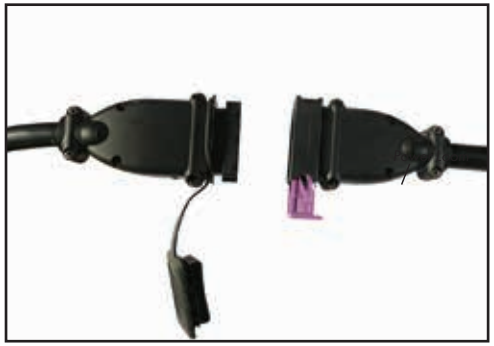
5 Run the other end of the Console loom to the rear of the tractor.

6 At the rear of the tractor, connect the Console & Sprayer looms:

a) Remove the dust caps from the Console & Sprayer looms.

b) Align the female connector with the male connector & push them together.

7 Run the Console Power loom to the tractor battery.



The Boom Controller, tractor loom & power loom.

Fit the Trailed Boom Controller

To fit the Trailed Boom Controller:

1 Unpack the Trailed Boom Controller, Controller loom and Power loom.

2 Locate the Controller in the tractor cab so that it is easily-reached for operating.

3 Firmly fix the cradle base of the Controller to the tractor.

Connect the Power loom to the back of the Controller.

4 Connect the Controller loom to the back of the Controller:

a) Align the female loom connector to the male Console connector and push them together.

b) Rotate the ring-lock clockwise to lock the connectors in place.

5 Run the other end of the Console loom to the rear of the tractor.

Align the Power loom connectors & push them together.

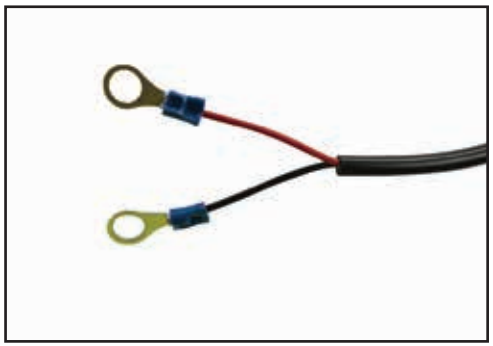
6 Connect the Controller loom to the loom on the Sprayer:

a) Remove the dust caps from the Controller and Sprayer looms.

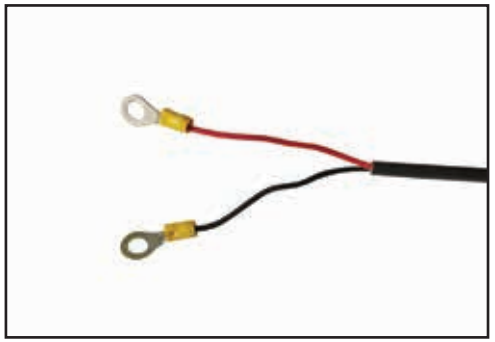
b) Align the female loom connector to the male Controller connector and push them together.

c) Rotate the ring-lock clockwise to lock the connectors in place.

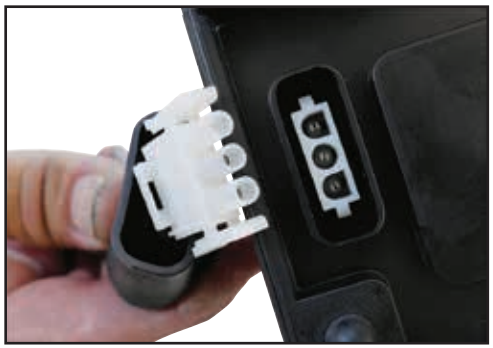
d) Lock the male & female dust caps together, to keep them clean.



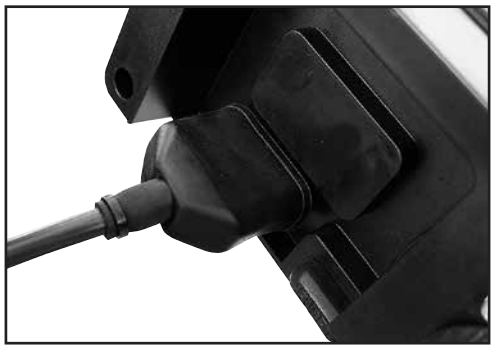
Rotate the ring-lock clockwise to lock the connectors.



Rotate the ring-lock clockwise to lock the connectors.

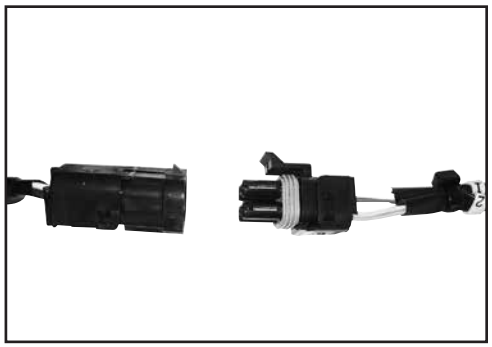


Pull back the dust cover to access the male connector.



Fit the dust cover to the back of the console.

Optional Electric Fence Line Controller.



Connect the Fenceline Controller loom.

7 Connect the Power loom to the Controller:

a) Pull back the rubber dust cover to access the white male connector.

b) Align the white male connector with the female connector on the back of the Controller, then, push-in the male connector in until it clicks in place.

c) Fit the dust cover to the back of the console, to seal the connectors from dust.

5 Run the other end of the Power loom to the tractor battery.

Fit Other Optional Controllers

Other option controller may include:

- Electric fence-line controller.

To fit the Electric Fence Line Controller:

1 Unpack the Electric Fence Line Controller (including Controller loom & Power loom) and mounting bracket.

2 Locate the Controller in the tractor cab so that it is easily-reached for operating.

3 Firmly fix the mounting bracket of the Controller to the tractor, then, slide the Controller onto the bracket until it locks into place.

4 Connect the Sprayer Fenceline Controller loom to the Tractor Controller loom:

a) Remove the dust caps from the ends of the looms.

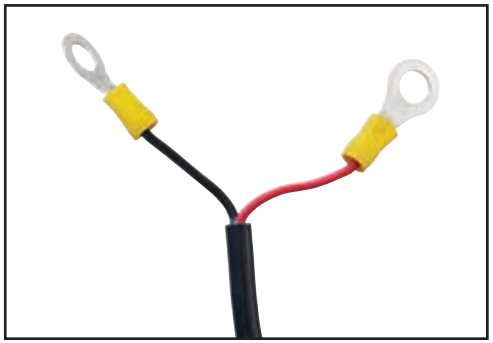
b) Align the female loom connector to the male Controller connector, then, push them together until they click in place.

c) Lock the male & female dust caps together, to keep them clean.

5 Run the battery connectors of the Fencline Power Loom to the tractor battery.

Align, then, push-in the male connector until it clicks in place.

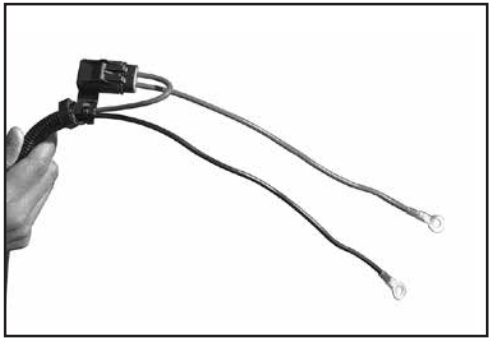
Run the other end of the loom to the tractor battery.

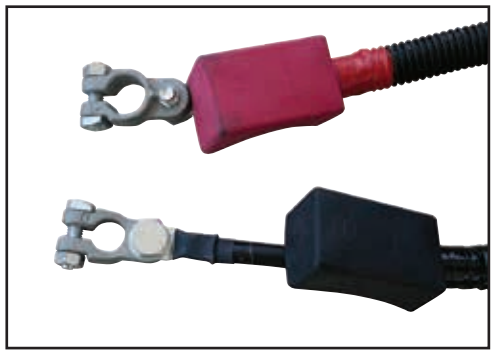


NOTE

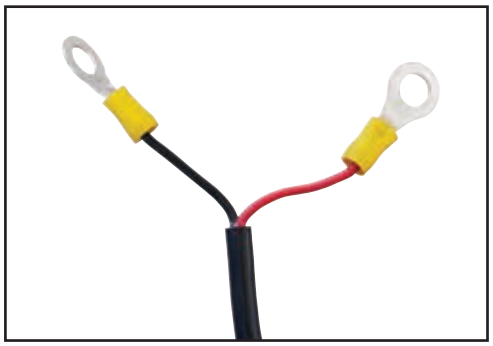
For operating instructions of this model of spray controller you have been supplied, refer to the controller manual supplied seperately.

Optional Fenceline Controller power loom.

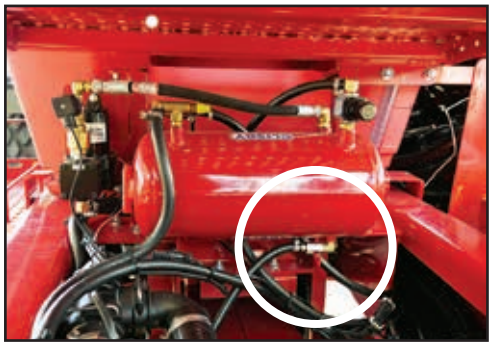




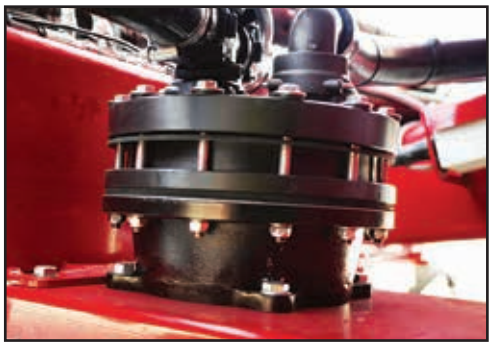
WEEDit Controller Power Loom.



Bravo, Visio & Trailing Boom Controller power looms.



***Regularly** drain the water from the air tank.*



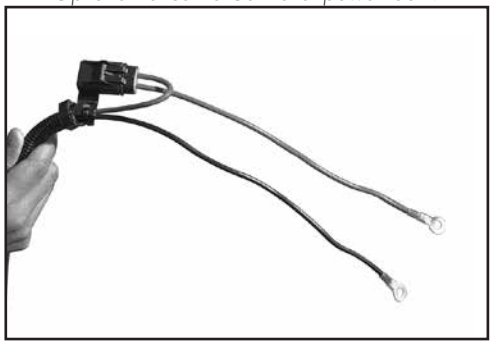
The Optical Spot Sprayline PAV.

4 Connect All Power Leads to the Tractor Battery

Connect all power leads <u>directly to the battery</u>, namely the:

- WEEDit Controller
- Bravo Controller
- Visio Controller
- Trailing Boom Controller
- Other optional controller(s).

Optional Fenceline Controller power loom.



Important Start-Up Procedure

The **Air System** of the Optical Spot Sprayer must be engaged and fully charged **BEFORE the hydraulic drive** is **engaged**.

The Optical Spot Sprayer uses compressed air in the:

- Main Axle airbag suspension
- ARDS Drawbar airbag, and
- Optical Spot Sprayline PAV (Pressure Accumulator Valve).

Regularly drain the water from the air tank and regulators.

To charge the **Air System**, TURN-ON one of the Controllers. This engages the compressor to charge the air system.

It is essential that this done BEFORE engaging the hydraulic drive which drives the centrifugal pumps of the sprayer.

The Optical Spot Sprayline PAV (Pressure Accumulator Valve) diaphragm requires the compressed air pressure to counter balance the liquid pressure of the sprayline.

If the liquid is engaged/pressurised before the air pressure, the PAV diaphragm may be damaged or blown.

⚠ CAUTION

Make absolutely certain that:

- **Red leads are connected to the positive terminal, and**
- **Black leads are connected to the negative terminal.**

Damage can occur to the systems if power leads are reversed or incorrectly fitted.

⚠ CAUTION

NEVER ENGAGE the hydraulic pump drive before charging the Air System!

The Air system must ALWAYS be Turned ON - BEFORE starting the pump drives, otherwise damage may occur to the PAV diaphragm.

⚠ CAUTION

ALWAYS "FIRST" Switch-On a Spray Controller - Before engaging the hydraulic pump drive.

The Air system must ALWAYS be Turned ON - BEFORE starting the pump drives, otherwise damage may occur to the PAV diaphragm.

Regularly *drain the water from the air tank and regulators.*

Base of WEEDit camera must be set 1100mm above the ground.

Check & Adjust the Optical Spot Spray Boom Height

For the first time setup, consult the WEEDit Transport Unloading & Setup Guide.

Setup is best done with the Optical Spot Sprayer hitched to the tractor and on level ground and the booms opened to their spraying position.

For optimum results the WEEDit folding boom Optical Sensors must be set at 1100 mm above ground level (+/- 20mm is acceptable) and the two centre section units (on the sprayer chassis set to 1060mm..

NOTE

The correct height (above ground level) for the 2 centre section sensors on the WEEDit 7000 Sprayer is 1060mm - measured vertically down from the bottom front end of the sensor unit.

Main Axle airbag.

The following adjustments are available to achieve the correct Sprayer boom (Optical Sensor) height:

- Drawbar hitch height adjustment
- Main axle airbag inflation level
- ARDS Drawbar airbag inflation level
- Boom steering wheel and castor wheel shock absorber pressure.

The ARDS drawbar airbag at the rear of the hitch.

Nominal 5 degrees forward-sloping-down chassis.

The chassis angle of the Sprayer is designed to operate at a nominal 5 degrees forward -sloping-down.

Ideally the chassis remains at this angle after the boom height adjustment is completed. However some variation (+/- 1 degree) in order to achieve correct sensor height is acceptable.

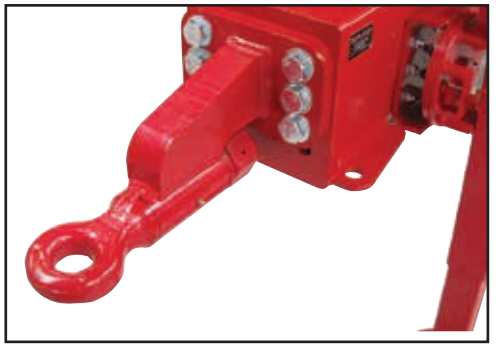
Follow the procedures outlined (1 to 5) to correctly adjust the boom height.

NOTE

Ensure tyres of the sprayer and boom are correctly inflated:

- **Sprayer standard tyre pressure is 24 psi (Optional fitted tyres may be different)**
- **Boom standard tyre pressure is 15 psi.**

Tyre inflation and soil conditions can also affect ride heights.



The front drawbar hitch tongue is height adjustable.

The recommended procecedure for the Optical Spot Sprayer boom height adjustment is:

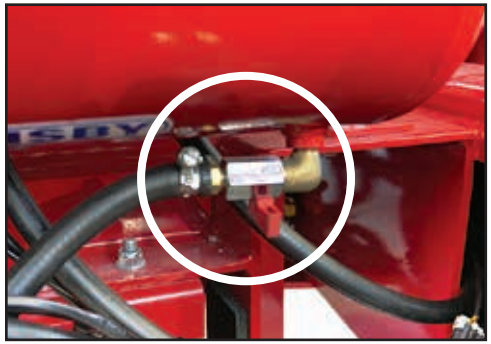
1 First, connect the sprayer to the tractor (refer to instructions on page 2.13).

2 Set the ARDS Drawbar airbag adjustment to "standard" height

3 Set the Main Axle airbag adjustment to "standard" height.

4 Adjust the Main Axle airbags to finalise boom height so that the cameras on & closest to chassis) measure 1100mm distance from ground to camera base.

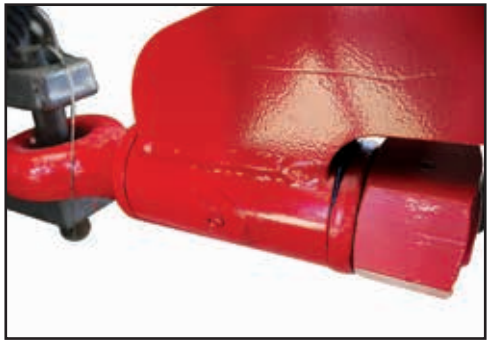
Camera sensor located on the chassis at the rear of the 7000 litre sprayer.



Regularly *open the valve to drain water from the air tank & regulators.*

5 Adjust the Sprayer hitch tongue to match the height of the tractor drawbar and maintain the 5 degree forward sloping angle of the Sprayer's chassis.

6 Adjust the Optical Spot Spray Boom Height.



Connect the sprayer to the tractor.

1 Connect the Sprayer to the Tractor

First, connect the sprayer to the tractor (refer to instructions on page 2.14).

The starting position is with the hitch tongue located in the top holes (opposite to that pictured above).

The hitch tongue is height adjustable and can also be turned 180 degrees.

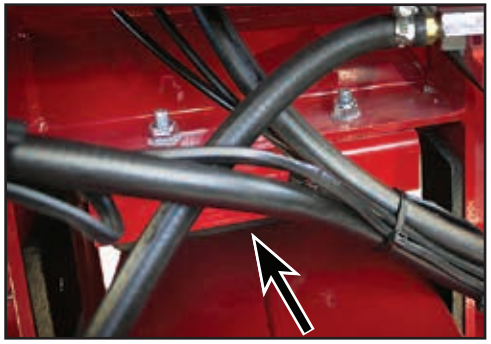
The ARDS drawbar inflatable airbag mechanism.

2 Set the ARDS Drawbar Airbag "Standard" Height

The ARDS drawbar airbag level is set using the air valve adjustment rod (on the left hand side underside of the chassis adjacent to the drawbar).

The inflation of the ARDS drawbar airbag is supplied via the pressure regulator attached to the air tank. It is factory set at 40 psi (via pressure regulator).

Adjust the ARDS drawbar airbag pressure to 40 psi using the pressure adjustment valve.



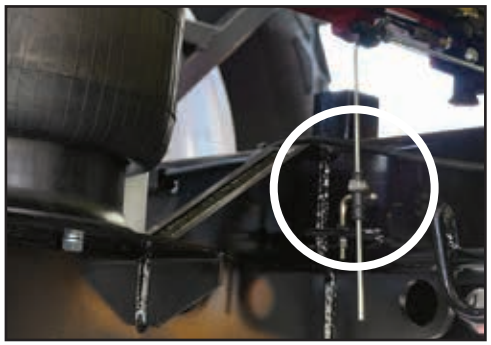
Start with 35mm gap between drawbar and the rubber stop plate above it.

To set the drawbar airbag level, loosen the hose clamp, slide the control rod up or down, then retighten the clamp:

- Start with 35mm gap between drawbar and rubber stop plate above the hitch.
- Adjustment range is 20 ~ 50mm.

The Optical Spot Sprayer's chassis should be maintained as near as possible to the 5 degree nominal angle.

To set the drawbar airbag level, loosen the hose clamp, slide the control rod up or down, then retighten the clamp.



To set axle ride height, loosen the hose clamp, slide the control rod up or down, then, retighten the clamp.

3 Set the Main Axle Airbag "Standard" Height

The main axle airbag ride height is set using the air valve rod (on the left hand side, underside of the chassis adjacent to the axle).

To set main axle airbag ride height, loosen the hose clamp, slide the control rod up or down, then retighten the clamp:

- Start with airbag setting of 310mm
- Adjustment range is 270 ~ 350mm.

Press WEEDit Controller Power Button to start the air compressor.

4 Check & Adjust the Boom Sensors Height Using the Main Axle Airbag Adjustment

The base of two optical sensors located on the sprayer chassis (boom centre section) should be be set 1060mm above ground.

All other sensors are set at 1100mm above ground.

To adjust the Sprayer's chassis and Optical Sensor Height:

1 Start the air compressor and charge the air tank. The air compressor starts automatically when the WEEDit Controller is switched on (see page 4.19).

Check the air tank pressure is charged to 100psi.

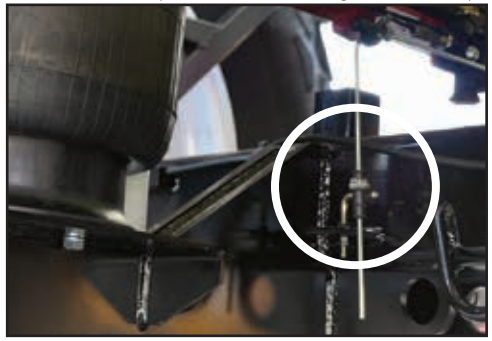
Remove the electrical fitting from the air valve.

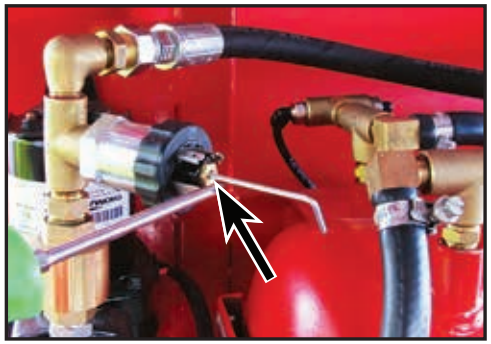
The air tank is factory set at 100 psi - this is the ideal pressure for the main axle airbags.

This pressure is show on the front gauge panel.

2 Check the air tank pressure is charged to the recommended 100psi.

To adjust axle ride height loosen the hose clamp, slide the control rod up or down, then, retighten the clamp.





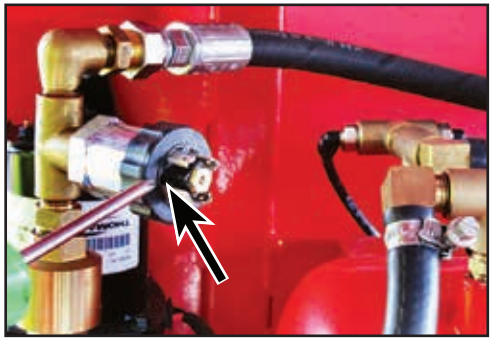
Adjust maximum pressure (100 psi) using the centre hole & allen key [shown].

3 If in the unlikely event it is necessary, to adjust the air pressure setting of the main axle airbags:

- Remove the electrical fitting from the air valve
- Adjust maximum pressure (100 psi) using the centre hole & allen key *[shown above]*
- Adjust the level switch (hysteresis) set at 70 psi via the side hole *[shown below at end of screwdriver]*.

4 Check the distance from ground to camera base (closest to chassis) measures 1100mm. If necessary, adjust the axle ride height by adjusting the hose clamp on the control rod.

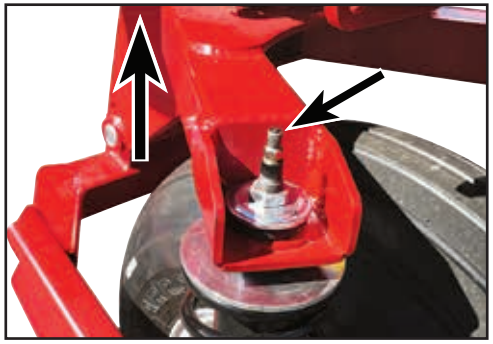
Adjust the level switch (hysteresis) set at 70 psi via the side hole on the valve [shown at end of screwdriver].



The front drawbar hitch tongue is height adjustable.

5 Drawbar Hitch Tongue Height Adjustment

The hitch tongue is height adjustable and can also be turned 180 degrees. Starting position is one of the holes higher than shown in the picture above.



Individually lift each boom steering wheel & castor wheel off the ground, then, inflate the shocker absorber to 110 psi.

6 Adjust the Optical Spot Spray Boom Height

Boom sensor height should only be adjusted with the boom in the open/spray position. If setting-up for the first time, consult the WEEDit Transport Unloading & Setup Guide.

Before inflating air shockers from new, the boom wheel MUST be raised clear of the ground to do this.

Individually lift each of the boom steering wheel and castor wheel off the ground, then, inflate the shocker absorber to 110 psi.

Adjust all boom tyre pressures to 105 kPa (15 psi).

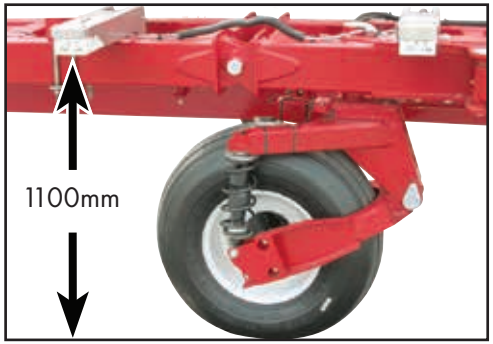
First set tyre pressures to 15 psi, then, adjust the shocker pressures to achieve 1100mm camera height.

The boom wheel shock absorbers require no less than 20 psi minimum inflation pressure.

If the shock absorbers operate with inflation pressure less than 20 psi, excessive wear will occur in moving components.

Adjusting the air pressure in the boom steering & castor wheel shock absorber system is used to adjust the boom height:

- Boom Height from the ground to the the base of the WEEDit cameras must be 1100mm.
- Boom Level - boom height must be consistent across the full width of the boom.



Adjust shocker air pressures to achieve 1100mm sensor height (+/- 20mm).

To adjust the Boom Height:

1 First set tyre pressures to 15 psi, then,

2 Adjust shocker pressures to achieve 1100mm camera height.

Adjust shocker air pressures to achieve 1100mm sensor height (+/- 20mm).

There must be a minimum of 10psi in the shocker at all times. Both shockers in each set must be the same pressure.

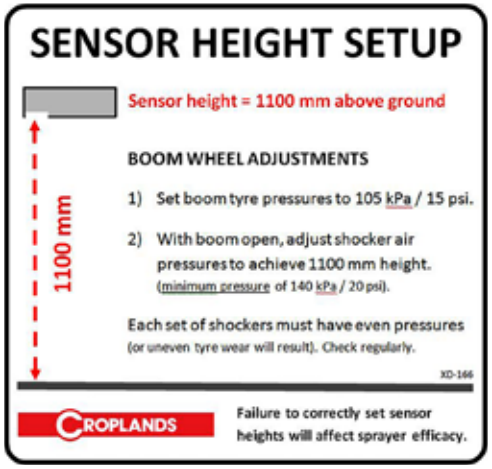
CAUTION

During initial set-up and if boom shock absorbers lose all pressure, DO NOT attempt to inflate the shock absorbers without first lifting the boom wheels completely off the ground.

Damage to shock absorbers will occur if inflation is attempted without taking all weight off the wheels.

CAUTION

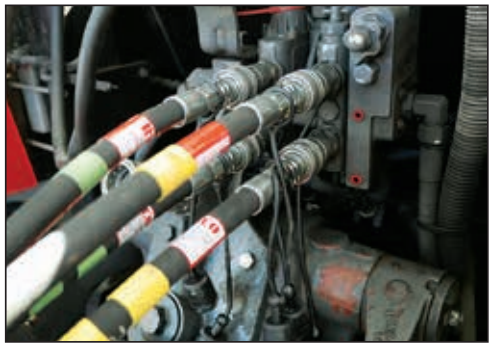
Air pressures for each set of shockers must be even - other wise uneven wear may result.



The sprayer sensor height decal.

After completing the adjustments 1 to 6, check distance from ground to camera base (closest to chassis) measures 1100mm.

Redo any adjustments necessary to ensure the measurement from ground to base of cameras is 1100mm.



Disconnect hydralulic hoses.

Unhitching

To disconnect the Sprayer from the tractor, follow the procedure below:

1 Ensure the Trailing Boom arms are in the folded position.

2 Locate the sprayer on level ground and disconnect the:
- Hydraulic hoses for the:
  - Boom
  - Centifigal Pump drives
  - Filling pump (if fitted)
- Electric Controller Looms.

Unpin & rotate the hitch jack down.

3 Unpin and rotate the hitch jack down.

Lock the hitch jack in postion, then adjust the hitch height.

4 Lock the hitch jack into position and, then, adjust the hitch height using the hitch jack.

5 Unlock and remove the tractor drawbar pin.

CAUTION

There must be a minimum of 10psi in the shocker at all times.
Each pair of shock absorbers on each wheel must be the same pressure.

CAUTION

For safety purposes, steps above must be performed on level ground.

NOTE

It is recommended that the trailing boom arms are folded prior to parking and un-hooking the sprayer.

NOTE

Fit dust covers to hydraulic remote connectors to avoid dirt/dust contamination.

Main Control Panel

Remote Fill Valve:
- Fill Main tank
- Fill Main Hopper
- Fill Spot Hopper
- Fill Spot Tank

Spot Spray Valve:
- Spot Spray
- Spot Probe
- Hopper 30L
- Self Fill Pump

Spot Pump Vent Return Valve:
- To Spot Tank
- To Main Tank

PAV Return Valve:
- To Spot Tank
- To Main Tank

Valves :
- Spot Tank Rinse,
- Probe Rinse,
- Agitators Main Tank
- Main Tank Rinse

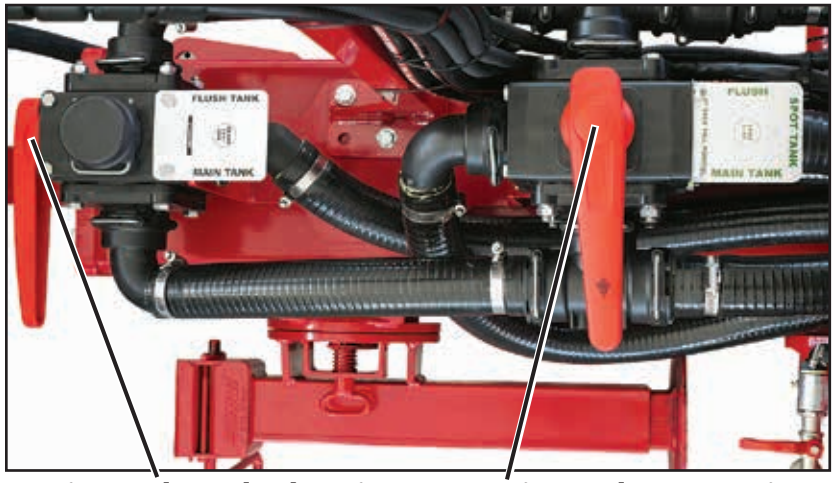
Main Blanket Spray Valve:
- Main Probe
- Off
- Hopper 60L
- Main Spray

Blanket Sprayline Pressure Regulator

Spot Tank Chemical Probe Connector

Chemical Probe Rinse Connector

Main Tank Chemical Probe Connector



Suction Valve: Blanket Line

Suction Valve: Spot Line

Remote Connector (2") - Fill Flush Tank

Fresh Water Tap (Front)

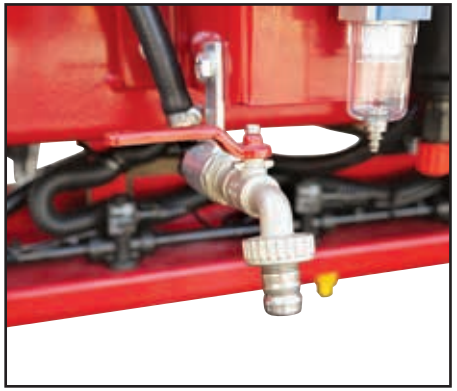
Remote Connector (2") - Fill Main & Spot Tanks

Drain Valve: Main - Off - Spot

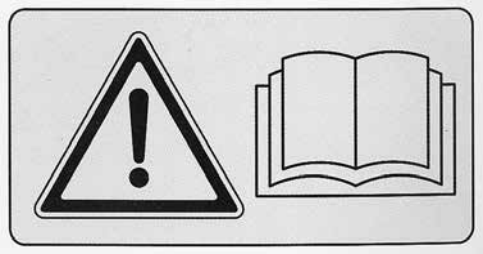
Pressure Gauges : Spot line, Air Tank & Blanket line

30L Chemical Mixing Hopper - Spot Tank

60L Chem-E-Flush Hopper - Main Tank



(Left): Fresh Water Tap (Rear)



Read Operators' Manuals before operating machine.

Pre-Operation Check List

1 Read Operator's Manuals thoroughly, before attempting to use this machine.

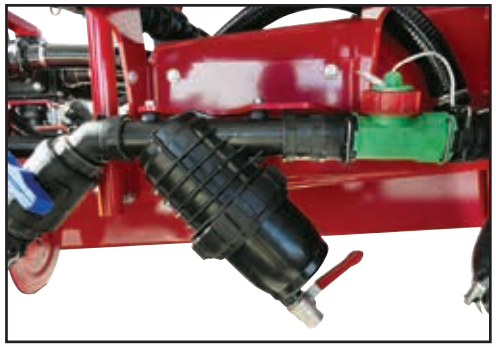
2 Read and follow instructions on chemical manufacturers labels.

3 Always wear appropriate protective clothing.

4 Check that all maintenance procedures have been followed.

5 Check all plumbing and fittings to ensure they are tight, not damaged or leaking.

6 Check hydraulic connections.



Check the fresh water fill filter is clean.

7 Check the fresh water fill filter is clean.

8 Check all pressure filters are clean:

a) Two Blanket sprayline pressure filters

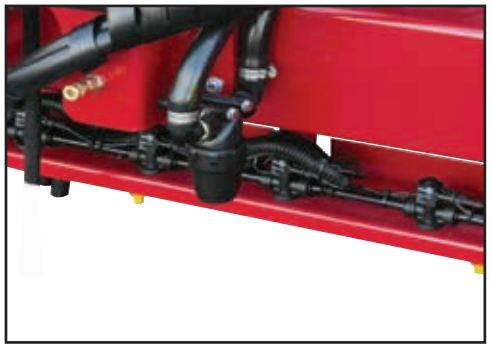
b) Two Optical Spot Sprayer line pressure filters

c) One Optical Spot Sprayer line centre-section pressure filter.

Thoroughly clean all pressure filters out after initial use, and nozzles if necessary.

Check the Spot sprayline pressure filters are clean.

Check the Optical Blanket sprayline pressure filters are clean.



Check the Spot sprayline centre-section pressure filter is clean.

Check the Trailing Boom functions correctly.

9 Check the Trailing Boom Controller functions correctly.

NOTE

IMPORTANT: Clean all pressure filters after initial use.

Whilst all precautions are taken during assembly, it is possible to get filings in the tank and lines. These will accumulate in the filter during first use.

WARNING

Ensure wheel nuts are tight before every use.

Torque settings:

M16 x 1.5 Stud = 190Nm
M18 x 1.5 Stud = 270Nm
M20 x 1.5 Stud = 380Nm
M22 x 1.5 Stud = 510Nm

Check the WEEDit Controller spraying functions.

10 Check all WEEDit Controller spraying functions:

- Refer to the instruction in the "WEEDit User Manual"

11 Refer to instructions provided in other Operators Manuals supplied with the Sprayer.

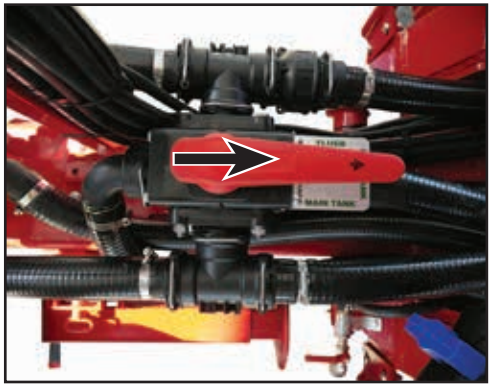
WEEDit Controller standard.

Check the WEEDit Controller Operation

When the Optical Spot Sprayer is first used or when setting up for operation, the following steps should be followed:

1 Connect Sprayer to tractor (see instructions pages 2.10-2.18).

2 Fill an appropriate quantity of clean water into Spot Spray tank (see instructions pages 3.2-3.4).



Place the suction valve in "Spot Tank" position.

3 Place the Suction Line valve in the "Spot Tank" position.

CAUTION

NEVER ENGAGE the hydraulic pump drive before charging the Air System!

The Air system must ALWAYS be Turned ON - BEFORE starting the pump drives, otherwise damage may occur to the PAV diaphragm.

CAUTION

ALWAYS "FIRST" Switch-On a Spray Controller - Before engaging the hydraulic pump drive.

The Air system must ALWAYS be Turned ON - BEFORE starting the pump drives, otherwise damage may occur to the PAV diaphragm.

WARNING

DO NOT have pesticides in the spraytank when checking the sprayer.

NOTE

Additional copies of the WEEDit User manual can be downloaded in a PDF file format from the Internet.

Always follow the instructions of the separate WEEDit Controller User Manual - for Start-up, Calibration and Sprayer Operation.

Rotate the Spot Spray Valve to "Spot Spray", then, open the "Agitators Main Tank" valve.

4 Rotate the Spot Spray Valve to "Spot Spray" position.

5 Rotate the spot vent valve to "Spot Vent Return to Spot Tank" position.

WEEDit Controller Power Button - On/Off.

6 Press the Controller Power Button to switch-on the Controller.

Follow the instructions in the separate WEEDit Controller User Manual.

The WEEDit Console will show the default screen and the air compressor should start running.

7 Engage the pump hydraulic drive.

Press the Flush Buttom to flush & check pressure.

8 Press the Flush button to check the pressure of the system by briefly flushing it.

Flush the system and check if the pressure remains 2.0 bar at all the nozzles. The air compressor should start running after flushing begins.

Adjust the pressure if required.

Adjust the air pressure at the rear of the Sprayer.

9 Adjust the pressure using the air pressure adjustment valve located at the rear of the Sprayer on the right hand side.

To adjust the spraying pressure:

a) Pull the knob on the air pressure valve outwards.

b) Rotate the knob to set the required pressure.

c) Push the knob in again to lock it in place.

<u>Maximum working pressure</u> be set at 3 BAR (45 psi). If the maximum pressure is above this, it will effect the timing of the Optical Spot Spray system/sprayer efficiency.

Rotate the spot vent valve to "Spot Vent Return to Spot Tank".

CAUTION

Ensure that the system does not suck in any air. Ensure all suction lines (from the spray tank) and all couplings are absolutely water tight. Even the smallest leakage may result in pressure variations or even complete pump failure.
Sucked-in air may result in "nozzle's dripping".

NOTE

To maintain the right pressure at the nozzles at all times, a PAV (Pressure Accumulator Valve) regulates sprayline pressure.
Desired pressure is achieved by using an air regulator installed between the air compressor and the PAV (Pressure Accumulator Valve).

NOTE

This machine is a Spot Spray unit. It is not designed as a blanket sprayer.
Too much chemical flow will put excessive load on the PAV system.
The system must be kept at 3 Bar to ensure best sprayer efficacy.

10 While water is being pumped through the boom, check:

- For any leakages or blockages throughout the Sprayer.
- All hoses, connections, valves, filters, boom fittings etc.
- All nozzles are operating correctly.

Rectify any problems.

11 With all booms operating, check the pressure drop in the feeding lines is not too big, by checking the actual pressure at the nozzle outlet. You could use a nozzle tester for this.

12 On completion of checking the sprayer, turn the controls Off.

13 Disengage the pump hydraulic drive after the Spray Controls are switched off.

NOTE

Adjust the WEEDit pump oil flow at the tractor to achieve 1.8 to 2.2 Bar (26 - 32 psi) pressure when using Flush mode.

NOTE

Adjust tractor oil flow to achieve correct WEEDit pump performance.
Excessive oil flow may cause tank foaming.

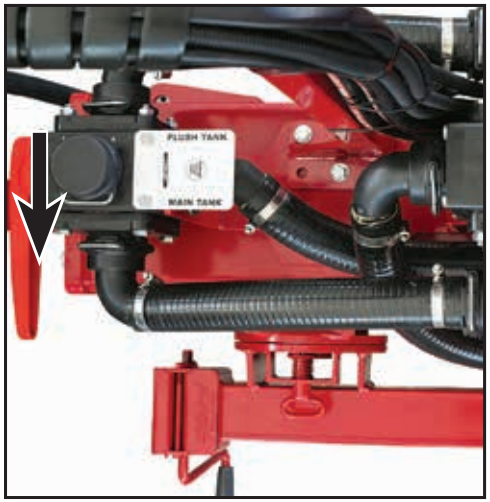
Check the Bravo Controller operation.

Check the Bravo Controller Operation

When the Optical Spot Sprayer is first used or when setting up for operation, the following steps should be followed:

1 Connect the Sprayer to tractor (see instructions pages 2.10-2.18).

2 Fill an appropriate quantity of clean water into Main spray tank (see instructions pages 3.2-3.4).



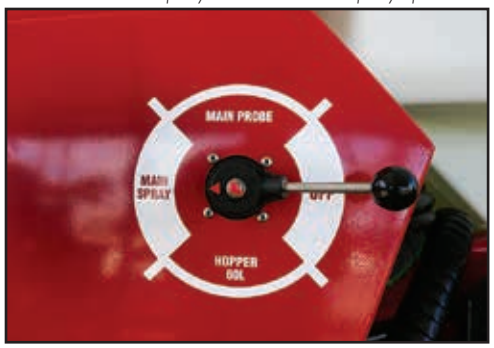
Place the suction valve in "Main Tank" position.

3 Place the Suction Line valve in the "Main Tank" position.

4 Rotate the Main Spray Valve to "Main Spray" position.

5 Engage the pump hydraulic drive.

Rotate the Main Spray Valve to Main Spray" position.



Press the Controller Power Button to switch-on the Controller.

6 Press the Controller Power Button to switch-on the Controller.

Follow the instructions in the separate Bravo Controller User Manual.

The Bravo Console will show the default screen and the air compressor should start running.

7 Adjust the spraying pressure as follows with the tractor & sprayer stationary:

(a) On the Spray Controller, select the MANUAL mode using the appropriate key.

(b) Switch on all boom valves, and switch the controller into the "RUN" position. Water will now be flowing out the nozzles.

It is recommended to do this with the boom open in the spraying position.

(c) Use the "+" key on the Spray Controller to fully close the electric servo valve. This will take a few seconds.

Adjust the manual Blanket Pressure Regulator.

(d) When the servo is fully closed, adjust the manual Blanket Pressure Regulator valve to the maximum working pressure. Recommended maximum working pressure is 8 BAR (120 psi). If the maximum pressure is above this, damage to your sprayer may result.

(e) Use the "-" key to reduce the pressure to your normal spraying pressure - 2-4 BAR (30-60 psi).

Open the "Agitators Main Tank" valve.

8 Open the "Agitators Main Tank" valve.

9 Visually check that both tank agitators are working.

Visually check that the tank agitator is working.

10 Turn the Controller Master switch ON & OFF and check all boom sections switch off together.

11 Turn fenceline nozzle ON & OFF to check it is working correctly (if fitted)

12 While water is being pumped through the boom, check for any leakages or blockages throughout the sprayer.

Check all hoses, connections, valves, filters, boom fittings etc.

Check the nozzles are operating correctly.

Rectify any problems.

13 With all boom operating, re-check pressure range by alternating from "+" to "-" on the Spray Controller while in MANUAL mode.

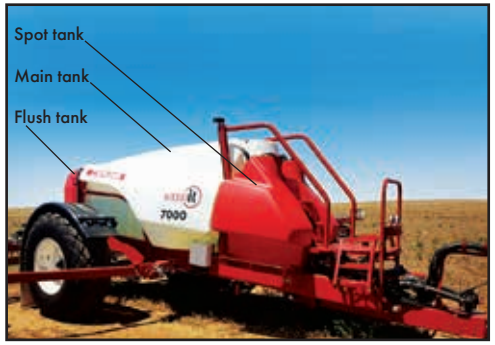
Ensure maximum pressure does not exceed 8 BAR. Minimum pressure should reach almost zero.

14 Switch booms ON & OFF several times, ensuring each section is operating individually, and that the non-drip nozzle bodies are working.

15 On completion of checking the sprayer, turn controls Off by placing the master switch and boom switches in OFF position.

16 On completion of checking the sprayer, turn the controls Off.

17 Disengage the pump hydraulic drive after the Spray Controls are switched off.



7000 litre Dual Line Optical Spot Sprayer.

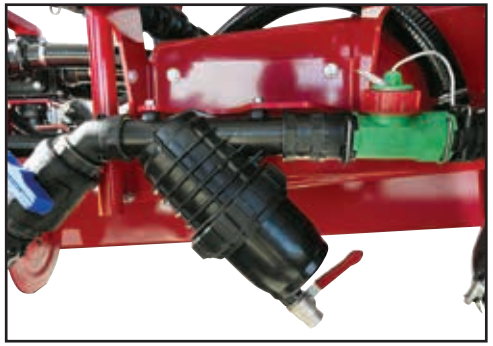
Filling the Sprayer Tanks

The sprayer incoprorates filling of all tanks and allows external filling of the main tank & spot tank.

The Dual Line sprayer has three tanks:

	Tank	Fill	External Fill
1	Spot tank	yes	yes
2	Main tank	yes	yes
3	Flush tank	yes	no

Always use clean, fresh water, free of suspended organic matter or clay. Some chemicals are deactivated when they contact these materials.



Fill filter.

Filling

Filling requires a pressured water source and is used to fill all tanks.

See page 5.5 for the Self-Filling option.

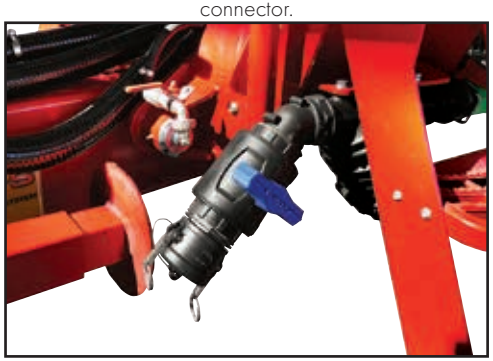
Main Tank

To fill the Main tank using the Fill inlet connector:

1 Clean the Fill filter.

2 Connect the filling hose to the Fill inlet connector.

Connect the filling hose to the Fresh Water Fill inlet connector.



Rotate the Fill valve to "Fill Main Tank". position.

3 Rotate the Fill valve to "Fill Main Tank" position.

4 Fill the Main tank with the required amount of water using your water source and Pony Flow 5 filling flowmeter.

On completion, unlock and remove the filling hose, then, replace the Fill Connector end cap.

Rotate the Fill valve to "Fill Spot Tank" position.

Spot Tank

To fill the Spot tank using the Fill inlet connector:

1 Clean the Fill filter.

2 Connect the filling hose to the Fill inlet connector.

3 Rotate the Fill valve to "Fill Spot Tank" position.

4 Fill the Spot tank with the required amount of water using your water source and Pony Flow 5 filling flowmeter.

On completion, unlock and remove the filling hose, then, replace the Fill Connector end cap.

Pony Flow 5 filling flowmeter.

NOTE

The Main Tank fill is fitted with a Pony Flow 5 filling flowmeter.

Zero the filling flowmeter prior to filling.

NOTE

Always calculate the correct quantity of water required, and when filling, allow sufficient water quantity for adding and mixing chemicals.

If necessary top up the tank to required quantity after adding chemicals.

Fill Flush Tank - Water Only connector:

Flush Tank

Always use clean, fresh clean water, free of suspended organic matter or clay.

To fill the Flush tank use the Fill Flush Tank Water Only connector:

1 Connect the filling hose to the Fresh Water Fill inlet connector.

2 Open the ball valve.

3 Fill the Flush tank with the required amount of water.

4 Close the ball valve.

5 Disconnect the filling hose from the Fill Flush Tank connector & refit the end cap.

Open the Main tank lid for inspection.

Top-Lids

Top lids are provided for inspection of the tanks.

It is possible to fill tanks via the top lid, if necessity arose, but it is not recommended.

Main Tank

7000 litre Main tank.

To inspect inside the Spray tank:

a) Unlock & open the Spray tank lid.

b) Close & lock the tank lid after inspection.

Main tank inspection lid closed & locked.

Open the Spot tank lids for inspection.

Spot Tank

1500 litre Spot tank

To inspect inside the Spray tank:

a) Open the Spray tank lids (2).

b) Close & lock the tank lids after inspection.

Replace Spot tank lids after inspection.

The red coloured Flush tank at the rear of the sprayer.

Flush Tank

800 litre Flush tank.

Used for flushing the sprayer and for personal safety when operating the unit in the field.

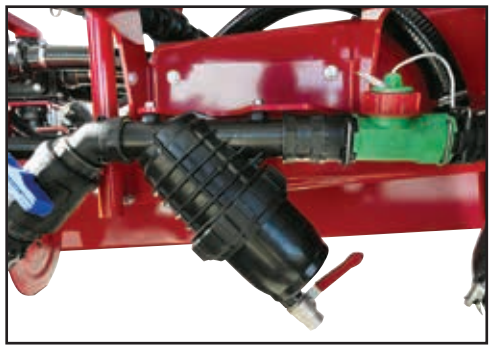
Whilst it's possible to inspect the flush tank via the top lid, it's rarely necessary and will require an appropriate (safe) platform or ladder for access to the top of the tank.

To inspect inside the Flush tank:

a) Organise a safe platform or ladder for accessing the flush tank lid.

b) Unscrew the tank lid.

c) Replace & tighten the lid after inspection.



Fill filter.

Self-Filling

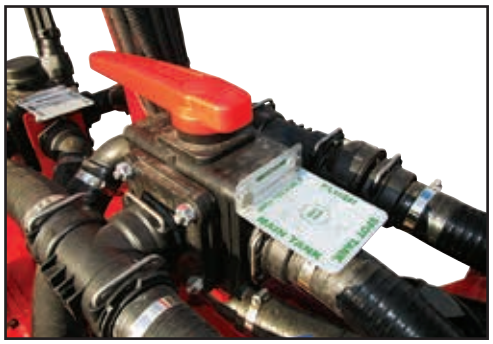
The Self-Fill function operates via the spot spray centrifugal pump.

Main Tank

To fill the Main tank using the spot spray centrifugal pump and fill inlet connector:

1 Clean the Fill filter.

2 Connect the filling hose to the Fill inlet connector.



Rotate the "Spot" ball valve to the front.

3 Rotate “Spot” ball valve to the front.

4 Rotate:

- The Fill valve to "Fill Main Tank" position and
- The Spot valve to "Self Fill Pump" position.

Rotate the Fill valve to "Fill Main Tank" position.

5 Start tractor and place sprayer controls in start up position according to Controller operating instructions.

6 Engage the Spot pump drive and bring the pump to operating speed.

7 Fill the Main tank with the required amount of water using your water source and Pony Flow 5 filling flowmeter.

On completion, unlock and remove the filling hose, then, replace the Fill Connector end cap.

Rotate the Spot valve to "Self-Fill Pump" position.

Spot Tank

To fill the Spot tank using the spot spray centrifugal pump and fill inlet connector:

1 Clean the Fill filter.

2 Connect the filling hose to the Fill inlet connector.

3 Rotate “Spot” ball valve to the front.

4 Rotate:

- The Fill valve to "Fill Main Tank" position and
- The Fill valve to "Fill Spot Tank" position.

Connect the filling hose to the Fresh Water Fill inlet connector.

Rotate the Spot valve to "Self-Fill Pump" position.

NOTE

Always calculate the correct quantity of water required, and when filling, allow sufficient water quantity for adding and mixing chemicals.

If necessary top up the tank to required quantity after adding chemicals.

Rotate the Fill valve to "Fill Spot Tank" position.

Rotate the Spot valve to "Self-Fill Pump" position.

5 Start tractor and place sprayer controls in start up position according to Controller operating instructions.

6 Engage the Spot pump drive and bring the pump to operating speed.

7 Fill the Main tank with the required amount of water using your water source and Pony Flow 5 filling flowmeter

On completion, unlock and remove the filling hose, then, replace the Fill Connector end cap

Main Hopper

To fill the Main HJopper using the spot spray centrifugal pump and fill inlet connector:

1 Clean the Fill filter.

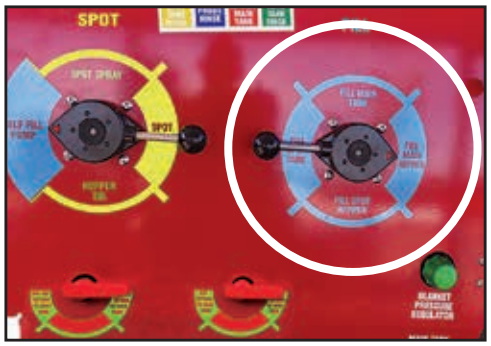
2 Connect the filling hose to the Fill inlet connector.

3 Rotate "Spot" ball valve to the front.

4 Rotate:

- The Fill valve to "Fill Main Tank" position and
- The Fill valve to "Fill Main Hopper" position.

Rotate the Fill valve to "Fill Main Hopper" position.



5 Start tractor and place sprayer controls in start up position according to Controller operating instructions.

6 Engage the Spot pump drive and bring the pump to operating speed.

7 Fill the Main tank with the required amount of water using your water source and Pony Flow 5 filling flowmeter

On completion, unlock and remove the filling hose, then, replace the Fill Connector end cap

Spot Hopper

To fill the Spot HJopper using the spot spray centrifugal pump and fill inlet connector:

1 Clean the Fill filter.

2 Connect the filling hose to the Fill inlet connector.

3 Rotate "Spot" ball valve to the front.

4 Rotate:

- The Fill valve to "Fill Main Tank" position and
- The Fill valve to "Fill Main Hopper" position.

5 Start tractor and place sprayer controls in start up position according to Controller operating instructions.

6 Engage the Spot pump drive and bring the pump to operating speed.

7 Fill the Main tank with the required amount of water using your water source and Pony Flow 5 filling flowmeter

On completion, unlock and remove the filling hose, then, replace the Fill Connector end cap

WARNING

Always wear protective clothing when cleaning filters containing toxic chemicals.

Cleaning Filters

Filters are used to stop solids entering the liquid system and blocking lines, nozzles or damaging the pump.

The sprayer incorporates a:

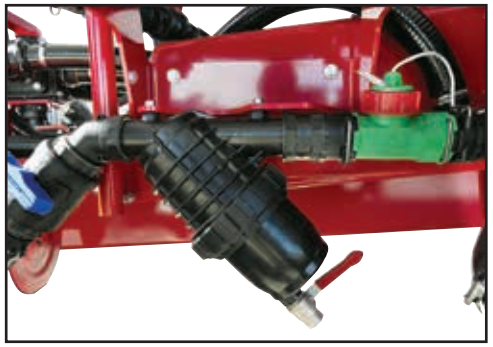
- Main tank
- Spot tank
- Flush tank.

The system incorporates filling and suction filters, boom pressure filters and nozzle filters.

Always ensure a filter is used if filling the Main tank, Spot tank and Flush tank via the lid opening.

All filters should be cleaned regularly or after each spraying period.

If the filter screen is damaged, replace with a new screen.



Clean the Fresh Water Fill filter regularly.

Bottom-Fill Filter

The Fresh Water Fill filter should be cleaned regularly or before each filling of the spray tank.

To clean the Fresh Water Fill filter:

1 Completely stop all sprayer functions.

2 Ensure the Fresh Water Fill valve is in “Off" position.

3 Remove the outer filter screw and bowl, and then, remove the filter and thoroughly clean it before re-assembling the filter.

NOTE

Be careful not to damage or deform the mesh or O-ring while cleaning and refitting the filters.

Clean the Optical Spot sprayline pressure filters regularly.

Optical Spot Sprayline Pressure Filters

The Optical Spot sprayline pressure filters should be cleaned regularly or after each spray tank has been emptied.

To clean the pressure filters:

1 Completely stop all sprayer functions.

2 Rotate the Optical Spot sprayline Suction valve to "Off" position.

3 Remove the outer filter bowls, and then, remove the filters and thoroughly clean them before re-assembling the filter.

NOTE

Be careful not to damage or deform the mesh or gasket while cleaning and refitting the filters and nozzle caps.

Check the centre-section Spot sprayline pressure filter is clean.

Centre-Section Spot Sprayline Pressure Filter

The centre-section Spot sprayline pressure filter should be cleaned regularly or after each spray tank has been emptied.

To clean the pressure filter:

1 Completely stop all sprayer functions.

2 Rotate the Main Spray Suction Line valve to "Off" position.

3 Remove the outer filter bowl, and then, remove the filter and thoroughly clean it before re-assembling the filter.

NOTE

Be careful not to damage or deform the mesh or O-ring while cleaning and refitting the filters.

Clean the Blanket sprayline pressure filters regularly.

Blanket Sprayline Pressure Filters

The Blanket sprayline pressure filters should be cleaned regularly or after each spray tank has been emptied.

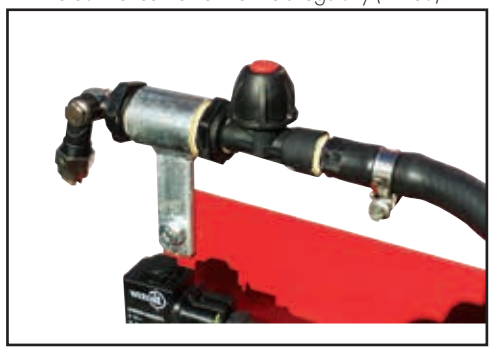
To clean the pressure filters:

1 Completely stop all sprayer functions.

2 Rotate the Blanket sprayline Suction valve to "Off" position.

3 Remove the outer filter bowls, and then, remove the filters and thoroughly clean them before re-assembling the filter.

Clean Fenceline nozzle filters regularly (if fitted).



Clean Blanket sprayline nozzle filters regularly.

Blanket Sprayline Nozzle Filters & Fenceline Option

Nozzle filters of the Blanket Sprayline and the Fencline Nozzle option (if fitted), should be cleaned regularly and when a nozzle spray pattern is effected by blockage.

To clean the Nozzle filters:

1 Completely stop all sprayer functions.

2 Ensure all pressure is removed from the spray lines.

3 Remove the nozzle cap and nozzle, and then, remove Nozzle filter.

Thoroughly clean Nozzle filter (and nozzle if necessary) before re-fitting the nozzle & nozzle cap.

4 Repeat step 3 for each nozzle.

Clean the compressor air filter regularly.

Air Filter

The air filter used by the compressor on the Optical Spot sprayer, is located on the top right hand side, rear chassis upright. The air fillter should be cleaned regularly.

To clean the air filter:

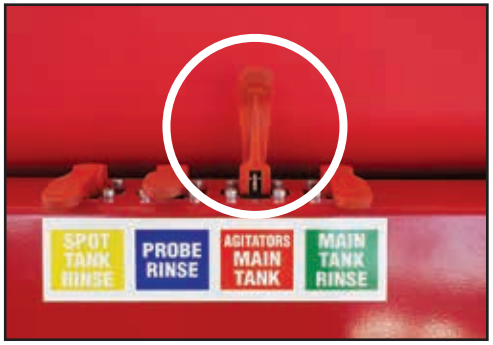
1 Completely stop all sprayer functions.

2 Remove the air filter cover and then remove the air filter element.

3 Thoroughly clean the air filter by tapping the filter and or using compressed air to remove the dust build-up.

If necessary replace with a new filter element.

4 Re-assemble the clean filter element and cover.



Open the Agitators Main Tank valve before adding chemical.

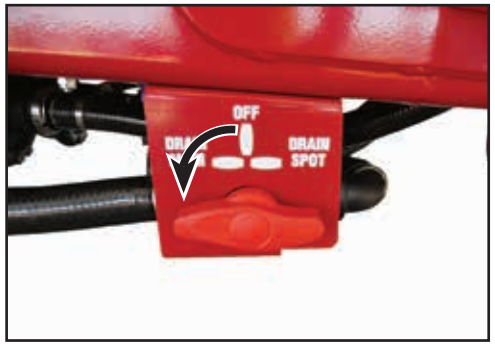
Tank Agitation

When chemical is added to the main tank, the pump and Agitators Main Tank valve must be open at all times to ensure chemical does not settle in the tank.

Check to see that tank agitation is correctly adjusted.

If agitation causes too much foaming in the tank, try closing Off one agitator to reduce foaming

If chemical settles, through pump break down or another reason, start up the sprayer after the fault has been rectified and let the mixture in the tank agitate for a length of time to ensure thorough mixing of the chemical.

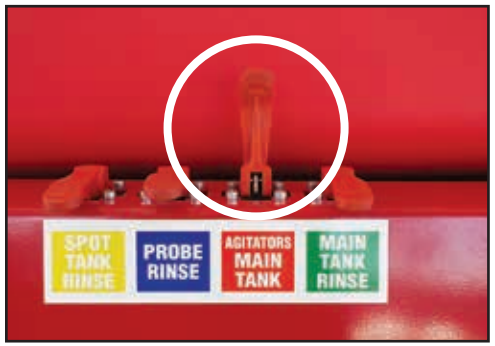


Open the Tank Drain valve to drain the Main tank.

Flushing the Sprayer

The sprayer is equipped with a flush tank for cleaning both the Main tank & Blanket Spray line and Spot Spray tank & Spot spraylines and the Main tank & Blanket spraylines when changing chemicals, and at the end of the day.

Always Flush the Tanks, Booms & Spraying Systems After Use. Is never recommended to leave chemicals standing in the main or spot spray tanks because of chemical settling issues, even though it may sometimes be necessary on occasions, if weather or machinery problems means spraying needs to be interrupted without emptying the spray tanks.



Open the "Agitators Main Tank" valve.

If spraying is interrupted and chemical mix is to be left in the spot & main tanks, it is recommended to flush chemical from both spraying systems and spraylines to avoid premature wear or failure of components and seals in the systems.

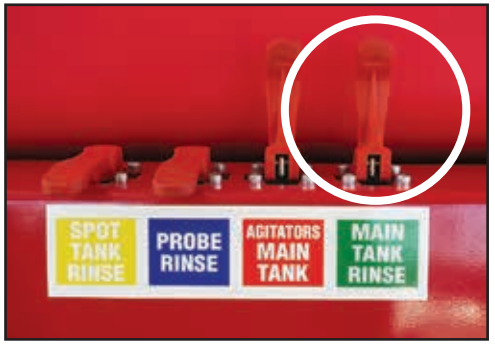
Flushing the Main Tank & Blanket Sprayline

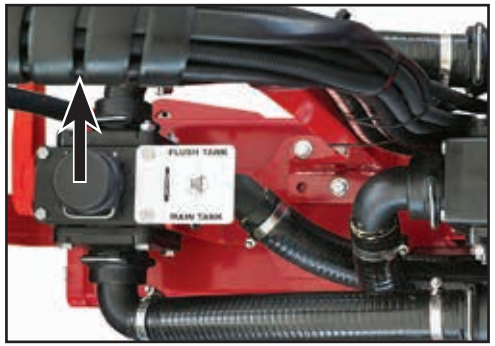
To flush the Main tank & Blanket sprayline:

1 Ensure the site for flushing and cleaning the sprayer meets with environmental and statutory regulations.

2 Open the Main Tank Drain valve to drain any remaining spray mixture from the tank.

Open the "Main Tank Rinse" valve.





Rotate the front-most Suction Line valve to the "Flush" position.

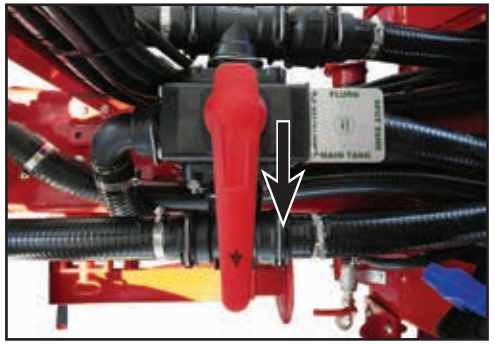
3 Open the "Agitators Main Tank" valve.

4 Open the "Main Tank Rinse" valve.

5 Rotate the front-most Suction Line valve to "Flush" position.

6 Rotate the other front Suction Line valve to "Main Tank" position.

Rotate the rearmost Suction Line valve to "Main Tank" position.



Rotate the Main Spray valve to "Main Spray" position.

7 Rotate the Main Spray valve to "Main Spray" position.

8 Start tractor and place sprayer controls in start up position according to Controller operating instructions.

9 Engage the pump drive and bring the pump to full operating speed.

All pumped liquid is now being returned into the tank. The system is not pressurised and tank agitator is not working.

NOTE

Ensure the drained mixture is disposed of as required by law.
Read chemical instructions.

CAUTION

ALWAYS "FIRST" Switch-On a Spray Controller - Before engaging the hydraulic pump drive.

The Air system must ALWAYS be Turned ON - BEFORE starting the pump drives, otherwise damage may occur to the PAV diaphragm.

Turn the spray boom sections ON.

10 Pressurise the system to operate tank rinse and agitators.

11 Adjust pressure to desired operating pressure by adjusting pressure up or down.

12 Turn the spray boom sections ON.

Fresh water now flushes through the suction line, pump, pressure lines, boom sections and nozzles.

All water comes into the spray tank from the flush tank. Water remaining in the tank drains out of the tank through the drain outlet.

Open the Boom Section Manifold Flush valve.

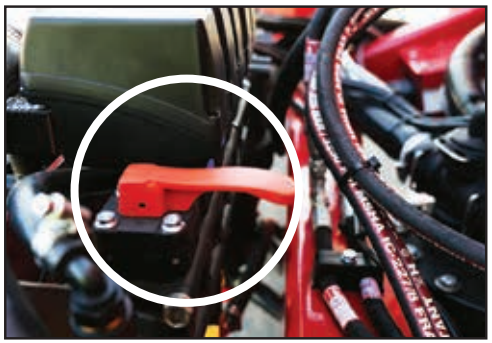
13 Open the Boom Section Manifold Flush valve (on the RHS of the Section Manifold at the rear of the sprayer) to flush the Boom Section Manifold valves.

The flushed liquid passes through a short hose onto the ground.

14 Close the Section Manifold Flush valve after the flush is completed.

15 Open the Blanket Line Pressure gauge valve at the front of the sprayer to flush any chemicals from the gauge and line, then, close the valve.

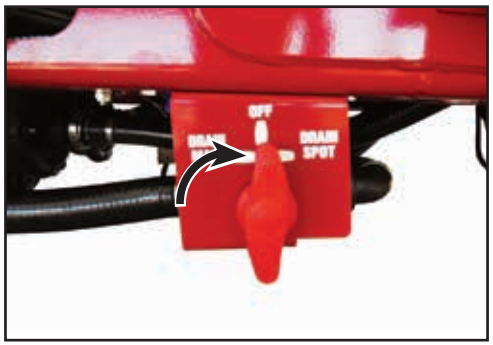
16 If fitted, flush the non-drip fenceline spraylines & clean the nozzle filters.



Close the Boom Section Manifold Flush valve.

17 On completion of flushing, shut down all contols and disengage the pump drive.

18 Remove and clean the pressure filters, then, reassemble.



Rotate the Main Tank Drain valve to "OFF" position.

19 Adjust all valves back to operating mode:

a) Close the Main Tank Rinse valve.

b) Rotate the Suction Line valves to "Main Tank" positions.

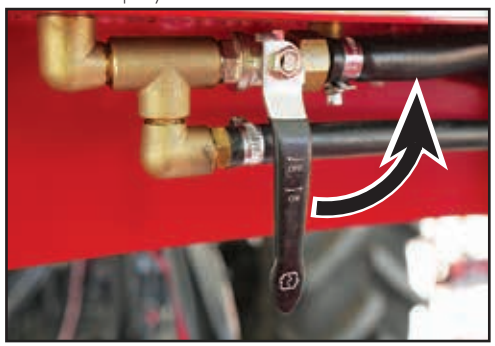
c) Close the Main Tank Drain valve.

20 Wash/hose down the outside of the sprayer.

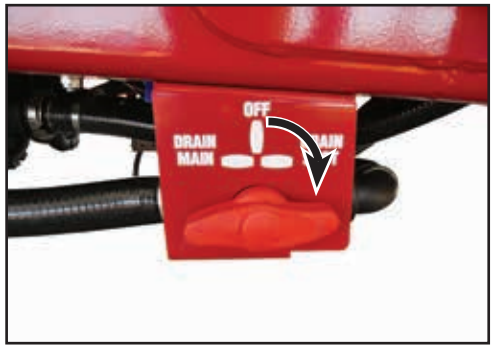
NOTE

It is recommended to do the sprayer cleaning and flushing with the boom open in the spraying position.

Open the Blanket Line Pressure valve at the front of the sprayer to flush out chemicals.



Remove and clean the pressure filters.



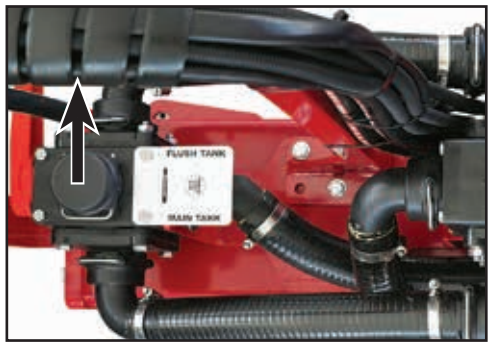
Open the Main Tank Drain valve to drain the tank.

Flushing the Spot Tank & WEEDit Sprayline

To flush the Spot Spray tank & Spot spayline:

1 Ensure the site for flushing and cleaning the WEEDit meets with environmental and statutory regulations.

2 Open the Main Tank Drain valve to drain any remaining spray mixture from the tank.



Rotate the front-most Suction Line valve to the "Flush" position.

3 Rotate the front-most Suction Line valve to "Flush" position.

4 Rotate the other front Suction Line valve to "Spot Tank" position.

Rotate Spot Vent valve to "Return to Spot Tank" position.

5 Rotate the Spot Vent valve to "Return to Spot Tank" position.

6 Rotate the PAV valve to "Return to Spot Tank" position.

Rotate the Spot Spray valve to the "Spot Spray" position.

7 Rotate the Spot Spray valve to the "Spot Spray" position.

8 Open the "Spot Tank Rinse" valve.

9 Start tractor and press the Controller Power Button to switch-on the Controller & start the air compressor.

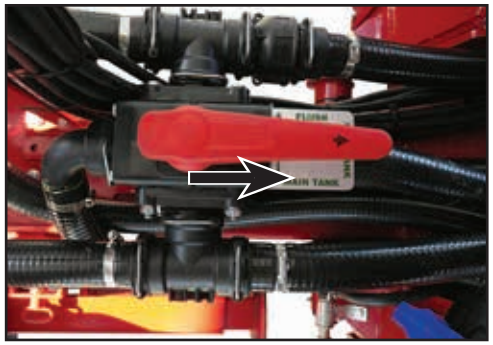
Follow the instructions in the separate WEEDit Controller User Manual.

The WEEDit Console will show the default screen and the air compressor should start running.

NOTE

Ensure the drained mixture is disposed of as required by law.
Read chemical instructions.

Rotate the other front Suction Line valve to "Spot Tank" position



Rotate the PAV valve to the "Return to Spot Tank" position.

Open the "Spot Tank Rinse" valve.

WEEDit Controller Power Button - On/Off.

10 Engage the pump hydraulic drive.

11 Press the Flush button to check the pressure of the system by briefly flushing it.

Flush the system and check if the pressure remains 2.0 bar at all the nozzles. The air compressor should start running after flushing begins.

Adjust the pressure if required.

Press the Flush Buttom to flush & check pressure.

12 Turn the spray boom sections ON.

Fresh water now flushes through the suction line, pump, pressure lines, boom sections and nozzles.

All water comes into the spray tank from the flush tank. Water remaining in the tank drains out of the tank through the drain outlet.

13 Open the Spot Line Pressure gauge valve at the front of the sprayer to flush any chemicals from the gauge and line, then, close the valve.

Remove and clean the pressure filters.

14 On completion of flushing, shut down all contols and disengage the pump drive.

15 Remove and clean the three Spot sprayline pressure filters, then, reassemble.

16 Adjust all valves back to operating mode:

a) Close the Main Tank Rinse valve.

b) Rotate the WEEDit Suction Line valves to "Spot Tank" position.

c) Close the Spot Tank Drain valve.

17 Wash/hose down the outside of the sprayer.

End of Boom Section Push-In-Plugs.

End of Boom Section Push-In-Plugs

The removal of End of Boom Section Push-In-Plugs is not usually necessary when normally flushing the Optical Spot spraylines system.

However, it is recommended to remove the Push-In-Plugs to flush the spraylines after doing any repair work on the boom to be sure to remove any particles or debris after the repairs.

To remove the Push-In-Plugs, simply pull them out.

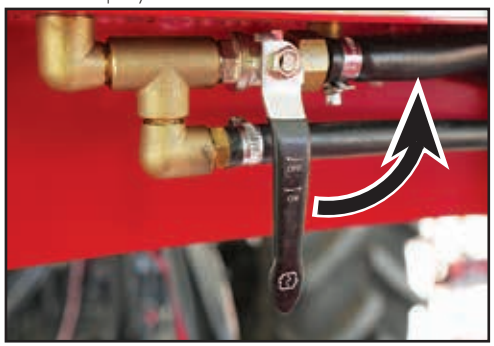
Be sure to replace the Push-In-Plugs after flushing.

CAUTION

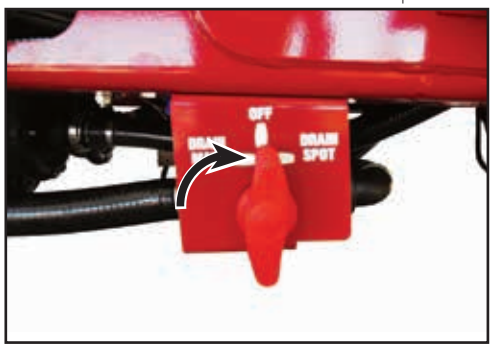
ALWAYS "FIRST" Switch-On a Spray Controller - Before engaging the hydraulic pump drive.

The Air system must ALWAYS be Turned ON - BEFORE starting the pump drives, otherwise damage may occur to the PAV diaphragm.

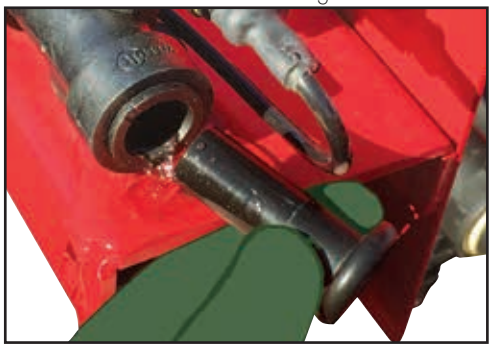
Open the Spot Line Pressure valve at the front of the sprayer to flush out the chemicals.



Rotate the Main Tank Drain valve to "OFF" position.



Pull-out to remove & push-in to replace the Boom Section Push-In-Plugs.



Using Tank and Equipment Cleaners

If a cleaning agent is required (refer to chemical label), first completely flush the sprayer with water as outlined.

To Use Cleaners in Spray Lines & Main Tank:

1 Fill the appropriate spray tank with fresh water to the desired level.

2 Add cleaning agent into the required tank (use according to instructions).

3 Position the valves for the tank required according to the flushing instructions.

7 Start tractor and place sprayer controls in start up position according to Controller operating instructions (see page 2.24).

8 Engage the pump and bring the pump to full operating speed.

All pumped liquid is now being returned back into the tank. The system is not pressurised and tank agitators are not working.

9 Pressurise the system to operate the tank rinse (and agitators) if fitted.

10 Adjust pressure to desired operating pressure by adjusting pressure up or down.

10 Turn the spray boom sections ON.

Fresh water now flushes through the suction line, pump, agitator, pressure lines, boom sections and nozzles.

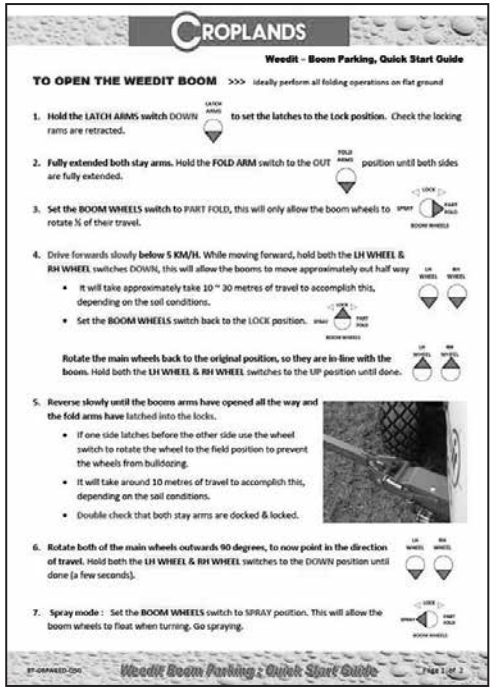
11 If you require the cleaning agent to soak or stand for a period, turn the spray booms Off, and completely shut down the sprayer for a period.

12 Repeat steps 8 - 12 after soaking is completed.

13 Turn the spray booms OFF and shut down the sprayer.

14 Open the approriate Tank Drain valve.

15 After the tank is drained, completely flush the spraylines & tank again, the flushing instructions.



CROPLANDS

Weedit - Boom Parking, Quick Start Guide

TO OPEN THE WEEDIT BOOM >>> ideally perform all folding operations on flat ground

1. Hold the **LATCH ARMS** switch DOWN to set the latches to the Lock position. Check the locking rams are retracted.
2. **Fully extended both stay arms.** Hold the **FOLD ARM** switch to the OUT position until both sides are fully extended.
3. Set the **BOOM WHEELS** switch to PART FOLD, this will only allow the boom wheels to rotate ½ of their travel.
4. Drive forwards slowly **below 5 KM/H.** While moving forward, hold both the **LH WHEEL & RH WHEEL** switches DOWN, this will allow the booms to move approximately out half way
   - It will take approximately take 10 ~ 30 metres of travel to accomplish this, depending on the soil conditions.
   - Set the **BOOM WHEELS** switch back to the LOCK position.

   Rotate the main wheels back to the original position, so they are in-line with the boom. Hold both the **LH WHEEL & RH WHEEL** switches to the UP position until done.
5. Reverse slowly until the booms arms have opened all the way and the fold arms have latched into the locks.
   - If one side latches before the other side use the wheel switch to rotate the wheel to the field position to prevent the wheels from bulldozing.
   - It will take around 10 metres of travel to accomplish this, depending on the soil conditions.
   - Double check that both stay arms are docked & locked.
6. Rotate both of the main wheels outwards 90 degrees, to now point in the direction of travel. Hold both the **LH WHEEL & RH WHEEL** switches to the DOWN position until done (a few seconds).
7. Spray mode : Set the **BOOM WHEELS** switch to SPRAY position. This will allow the boom wheels to float when turning. Go spraying.

Weedit Boom Parking : Quick Start Guide

Also supplied with the sprayer is the "BT-OMWEED-QSG" Quick Start Guide.

Opening & Closing the Spray Boom

The unfolding & folding of the trailing boom must be undertaken on <u>level ground</u>.

Unfolding the boom involves using the toggle switches on the boom controller to:

- Unlock the stay arm locks *(see note below)*
- Rotate the main wheels to open out the wings while reversing the tractor & sprayer, then,
- Open the stay arms
- Connect the stay arms,
- Lock the stay arms into positon
- Rotate & lock the wheels into spraying position.

The Boom Controller.

Opening the Boom for Spraying

To open the sprayer boom from transit to spraying position:

1 Connect the sprayer to the tractor. Follow instructions on pages 2.10 - 2.20 of this manual. Move the unit onto level ground for opening the boom.

2 The red light "On" in the centre of the boom controller panel shows the power is connected for boom controls.

3 Adjust the tractor oil flow to 1/8th and engage the hydraulic bank for continuous flow.

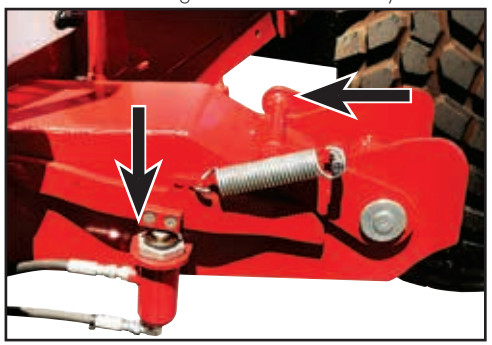
Hold DOWN the LATCH ARMS switch to lock the latches.

4 Hold DOWN the LATCH ARMS switch to hydraulically move the boom stay arm lock latches into their locked position.

When locked, the latch locking ram is fully retracted & the locking mechanism is retracted ready for connecting the boom stay arms.

5 Check both locking ram and latch are fully retracted on each side of the sprayer.

Check each locking ram and latch are fully retracted.



NOTE

The initial boom alignment is carried out at the factory and checked by your dealer.

NOTE

Tip for unlocking the stay arms latches (parrot beak locking mechanisms).

It is recommended to take any load off the stay arm latches before unlocking by reversing the machine a small distance (1 metre is ample) before activating.

WARNING

Make sure there are no people, things or power lines with in range of the spray boom when folding or unfolding.

Hold DOWN the FOLD ARMS switch to open the stay arms.

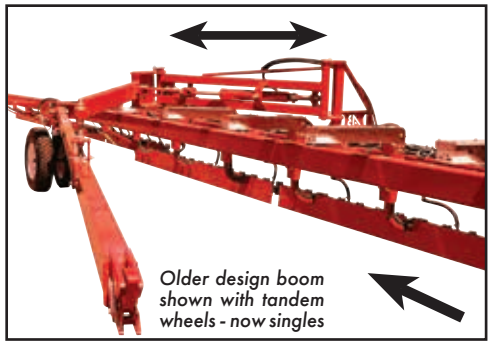
6 Hold DOWN the FOLD ARMS switch to open the wing stay arms.

Hold DOWN the switch until each wing stay arm is fully opened.

Move the BOOM WHEELS switch to PART FOLD.

7 Move the BOOM WHEELS switch to PART FOLD. This only allows the main boom wheels to rotate ½ of their travel.

8 Hold DOWN both LH & RH WHEEL switches while slowly moving the sprayer forwards (below 5 km/h).



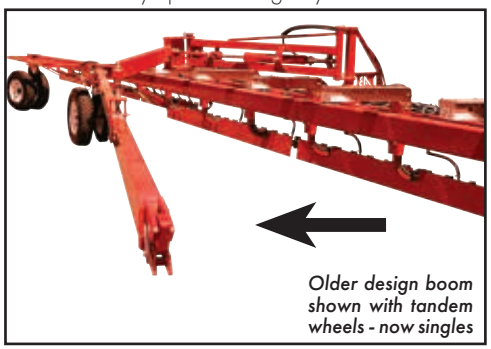
Drive the sprayer forwards until booms open approximately half way.

Drive forward until both boom wings are approximately half open - this will take approximately 10 to 30 metres of travel, depending on soil conditions.

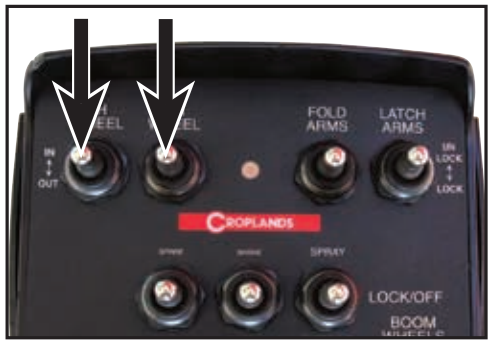
When the boom is half open, move the BOOM WHEELS switch to LOCK position.

6 When the boom is half open, move the BOOM WHEELS switch to LOCK position.

Fully open the wing stay arms .



Hold DOWN both LH & RH WHEEL switches & slowly drive forwards.

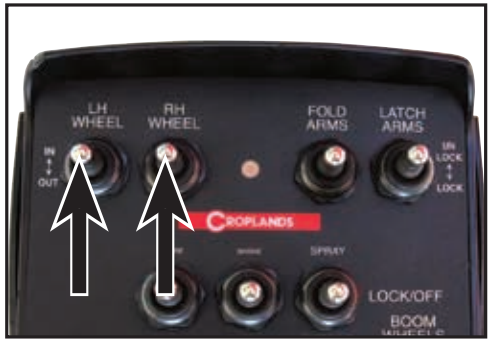


NOTE

Depending on the soil conditions, it requires approximately 10 - 30 metres of reverse travel to open the booms half way.

NOTE

Depending on the soil conditions, it will normally take a further 10 metres of travel to fully open the boom wings, connect & latch the stay arms.



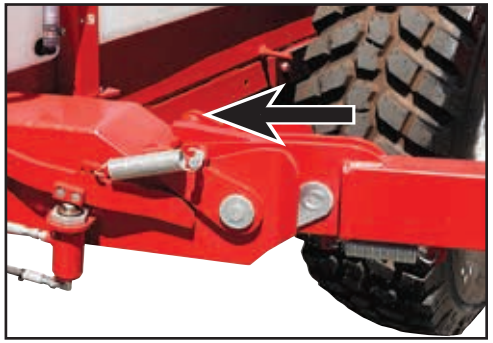
Hold UP both LH & RH WHEEL switches to rotate the wheels.

7 Hold UP both LH & RH WHEEL switches to rotate the wing wheels back to their original position (in-line with the boom). This normally takes a few seconds.

8 Reverse the sprayer slowly until the stay arms are adjacent the docking station.

Before either of them docks, hold DOWN the WHEEL switch (for each wing wheel) to rotate each wheel to the "Field" position (at 90 degrees to the boom).

Reverse the sprayer slowly until both stay arms are latched into the sprayer locks.

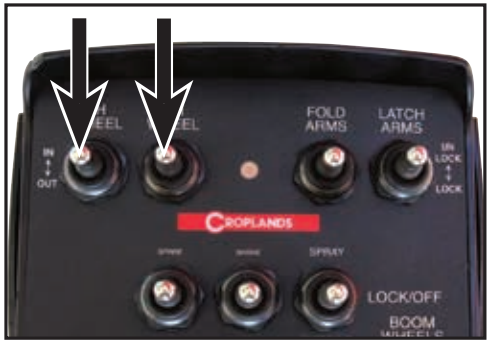


Check that the boom stay arms are docked & each latch is correctly positioned.

This will normally take about 10 metres of travel to accomplish, depending on soil conditions.

9 Check that both boom stay arms are docked & locked. Each latch must be correctly positioned (stay arm latch resting on the locking mechanism).

10 Check each side of the sprayer to ensure both locking mechanisms are corectly locked.



Hold DOWN both LH & RH WHEEL switches to rotate the main wheels to face forward in the direction of travel.

11 Hold DOWN the LH & RH WHEEL switches to rotate the main wing wheels to face forward in the direction of travel (at 90 degrees to the boom).

This will normally take a few seconds to complete.

Inset: Main wing wheels in unfolding position. Rotate the wheels to face forward - in the **direction of travel.**

CAUTION

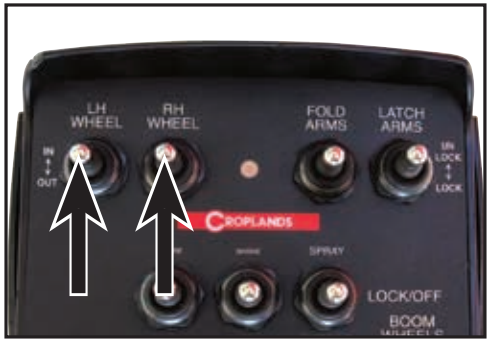
It is recommended to rotate the wing wheels forwards (to "Field" position) once the stay arms are adjacent the docking station - before either of them docks.
Hold DOWN the WHEEL switch (for each wing wheel) to rotate each wheel to the "Field" position.
If not opened, wing wheels can be pushed sideways (bulldozing) which may damage boom components.

CAUTION

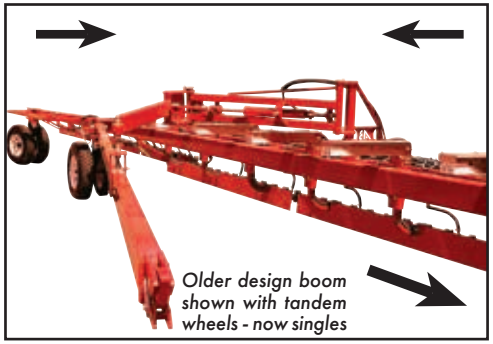
Be sure to check that the locking ram (on each side of the sprayer) mechanism is fully extended with the stay arm firmly locked into position.
Failure to ensure the locking mechanisms are correctly locked in place may result in the stay arms releasing during spraying operations which may, in turn, cause damage to the sprayer.

Move the BOOM WHEELS switch to SPRAY position.

Move the BOOM WHEELS switch to LOCK position.



Hold UP both LH & RH WHEEL switches & slowly drive the sprayer forwards.



Slowly move the sprayer forward until both boom wings are fully closed (into the transport position).

12 Move the BOOM WHEELS switch to SPRAY position to lock the boom wheels into their spraying postion.

This allows the boom wheels to float when turning.

13 Turn off the tractor oil flow.

Leave the Master Switch On & boom wheels in Spray Position to allow the inner boom wheels to float when turning in the field.

On completion of these steps, the boom is opened & ready for spraying.

Closing the Boom for Transit

To close the sprayer boom for transit:

1 Turn on the tractor oil flow.

2 Move the BOOM WHEELS switch to the LOCK position to lock the main boom wheels in the direction of travel.

3 Hold UP the LATCH ARMS switch to hydraulically unlock the boom stay arm latches.

When unlocked, the latch locking ram mechanisms are fully retracted & ready for disconnection.

4 Hold UP both LH & RH WHEEL switches & slowly drive the sprayer forwards (below 5 km/h) to disconnect the stay arms and begin closing the boom wings.

Holding the LH & RH WHEEL switches UP moves the wheels into the transport position (in-line with the boom) while moving forward.

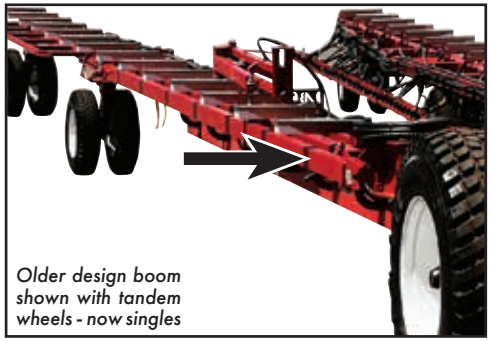
Slowly move the sprayer forward until both boom wings are fully closed (into the transport position).

5 When the boom is fully closed, hold UP the FOLD ARMS switch to close the wing stay arms.

Hold UP the FOLD ARMS switch until each wing stay arm is fully closed.

Hold UP the LATCH ARMS switch to unlock the boom stay arm latches.

Hold UP the FOLD ARMS switch to fully close the stay arms.



Hold UP the FOLD ARMS switch until each wing stay arm is fully closed.

After completing these steps, the sprayer is ready for transport.

Optional: *Transport Light kit available.*

WEEDit User Manual

Operating the Sprayer

For detailed operating instructions for Optical Spot Spraying, refer to:

- The WEEDit User manual,
- The Bravo User manual, and
- Other Controller Manuals supplied for controller(s) fitted to your sprayer.
- Refer to chapters 2, 3 & 4 of this manual for sprayer set-up and operating instructions.

Folding steps on each side at the front of the Sprayer.

Fold-Up the Steps Before Spraying

It is recommended to fold-up the steps on each side at the front of the Sprayer before proceeding to spray.

If left down, the steps have low clearance and damage may occur with uneven ground surfaces and/or with other objects.

Fold-up the steps on each side at the front of the Sprayer before proceeding to spray.

CAUTION

It is important that all boom wheel position changes are made whilst the machine is moving at slow walking speed - to reduce friction & load on wheel components (especially in sandy conditions).

Damage to the boom will occur if this recommendation is not followed.

Accurately calculate the amount of chemical required.

Calculate Water & Chemical Quantities

Before spraying it is necessary to calculate the exact quantities of water and chemical needed to spray the required area.

The following formulae may be useful:

1 **For chemical rates** expressed in litres or kg per hectare (land area), calculate the amount of chemical needed, using the formula:

Chemicals required (litres) =

Tank Volume (l) x Recommended Chemical Rate (l/ha) ÷ Spray Application Rate (l/ha)

eg. [4000 x 3] ÷ 150

= 80 litres.

Lower the 60 litre Chem-E-Flush into the filling position.

2 **For volume of mixture required** to spray the selected area, calculate the liquid required.

Spot spraying uses chemical recommendations given in water volume rates L/100L.

Use the following formula:

Chemical Required (litres) =

Tank Volume (litres) x Recommended Chemical Rate (l/100 litres) ÷ 100

eg, [2000 x 4] ÷ 100

= 80 litres.

NOTE

IMPORTANT! Be sure to mix only enough spray mixture to cover the area required. Avoid wastage and problems of needless chemical disposal.

Pull the lever to unlock & lower the Chem-E-Flush.

Adding Chemical To the Main Tank

Chemical can be added to the Main Tank using the:

A) Chem-E-Flush hopper, or the

B) Optional Chemical Probe.

Release & lower the hopper.

A) 60 Litre Chem-E-Flush Hopper

Only use the 60 litre Chem-E-Flush to add chemical the Main Tank with agitation.

To add chemical to the Main Tank using the 60 litre Cheme-E-Flush:

1 Make sure sufficient water is added to the main tank and the flush tank.

2 Pull the Unlock Lever the toward the Chem-E-Flush to release and lower the unit.

3 Lower the hopper to its filling position.

Rotate the Fresh Water Fill Valve to "Fill Main Hopper" position.

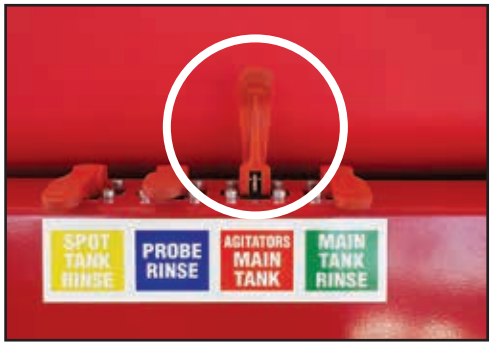
5 Rotate the Fresh Water Fill Valve to "Fill Main Hopper" position.

6 Open the Agitators Main Tank valve.

WARNING

Operating the pump at faster than idling speed may burst lines.

Open the "Agitators Main Tank valve before adding chemical.



Close the Transfer valve at the base of the hopper.

7 Close the Transfer valve at the base of the hopper.

8 Start the tractor and **operate the pump with the tractor engine at idling speed only.**

The pump is a hydraulically driven centrifugal pump.

Warning! Operating the pump at faster than idling speed, may burst lines.

NOTE

IMPORTANT! Ensure agitation of spray tank continues after chemical is added to the spray tank.

Open hopper lid & add chemical powder/liquid.

9 Pressurise the pressure lines by switching the appropriate spray controller ON & in RUN mode with booms OFF. (Refer to your controller operator manual for instructions).

10 Open the hopper lid & add chemical powder/liquid to the hopper.

11 Close the hopper lid & open the Fill valve to add water and mix the chemical.

Close the lide & open the Fill valve to add water and mix the chemical.

Close the Fill valve

12 Close the Fill valve after the chemical is mixed.

13 Open the Transfer valve at the base of the hopper to transfer chemical mixture to the spray tank.

14 Close the Transfer valve at the base of the hopper when transfer is completed.

Open the Transfer valve to transfer the mixture.

Open the hopper lid & place the container over the drum rinse valve.

To rinse a chemical container:

1 Open the Hopper lid and place the container over the rinse nozzle inside the hopper.

2 Ensure the Transfer valve at the base of the hopper is closed.

3 Ensure the Chem-E-Flush Fill valve is closed.

4 Lift the Drum Rinse valve to open it and rinse the drum.

Close the hopper lid.

To rinse the hopper:

1 Close the hopper lid.

2 Close the Transfer valve at the base of the hopper.

3 Close the Fill valve.

4 Open the Hopper Rinse valve to rinse the hopper.

5 Close the Hopper Rinse valve after rinsing the hopper.

Open the Transfer valve to transfer the rinse mixture.

6 After rinsing, transfer the rinse mixture to the spray tank, by opening the Transfer valve at the base of the hopper.

7 Repeat the rinse procedure, if necessary, to thoroughly cleanse the hopper.

8 Close the Transfer valve at the base of the hopper when transfer is completed.

Rotate the Main Spray valve to "Main Spray" position.

After completing the mixing procedures:

1 Check the Transfer valve at the base of the hopper is closed.

2 Rotate the Main Spray valve to “Main Spray” positon.

3 Turn the Suction Line valve to "Spray" position

4 Return the hopper back to its transport position. Push the hopper inwards until the latch mechanism is engaged.

Lift the Drum Rinse valve to rinse the container.

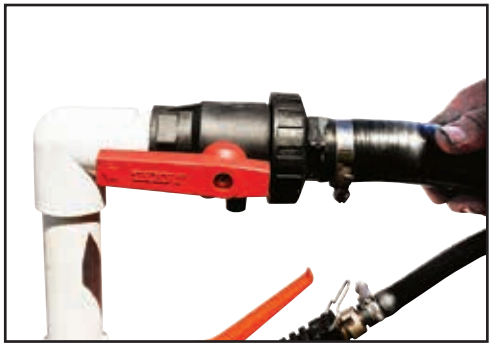
Lift the Hopper Rinse valve to rinse the hopper.

Close the Transfer valve after transfering the mixture.

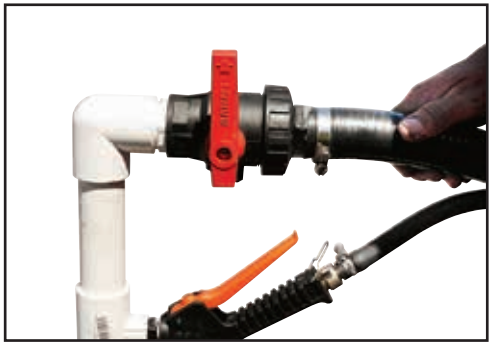
Return the hopper back to its transport position. Push the hopper inwards until the latch mechanism is engaged.

Connect the Probe to the "Main Tank Probe" inlet.

Rotate the Main Spray valve to the "Main Probe" position.



Open Probe valve to transfer mixture to spray tank.



Close probe valve.

B) Chemical Probe

To add chemical to the Main Tank using the chemical probe (optional), follow the steps outlined:

1 Make sure sufficient water is added to the spray tank and the flush tank.

2 Connect the Chemical Probe to the "Main Tank Probe" inlet.

3 Connect the Probe Rinse hose to the "Probe Rinse"connector.

5 Rotate the Main Spray valve to the "Main Probe" position.

6 Open the Agitators Main Tank valve.

7 Open the Probe Rinse valve.

8 Start the tractor and **operate the pump with the tractor engine at idling speed only.**

9 Place the probe in the chemical and open the Probe valve to transfer chemical to the spray tank.

10 Open the Probe Rinse gun to rinse the container while the Probe valve is open.

11 Close the Probe valve when the chemical transfer is completed.

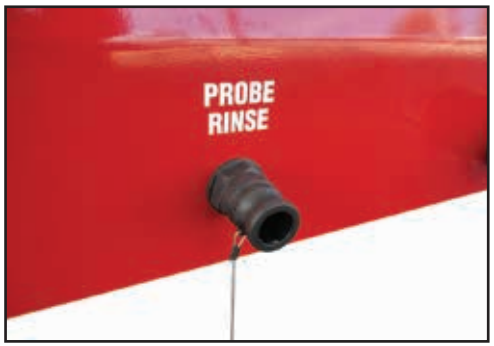
12 Close the Probe Rinse valve.

13 Rotate the Pressure Control lever to "Main Spray" position.

14 Turn the Suction Line valve to " main Spray" position

15 Disconnect the Probe and Probe Rinse hoses and refit the connector caps.

Connect the Probe Rinse hose to the "Probe Rinse" connector.



Open the "Agitators Main Tank" & "Probe Rinse" valves.

Open the Probe Rinse gun to rinse the container.

NOTE

IMPORTANT! Ensure agitation of spray tank continues after chemical is added to the spray tank.

Optional SHURflo AG Runner chemical transfer pump.

Optional SHURflo AG Runner chemical transfer pump fitted to WEEDit 7000

This option is used to transfer chemical from Envirodrums to the 30 litre hopper.

Attach the chemical transfer hose to the Camlock fitting.

To transfer chemical from Envirodrums to the 30 litre hopper:

1 Always wear protective clothing when handling chemical.

2 Attach transfer hose to Camlock fitting and the other end to chemical supply via Envirodrum coupling.

3 Make sure Chemical hopper lid is closed.

Open the ball valve to fill the hopper.

4 Open the ball valve to fill hopper position.

5 Turn on the pump.

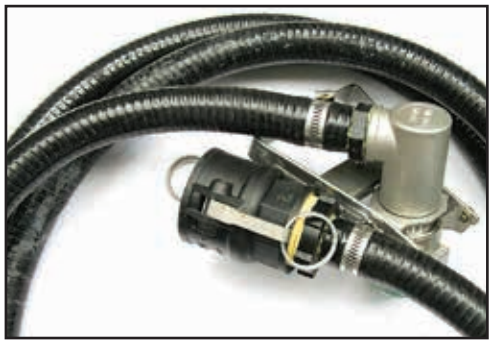
Pump the required amount of chemical to the 30L hopper.

Don't open the hopper lid whilst the transfer pump is operating.

6 Once completed, turn off the pump.

7 Transfer the chemical from 30L Hopper to the Spot tank as per instructions.

AG Runner chemical transfer hose.

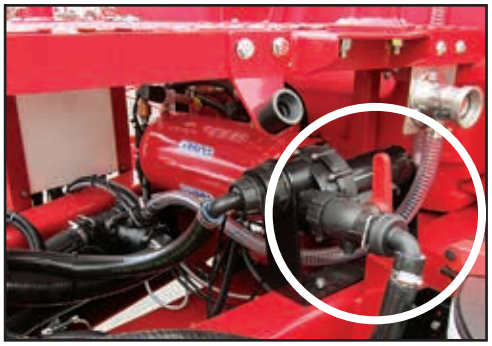


Turn the pump "On" to start & "Off" at completion.

Connect the Envirodrum coupling to the flush fitting.

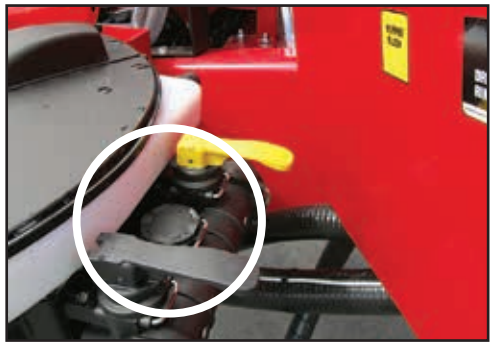
8 Connect the Envirodrum coupling to the flush fitting, then, repeat the above processes 5-7 to flush chemicals from the Agrunner system.

For more thorough rinsing, leave the 30L hopper "running" whilst flushing.



Close the Ag Runner tap to the hopper.

9 Close the AG Runner valve to the hopper, then, disconnect the hose.



The red Agitation tap is not fitted with the Ag Runner.

NOTE

The red Agitation tap is not used when the Agrunner chemical pump is installed.

Adding Chemical To the Spot Tank

Chemical can be added to the Spot Tank using the:

A) 30 litre Chemical Mixing hopper,

or the

B) Optional Chemical Probe.

30 litre Chemical Mixing hopper.

A) 30 Litre Chemical Mixing Hopper

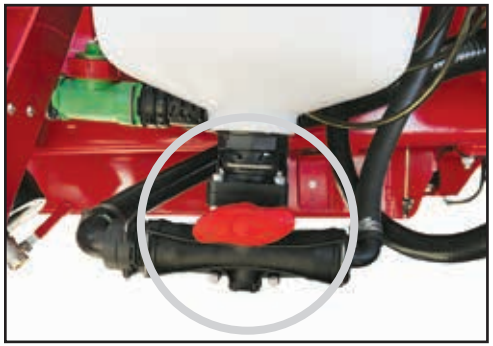
Only use the 30 litre Chemical Mixing hopper to add chemical the Spot Tank.

To add chemical to the Spot Tank using the 30 litre Chemical Mixing hopper:

1 Make sure sufficient water is added to the main tank and the flush tank.

Rotate the Fresh Water Fill Valve to "Fill Spot Hopper" position.

2 Rotate the Fresh Water Fill Valve to "Fill Spot Hopper" position.



Close the Transfer valve at the base of the hopper.

3 Close the Transfer valve at the base of the hopper.

4 Start the tractor and **operate the pump with the tractor engine at idling speed only.**

The pump is a hydraulically driven centrifugal pump.

Warning! Operating the pump at faster than idling speed, may burst lines.

NOTE

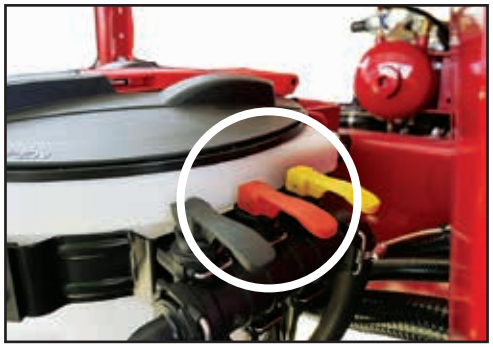
IMPORTANT! Ensure agitation of spray tank continues after chemical is added to the spray tank.

Open hopper lid & add chemical powder/liquid.

5 Pressurise the pressure lines by switching the appropriate spray controller ON & in RUN mode with booms OFF. (Refer to your controller operator manual for instructions).

6 Open the hopper lid & add chemical powder/liquid to the hopper.

7 Close the hopper lid & open the Fill valve to add water and mix the chemical.



Close the Fill valve

8 Close the Fill valve after the chemical is mixed.

9 Open the Transfer valve at the base of the hopper to transfer chemical mixture to the spray tank.

10 Close the Transfer valve at the base of the hopper when transfer is completed.

NOTE

The red Agitation tap is not used when the Agrunner chemical pump is installed.

Open the hopper lid & place the container over the drum rinse valve.

To rinse a chemical container:

1 Open the Hopper lid and place the container over the rinse nozzle inside the hopper.

2 Ensure the Transfer valve at the base of the hopper is closed.

3 Ensure the chemical mixer Fill valve is closed.

4 Lift the Drum Rinse valve to open it and rinse the drum.

Close the hopper lid.

To rinse the hopper:

1 Close the hopper lid.

2 Close the Transfer valve at the base of the hopper.

3 Close the Fill valve.

4 Open the Hopper Rinse valve to rinse the hopper.

5 Close the Hopper Rinse valve after rinsing the hopper.

Close the lid & open the Fill valve to add water and mix the chemical.

Open the Transfer valve to transfer the mixture.

Lift the Drum Rinse valve to rinse the container.

Lift the Hopper Rinse valve to rinse the hopper.

Connect the Probe to the "Spot Tank Probe" inlet.

B) Chemical Probe

To add chemical to the Spot Tank using the chemical probe (optional), follow the steps outlined:

1 Make sure sufficient water is added to the spray tank and the flush tank.

2 Connect the Chemical Probe to the "Spot Tank Probe" inlet.

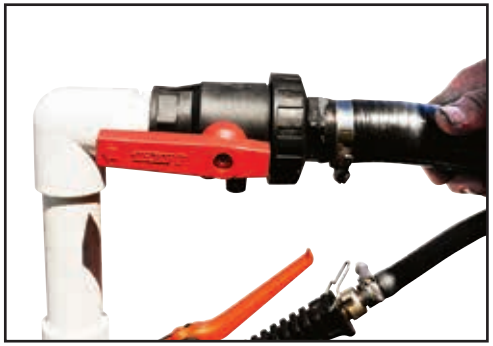
3 Connect the Probe Rinse hose to the "Probe Rinse"connector.

Rotate the Spot Spray valve to the "Spot Probe" position.

5 Rotate the Spoy Spray valve to the "Spoy Probe" position.

6 Open the Probe Rinse valve.

7 Start the tractor and **operate the pump with the tractor engine at idling speed only.**



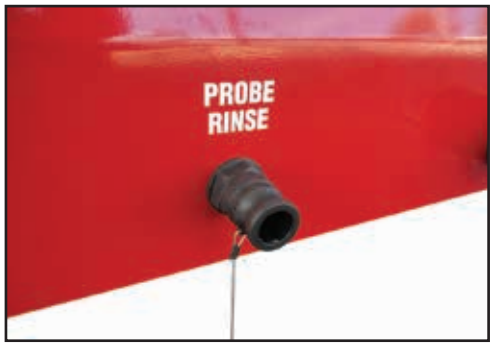
Open Probe valve to transfer mixture to spray tank.

9 Place the probe in the chemical and open the Probe valve to transfer chemical to the spray tank.

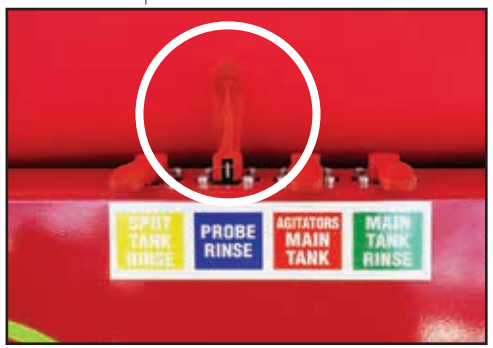
Open the Probe Rinse gun to rinse the container.

10 Open the Probe Rinse gun to rinse the container while the Probe valve is open.

Connect the Probe Rinse hose to the "Probe Rinse" connector.

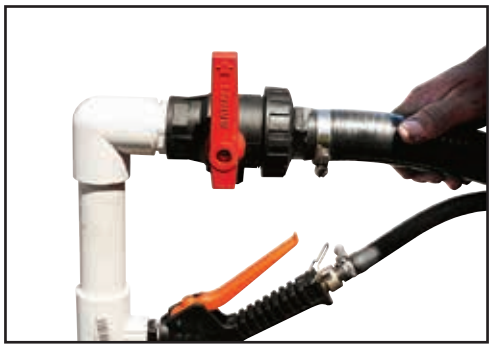


Open the "Probe Rinse" valve.



NOTE

IMPORTANT! Ensure agitation of spray tank continues after chemical is added to the spray tank.



Close probe valve.

Refit the Spot Tank Probe connector cap.

11 Close the Probe valve when the chemical transfer is completed.

12 Close the Probe Rinse valve.

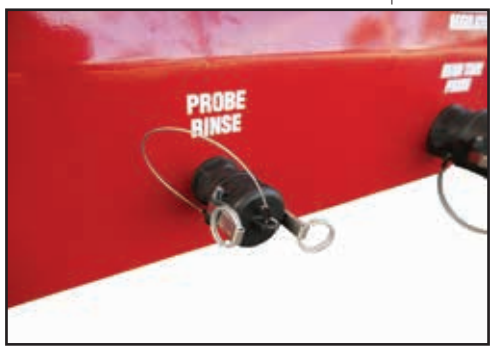
13 Rotate the Spot Spray valve to the "Spot Spray" position.

14 Turn the Suction Line valve to "Spot Spray" position

15 Disconnect the Spot Tank Probe and Probe Rinse hoses and refit the connector caps.

Rotate the Spot Spray valve to the "Spot Spray" position.

Refit the Probe Rinse connector cap.



Pre-Operation Checklist

This checklist assumes:

- The sprayer has been unloaded & adjusted ready to spray (see separate WEEDit Transport Unloading & Setup Guide),
- Assumes a knowledge of this manual and all associated manuals.

Use the following list, to check all pre-operation procedures have been completed before proceeding to spray:

1 **Safety.**
Do not operated this sprayer without complying with all safety obligations See sections 1 & 2.

2 **Connect Sprayer to Tractor.**
See pages 4.4 - 4.7

3 **Connect Controllers & Electrical.**
See pages 4.7 - 4.13

4 **Engage, Check & confirm the air system.**
See page 4.13

5 **Check Tyre & Boom shock absorber pressures.**
Optical sensor heights should be correct if airbag, tyre & shock absorber pressures are correct. Sensor heights should only be checked in the spray position (not in parked position).
See page 4.15 - 4.18

6 **Connect Hydraulics.**
See page 4.5 - 4.7.
Never engage the hydraulic pumps before the air system. See page 4.13.

7 **Filters checked.**
See pages 4.21, 5.6 & 7.4.

The following checks will require some liquid in the tanks - ideally fresh water:

8 **Pumps Checked** – do not run pumps dry.
See pages 4.22 - 4.26

9 **Application Pressures Checked.**
See pages 4.22 - 4.26

10 **Tank Agitators Checked.**
See Page 4.25.

11 **Check Optical Spot system.**
Wave some live plants under each sensor.

The following checks require:

- The sprayer to be have been previously calibrated (See section 6)
  &
- The operator is skilled in chemical application/operating on advice from Agronomist.

12 **Confirm Correct Nozzles for Application.**
(See section 6)

13 **Chemical Mixing.**
See pages 5.18 - 53.27.

14 **Water & Chemical loads.**
See section 3.

15 **Use the Pre-Operation Checklist, as a final check before spraying.**
See pages 4.21 - 4.26.

NOTE

Upon completion of spraying, thoroughly rinse & clean the sprayer. See pages 5.8 - 5.12.

Proper calibration considers all spraying variables.

Calibration Procedure

Applying the correct amount of chemical to a crop is only possible if:

- the sprayer is calibrated correctly.
- the sprayer is operated correctly.
- the sprayer is maintained correctly.

The variables of spray application (distance, time, working width, liquid and chemical volumes) must be measured and controlled accurately to ensure chemicals are applied at the correct rate.

Automatic spray controllers measure and control the variables of speed and flow rate to give constant application.

However proper nozzle selection, checking calibration of nozzles, speed and flow rate as well as correct mixing of chemicals must be done to ensure the accuracy and performance of the sprayer and its controller.

Accurate calibration is essential to ensure uniform application of the recommended dose of chemical to the target.

Proper calibration involves setting up the sprayer (nozzle selection, pressure, speed), calculating chemical and water rates and measuring the performance of the sprayer itself. Only then can you be totally confident in applying chemical correctly.

Fully Automatic Spray Controllers

Fully automatic spray controllers maintain application rates (set by the operator) when operated in Auto position.

Such controllers monitor speed of travel (speed sensor) and flow rate (flow meter) and automatically adjust flow rate (via a servo valve) to maintain correct application rate irrespective of speed variations within the limits of the nozzles used.

IMPORTANT:

1 It should be remembered that the spray controller does not eliminate the necessity to measure and check the accuracy of nozzle spray patterns and outputs. These must be checked regularly to ensure correct and uniform application rates because nozzles wear with use.

2 Flow meters used by a controller also need to be checked and calibrated on a regular basis.

On the following page, you will see how to maintain and check an dual line model optional Rapid-check flowmeter.

It is recommended you do this regularly during the spraying season.

See the Controller Operator's Manual for detailed information and calibrating procedures specific to the spray controller.

The 7000 litre Dual Optical Spot Sprayer

Note: Flow meters are note used on the Optical Spot Spray system as no flow meter can cope with the extreme low and high flow rates.

The 7000 litre Dual Optical Spot Sprayer has 2 flow meters:

- Blanket spray
- Main tank fill

For accurate spray rate application, follow the calibration procedures outlined below.

Rapid Check Flowmeter

Blanket Spray Calibration Procedure

This procedure is applicable to Blanket Spray applications only.

For accurate spray rate application, follow this calibration procedure:

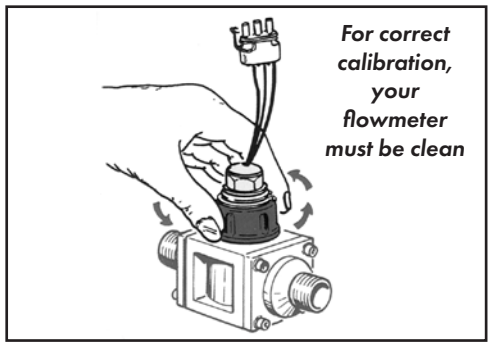
Step 1

Ensure Equipment Is In Good Working Order.

Tank, pump, boom, filters and nozzles must be clean, free of leakages and functioning properly.

Follow the pre-operation checklist, maintenance and operating instructions in this manual.

Install, calibrate and operate the spray controller according to the spray controller Installation/Operators Manual.



Unscrew the the Rapid Check assembly.

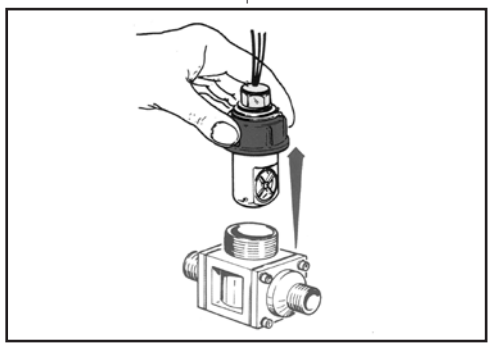
Daily Check & Maintenance of Flowmeter

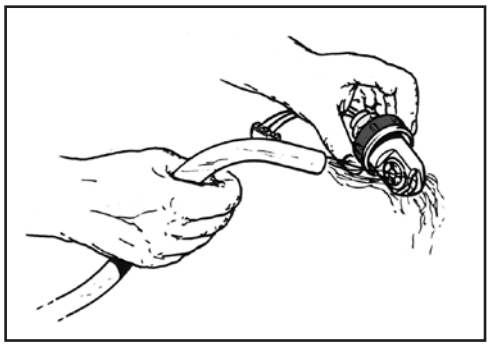
This is to be performed every day after work is finished:

1 Unscrew the assembly that holds the Rapid Check unit in the body.

2 Remove the Rapid Check unit from the body.

Remove the Rapid Check unit.



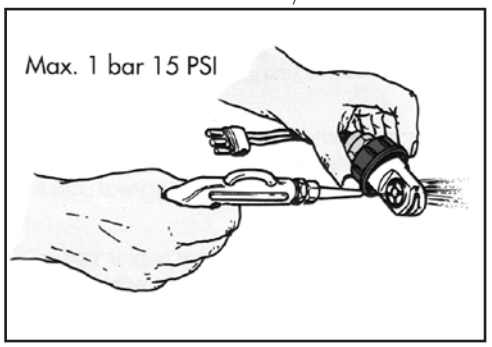


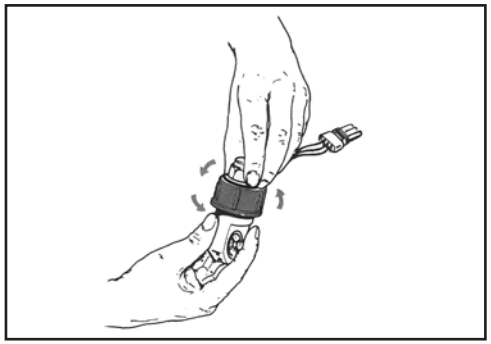
Wash any impurities out of the removable turbine unit.

3 Use clean water to wash any impurities out of the removable turbine unit.

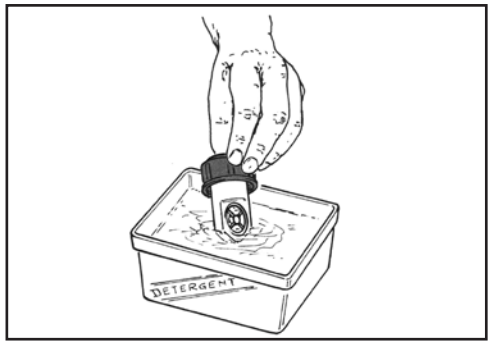
4 Use compressed air to verify that the turbine unit rotates freely (maximum air pressure 1 BAR [15 psi]).

Use compressed air to check that the turbine unit rotates freely.

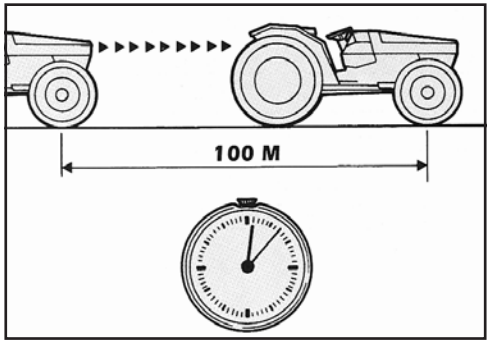




Unscrew the sensor.



Place the Rapid Check unit in a detergent bath.



Determine actual speed of travel.

Every 50 Hours

Carry out the following procedure after every 50 hours of operation:

1 Unscrew the sensor.

2 Separate the sensor from the Rapid Check unit.

3 Place the Rapid Check unit in a detergent bath for a few hours.

4 Remove the Rapid Check unit from detergent bath.

Use compressed air to verify that the turbine unit rotates freely (maximum air pressure 1 BAR [15 psi]).

If necessary, replace the Rapid Check unit with a new one.

Step 2
Determining the Actual Speed Of Travel

Your sprayer has been factory set with a calibration number. This should be fine-tuned prior to commencement of spraying and checked by your dealer. This is done by traveling a known distance (usually 100 metres) and comparing the distance measured by the Spray Controller to the known distance. If there is a discrepancy, the Spray Controller Manual explains how to easily adjust the calibration number automatically.

Step 3
Measure Swath Width

The spray controller requires the boom width to be entered in 3/4/5/6 parts.

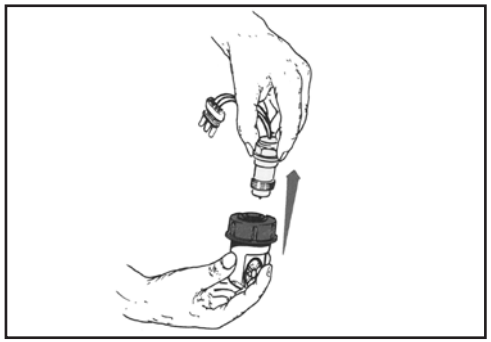
Measure the nozzle spacing and multiply nozzle spacing by the number of nozzles on each boom section to establish the width of each boom section.

eg, 0.5m x 12 = 6m

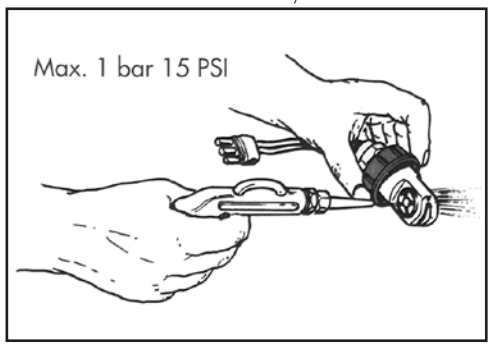
0.5m x 12 = 6m

0.5m x 12 = 6m

Separate the sensor from the Rapid Check unit.



Use compressed air to check that the turbine unit rotates freely.



NOTE

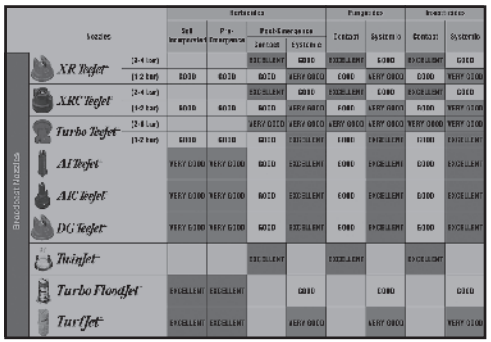
For setting and calibrating the WEEDit Spray Controller function, refer to pages 13 - 16 of the spray controller manual.

NOTE

Boom sections may vary on some booms.

Buyers Guide - courtesy of Teejet.

AI nozzle - courtesy of Teejet.



Nozzle selection chart- courtesy of Teejet.

Step 4
Select Nozzle Type & Size

Select Nozzle Type & Size according to:

- Chemical recommendations.
- Application rate required.
- Pressure setting.
- Swath width.
- Chosen speed of travel. (Use actual speed of travel, refer to step 2)

Two methods of selecting nozzle output are:

a) Use the charts on pages 4.12 to 4.13 or the manufacturer's nozzle chart

b) Calculate Required Nozzle Flow Rate.

a) Use Your Manual's Chart Or Manufacturer's Nozzle Chart.

Using the chart on pages 4.12 to 4.13 or the manufacturer's nozzle rate chart, reference:

- Application rate (eg 50 l/ha),
- Speed of travel (eg 12km/hr), &
- Pressure setting (eg 250kPa),

find the nearest nozzle to suit your requirements.

Also check to see what speed variations are available for applying the same rate. See pages 4.12 to 4.13.

It is usually best to select mid range pressure as this will allow the spray controller to adjust pressure up or down when speed variations occur.

b) Calculate Required Nozzle Flow Rate

If you know:

- the application rate required (eg 50 l/ha),
- speed of travel (eg 12km/hr),
- swath width (eg 18m), &
- the number of nozzles on the boom (eg 36).

The following formula can be used to establish required flow rate per nozzle:

Nozzle Flow Rate (l/min) =

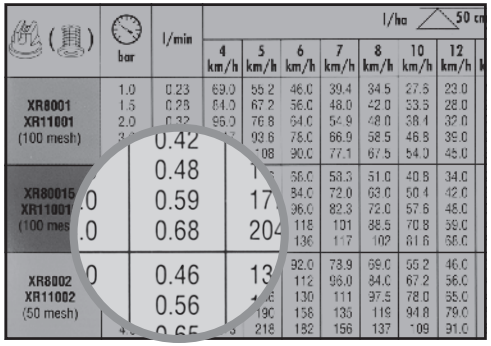
Speed (km/hr) x Swath Width (m) x Application Rate (l/ha) ÷ 600 ÷ Number of nozzles

eg, [(12 x 18 x 50) ÷ 600] ÷ 36

= 0.5 l/min for each nozzle

NOTE

Use your own experience or a registered rate calibration consultant to determine effective application rates in litres per hectare.



	bar	l/min	l/ha 50 cm 4 km/h	5 km/h	6 km/h	7 km/h	8 km/h	10 km/h	12 km/h
XR8001 XR11001 (100 mesh)	1.0	0.23	69.0	55.2	46.0	39.4	34.5	27.6	23.0
	1.5	0.28	84.0	67.2	56.0	48.0	42.0	33.5	28.0
	2.0	0.32	96.0	76.8	64.0	54.9	48.0	38.4	32.0
		0.42		93.6	78.0	66.9	58.5	46.8	39.0
		0.48			90.0	77.1	67.5	54.0	45.0
XR80015 XR11001 (100 mes	.0	0.59	17		96.0	82.3	72.0	57.6	48.0
	.0	0.68	204		115	101	88.5	70.8	59.0
					136	117	102	81.6	68.0
XR8002 XR11002 (50 mesh)	0	0.46	13		92.0	78.9	69.0	55.2	46.0
		0.56			112	96.0	84.0	67.2	56.0
					130	111	97.5	78.0	65.0
					156	135	118	94.8	79.0
					182	156	137	109	91.0

L/min column on nozzle chart - courtesy of Teejet.

An alternative formula is:

Nozzle Flow Rate (l/min) =

Speed (km) x Nozzle Spacing (cm) x Application Rate (l/ha) ÷ 60,000

eg, [12 x 50 x 50] ÷ 60,000

= 0.5 l/min

Now using the nozzle chart look down the nozzle capacity column (l/min) and select a nozzle to suit the output (eg 0.5 l/min). Refer to pages 4.9 to 4.11 for nozzle charts.

Step 5
Fit the Selected Nozzles to the Boom

Fit the selected nozzles to the boom as per the nozzle manufacturers specifications.

Test the actual output of the nozzles.

Step 6 (Recommended)
Check Nozzle Accuracy & Determine Nozzle Output

Test the actual output of the nozzles using the following procedure:

a) Ensure there is adequate water in the tank.

IMPORTANT: Do not use mixed pesticides for testing.

b) Start the sprayer and set the spray Controller master switch into MANUAL position and adjust the operating pressure.

c) Collect and measure the volume of spray from one nozzle and adjust pressure so that the nozzle gives the specified output (eg 0.5 l/min).

NOTE

Always use Actual Speed of Travel for speed in the above formula.

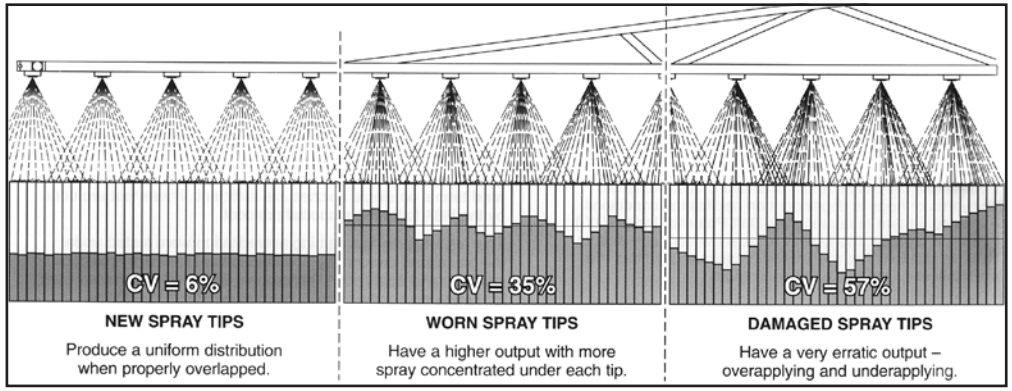
NOTE

Remember when selecting nozzle outputs that higher pressures and wider spray angles usually give finer droplet sizes than lower pressures and narrower spray angles.

⚠ WARNING

Do not use mixed pesticides for testing. Use only clean water.

Use of pesticides when testing is hazardous to your health.



Spray tip wear - courtesy of Teejet.

IMPORTANT:
Do not use a worn nozzle to set the pressure setting and nozzle rates.

If the boom is not fitted with new nozzles, fit one new nozzle and use it to set the flow rate and pressure setting.

This sets the standard flow rate, pressure setting and spray pattern with which to test the performance of other nozzles.

d) When the pressure is set to give a specified nozzle output (using a new nozzle), collect and measure the volume of spray from each nozzle for one minute in a collection jar or calibrating jug.

Specially designed nozzle testing equipment such as nozzle calibrating jugs can be used to simplify nozzle calibration.

e) Visually check nozzle spray patterns and spray angle for accuracy and, if necessary, replace any faulty nozzles.

f) Discard and replace any nozzle that deviates more than 10% from the specified output (eg with a 0.5 l/min specification- discard any nozzles 0.45 l/min and under or 0.55 l/min and over).

g) Check replacement nozzles by collecting and measuring output from each replacement.

h) Record the output of each nozzle on the boom. Add the outputs together and divide by the number of nozzles to get the required output of each nozzles in one minute.

eg, Total spray output 18 l/min ÷ 36 nozzles = 0.5 l/min per nozzle.

CAUTION

Do not use a worn nozzles to set the pressure setting and nozzle rates, otherwise inaccurate calibration will occur.

Step 7
Calculate Application Rate

When operating the spray controller, the controller automatically calculates and shows the rate of application.

Application Rate (l/ha) =

Spray Output (l/min) x 600 ÷ Speed (km/hr) x Swath Width (m)

eg, [18 x 600] ÷ [12 x 18]

= 50 l/ha

Step 8
If tested application is not satisfactory:

a) In Auto mode - if application rate is not being achieved:

i) Operating pressure will climb if nozzles are too small or blocked or speed is too slow.

Likewise, if your pressure filter is blocked (even partially), you may experience excessive pressure at the pump.

Make adjustments accordingly.

ii) Operating pressure will fall if nozzles are too large or speed is too slow. Make adjustments accordingly.

b) In Manual mode - the Controller application rate can be altered by:

i) Adjusting pressure up or down to increase or decrease rate of application (use +/- keys).

ii) Adjusting spraying speed up or down to decrease or increase rate of application.

iii) Changing to a different nozzle capacity.

NOTE

Full instructions of controller operation are contained in your separate Controller Manual.

Step 9
Add The Correct Amount Of Chemical To The Tank

a) For land area rates (litres or kg per hectare), use the following formula:

Chemical Required (litres) =

Tank Volume (litres) x Recommended Chemical Rate (l/ha) ÷ Spray Application Rate (l/ha)

eg, [2000 x 2.0] ÷ 50

= 80 litres

NOTE

All nozzles have a pressure and flow rate range to acheive the best results.

Ensure you have selected the nozzle which best suits your application to avoid any problems.

b) If chemical recommendation is given in water volume rates use the following formula:

Chemical Required (litres) =

Tank Volume (litres) x Recommended Chemical Rate (l/100 litres) ÷ 100

eg, [2000 x 4] ÷ 100

= 80 litres

c) For land area covered, use the formula:

Area Covered (ha) =

Tank Volume (litres) ÷ Spray Application Rate (l/ha)

eg, 2000 ÷ 50

= 40 hectares

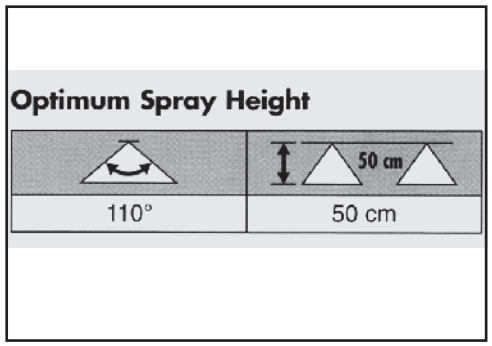
d) For tank volume required, use the formula:

Tank Volume Required (litres) =

Area (ha) x Spray Application Rate (l/ha)

eg, 20 x 50

= 1000 litres



Boom height - courtesy of Teejet.

Step 10
Adjust Boom Height

Boom height should be adjusted to suit the type of nozzle used, terrain and crop or soil being sprayed.

Minimum boom height recommendations depend on the nozzle spray angle and nozzle spacing.

Refer to Nozzle chart recommendations.

Step 11
Record All Data For Future Reference

Record all your calibration data on the work sheets given at the end of this section.

Photocopy the work sheets to obtain the number of work sheets required.

Optical Spot Spray Calibration Procedure

For accurate spray rate application, follow this calibration procedure outlined.

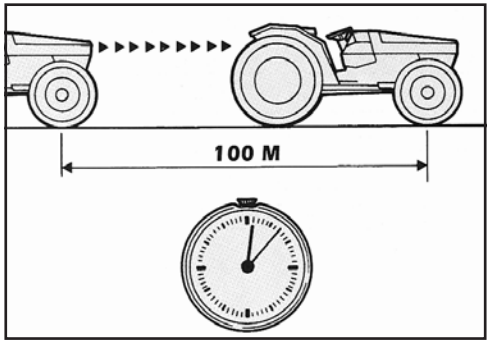
Step 1

Ensure Equipment Is In Good Working Order.

Tank, pump, boom, filters and nozzles must be clean, free of leakages and functioning properly.

Follow the pre-operation checklist, maintenance and operating instructions in this manual.

Install, calibrate and operate the spray controller according to the spray controller Installation/Operators Manual.



Determine actual speed of travel.

Step 2

Determining the Actual Speed Of Travel

Your sprayer has been factory set with a calibration number. This should be fine-tuned prior to commencement of spraying and checked by your dealer. This is done by traveling a known distance (usually 100 metres) and comparing the distance measured by the Spray Controller to the known distance.

If there is a discrepancy, the WEEDit User Manual explains how to easily adjust the calibration number automatically.

WEEDit User Manual.

Step 3

Check the Timing of the Detector

Follow the Detector Timing instructions in the WEEDit User Manual.

Step 4

Adjust the Nozzle Height

Follow the Adjusting Boom Height instructions in the WEEDit User Manual.

Step 5

Calibrating the Pressure Transducer

Follow the Calibrating the Pressure Transducer instructions in the WEEDit User Manual.

NOTE

For setting and calibrating the WEEDit Spray Controller function, refer to pages 13 - 16 of the spray controller manual.

NOTE

Correct spray decisions should be made in consultation with your local / industry agronomist.

Step 6

Machine Configuration Option

Follow the instructions of the Machine Configuration Option in the WEEDit User Manual.

Step 7

Add The Correct Amount Of Chemical To The Tank

Spot spraying uses chemical recommendations given in water volume rates L/100L.

Use the following formula:

Chemical Required (litres) =

Tank Volume (litres) x Recommended Chemical Rate (l/100 litres) ÷ 100

eg, [2000 x 4] ÷ 100

= 80 litres.

Blanket Line Flow Meter Calibration Correction Formula

Flow Meters may need further Calibration due to chemical viscosity and effects of adjuvants.

For accurate Calibration at the end of a full tank use the formula below:

Flow Meter Constant x Total Volume Shown when Sprayed Out ÷ Know Tank Volume = New Constant.

Example:

4000 = Litre Spray Tank Volume

4550 = Litres show on display when tanks is sprayed out

250 = Original Flow Meter Constant (PPU)

Hence the calculation:

250 x 4550 = 1,137,500

1,137,500 ÷ 4000

= New constant of 284.

NOTE

The Flow Meter Constant will vary with different flow meters.

It is often written on the meter, attached tag or in the separate flow meter manual.

BLANKET SPRAY - AIR-MIX & TURBODROP® NOZZLE SPRAYING INFORMATION

Nozzle	Bar	l/min	Litres/ha @ 500mm nozzle spacing											
			5km/h	6km/h	7km/h	8km/h	10km/h	12km/h	16km/h	20km/h	25km/h	30km/h	35km/h		
TDAM015 TD015 (Green)	1	0,346	83	69	59	52	42	35	26	21					
	2	0,490	118	98	84	74	59	49	36	29					
	3	0,600	144	120	103	90	72	60	45	36					
	4	0,693	166	139	119	104	83	69	52	42					
	5	0,775	186	155	133	116	93	77	58	47					
	6	0,849	204	170	146	127	102	85	64	51					
	7	0,917	220	183	157	138	110	92	69	55					
	8	0,980	235	196	168	147	118	98	74	59					
	9	1,039	249	208	178	156	125	104	78	63					
	10	1,095	263	219	188	164	132	109	82	66					
TDAM02 TD02 (Yellow)	1	0,462	111	92	79	69	55	46	35	28					
	2	0,653	157	131	112	98	78	65	49	39					
	3	0,800	192	160	137	120	96	80	60	48					
	4	0,924	222	185	159	139	111	92	69	56					
	5	1,033	248	207	177	155	124	103	77	62					
	6	1,131	271	226	94	170	136	113	85	68					
	7	1,222	293	244	209	183	147	122	92	73					
	8	1,306	313	261	224	196	157	131	98	78					
	9	1,386	332	277	237	208	166	139	104	83					
	10	1,460	350	292	250	219	175	146	110	88					
TDAM025 TD025 (Lilac)	1	0,577	138	115	99	87	69	58	43	35					
	2	0,816	196	163	140	122	98	82	61	49					
	3	1,000	240	200	171	150	120	100	75	60					
	4	1,154	278	231	199	174	139	115	86	70					
	5	1,291	310	259	221	194	155	129	96	78					
	6	1,414	339	283	243	213	170	141	106	85					
	7	1,528	366	305	261	229	184	153	115	92					
	8	1,632	391	326	280	245	196	163	122	98					
	9	1,732	415	346	296	260	208	174	130	104					
	10	1,826	438	365	313	274	219	183	138	110					
TDAM03 TD03 (Blue)	1	0,693	166	139	119	104	83	69	52	42					
	2	0,980	234	196	168	147	118	98	74	59					
	3	1,200	288	240	206	180	144	120	90	72					
	4	1,385	333	278	238	208	166	138	104	84					
	5	1,549	372	310	266	232	186	154	116	94					
	6	1,697	408	340	292	254	204	170	128	102					
	7	1,833	440	366	314	276	220	184	138	110					
	8	1,960	460	392	336	294	236	196	148	118					
	9	2,078	498	416	356	312	250	208	156	126					
	10	2,191	526	438	376	328	264	218	164	132					

Nozzle	Bar	l/min	Litres/ha @ 500mm nozzle spacing											
			5km/h	6km/h	7km/h	8km/h	10km/h	12km/h	16km/h	20km/h	25km/h	30km/h	35km/h	
TDAM04 TD04 (Red)	1	0,924	222	185	158	139	111	92	69	55				
	2	1,306	313	261	224	196	157	131	98	78				
	3	1,600	384	320	274	240	192	160	120	96				
	4	1,847	444	370	318	278	222	184	138	112				
	5	2,066	496	414	354	310	248	206	154	124				
	6	2,263	542	452	388	340	272	226	170	136				
	7	2,444	586	488	418	366	294	244	184	146				
	8	2,612	626	522	448	392	314	260	196	156				
	9	2,771	664	554	474	416	332	278	208	166				
	10	2,921	700	584	500	438	350	292	220	176				
TDAM05 TD05 (Brown)	1	1,155	277	231	198	173	139	116	87	69				
	2	1,633	392	327	280	245	196	163	122	98				
	3	2,000	480	400	342	300	240	200	150	120				
	4	2,309	556	462	398	348	278	230	172	140				
	5	2,582	620	518	442	388	310	258	192	156				
	6	2,828	678	566	486	426	340	282	212	170				
	7	3,055	732	610	522	458	368	306	230	184				
	8	3,264	682	652	560	490	392	326	245	196				
	9	3,464	830	692	592	520	416	346	260	208				
	10	3,651	876	730	626	548	438	366	276	219				
TDAM06 TD06 (Grey)	1	1,386	333	277	238	208	166	139	104	83				
	2	1,960	470	392	336	294	235	196	147	118				
	3	2,400	576	480	412	360	288	240	180	144				
	4	2,771	666	556	476	416	332	276	208	168				
	5	3,098	744	620	532	464	372	308	232	188				
	6	3,394	816	680	584	508	408	340	256	204				
	7	3,666	880	732	628	552	440	368	276	220				
	8	3,919	940	784	672	588	475	392	296	236				
	9	4,157	996	832	712	624	500	416	312	252				
	10	4,382	1052	876	752	656	528	436	328	264				

40 Degree Flat Fan Band Nozzle														
Nozzle Size	Pressure (Bar)	Droplet Size	Spray Width (cm)	Flow L/min	Croplands Optical Spot Sprayer Speed (kph)									
				100%	12	13	14	15	16	17	18	20	22	25
HIGH CLEARANCE Boom Nozzle Height 750mm														
4003	2	C	52	0.98	94	87	81	75	71	67	63	57	51	45
	2.5	C	52	1.10	106	98	91	85	79	75	71	63	58	51
	3	C	52	1.20	115	107	99	92	87	81	77	69	63	55
					Litres / Hectare									

40 Degree Flat Fan Band Nozzle														
Nozzle Size	Pressure (Bar)	Droplet Size	Spray Width (cm)	Flow L/min	Croplands Optical Spot Sprayer Speed (kph)									
				100%	12	13	14	15	16	17	18	20	22	25
STANDARD Boom Nozzle Height 650mm														
4003	2	C	43	0.98	114	105	987	91	82	80	76	68	62	55
	2.5	C	43	1.10	128	118	110	102	96	90	85	77	70	61
	3	C	43	1.20	140	129	120	112	105	98	93	84	76	67
					Litres / Hectare									

SPOT SPRAY - 60 DEGREE ATF FULL CONE NOZZLE

Nozzle Size	Pressure (Bar)	Droplet Size	Spray Width (cm)	Flow L/min	Croplands Optical Spot Sprayer Speed (kph)									
				100%	12	13	14	15	16	17	18	20	22	25
HIGH CLEARANCE Boom Nozzle Height 750mm														
ATF 03 60 Degree	2		60	0.98	82	75	70	65	61	58	54	49	45	39
	2.5		60	1.10	92	85	79	73	69	65	61	55	50	44
	3		60	1.20	100	92	86	80	75	71	67	60	55	48
ATF 04 60 Degree	2		60	1.31	109	101	94	87	82	77	73	66	60	52
	2.5		60	1.46	122	112	104	97	91	86	81	73	66	58
	3		60	1.60	133	123	114	107	100	94	89	80	73	64
STANDARD Boom Nozzle Height 650mm														
ATF 03 60 Degree	2		50	0.98	98	90	84	78	74	69	65	59	53	47
	2.5		50	1.10	110	102	94	88	83	78	73	66	60	53
	3		50	1.20	120	111	103	96	90	85	80	72	65	58
ATF 04 60 Degree	2		50	1.31	131	121	112	105	98	92	87	79	71	63
	2.5		50	1.46	146	135	125	117	110	103	97	88	80	70
	3		50	1.60	160	148	137	128	120	113	107	96	87	77
					Litres / Hectare									

SPOT SPRAY - 80 DEGREE ATF FULL CONE NOZZLE

SPRAYING INFORMATION

Nozzle Size	Pressure (Bar)	Droplet Size	Spray Width (cm)	Flow L/min	Croplands Optical Spot Sprayer Speed (kph)									
				100%	12	13	14	15	16	17	18	20	22	25
HIGH CLEARANCE Boom Nozzle Height 750mm														
ATF 03 80 Degree	2		90	0.98	54	50	47	44	41	38	36	33	30	26
	2.5		90	1.10	61	56	52	49	46	43	41	37	33	29
	3		90	1.20	67	62	57	53	50	47	44	40	36	32
ATF 04 80 Degree	2		90	1.31	73	67	62	58	55	51	49	44	40	35
	2.5		90	1.46	81	75	70	65	61	57	54	49	44	39
	3		90	1.60	89	82	76	71	67	63	59	53	48	43
STANDARD Boom Nozzle Height 650mm														
ATF 03 80 Degree	2		70	0.98	70	65	60	56	53	49	47	42	38	34
	2.5		70	1.10	79	73	67	63	59	55	52	47	43	38
	3		70	1.20	86	79	73	69	64	61	57	51	47	41
ATF 04 80 Degree	2		70	1.31	94	86	80	75	70	66	62	56	51	45
	2.5		70	1.46	104	96	89	83	78	74	70	63	57	50
	3		70	1.60	114	105	98	91	86	81	76	69	62	55
					Litres / Hectare									

CALIBRATION WORK SHEET - BLANKET SPRAY

Step 1

Check the Sprayer is in Good Working Order

Step 2

Determine Actual Speed of Travel

Follow Instructions on page 4.4 (Speed Calibration page).

Tractor model	
Gear	
Range	
Dual power	
Engine RPM	
Speed in Km/h	

Step 3

Measure Boom Widths

Boom section 1: .....

Boom section 2: .....

Boom section 3: .....

Boom section 4: .....

Boom section 5: .....

Boom section 6: .....

Boom section 7: .....

Step 4

Select Nozzle Type & Size

- **Chemical**: .....
- **Type of Nozzle**: .....
- **Pressure Setting**: .....
- **Travel speed** (km/hr): .....
- **Total number of nozzles** to be used .....

Nozzle Flow Rate (l/min)
=
Speed (km/hr) x Swath Width (m) x Application Rate (l/ha) ÷ 600 ÷ Number of nozzles

..... x ..... x ..... ÷ 600 ÷ .....

= ..... l/min for each nozzle

Step 5

Fit Selected Nozzles to Boom

Nozzle Type: .....

Nozzle Size: .....

Nozzle Colour: .....

Step 6

Check Nozzle Accuracy & Determine Nozzle Output

Thoroughly check nozzles & test the actual output of each nozzle.

- **Pressure Setting**: .....
- **Individual Nozzle Outputs**: .....

.....

.....

- **Sum of Nozzle Outputs**: .....

Step 7

Calculate Application Rate

The spray Controller automatically calculates and shows the rate of application.

Application Rate (l/ha)
=
Spray Output (l/min) x 600 ÷ Speed (km/hr) x Swath Width (m)

[..... x 600] ÷ [..... x .....]

= .....

Step 8

If Tested Application is Not Satisfactory - Make Changes & Repeat Procedure

.....

.....

Step 9

Add Correct Amount of Chemical

- **Chemical**: .....
- **Water Quantity**: .....
- **Chemical Added**: .....

Step 10

Boom Height

.....

Step 11

Record Data	
Date	
Farm location	
Crop to be sprayed	
Spray Volume litres/ha	
Nozzle type	
Nozzle size &colour	
No. of nozzles used	
Nozzle pressure	
Tested Output in l/min	
Actual Litres/Hectare	

CALIBRATION WORK SHEET - BLANKET SPRAY

Step 1

Check the Sprayer is in Good Working Order

Step 2

Determine Actual Speed of Travel

Follow Instructions on page 4.4 (Speed Calibration page).

Tractor model	
Gear	
Range	
Dual power	
Engine RPM	
Speed in Km/h	

Step 3

Measure Boom Widths

Boom section 1: .....

Boom section 2: .....

Boom section 3: .....

Boom section 4: .....

Boom section 5: .....

Boom section 6: .....

Boom section 7: .....

Step 4

Select Nozzle Type & Size

- **Chemical**: .....
- **Type of Nozzle**: .....
- **Pressure Setting**: .....
- **Travel speed** (km/hr): .....
- **Total number of nozzles** to be used .....

Nozzle Flow Rate (l/min)

=

Speed (km/hr) x Swath Width (m) x Application Rate (l/ha) ÷ 600 ÷ Number of nozzles

..... x ..... x ..... ÷ 600 ÷ .....

= ..... l/min for each nozzle

Step 5

Fit Selected Nozzles to Boom

Nozzle Type: .....

Nozzle Size: .....

Nozzle Colour: .....

Step 6

Check Nozzle Accuracy & Determine Nozzle Output

Thoroughly check nozzles & test the actual output of each nozzle.

- **Pressure Setting**: .....
- **Individual Nozzle Outputs**: .....

.....

.....

- **Sum of Nozzle Outputs**: .....

Step 7

Calculate Application Rate

The spray Controller automatically calculates and shows the rate of application.

Application Rate (l/ha)

=

Spray Output (l/min) x 600 ÷ Speed (km/hr) x Swath Width (m)

[..... x 600] ÷ [..... x .....]

= .....

Step 8

If Tested Application is Not Satisfactory - Make Changes & Repeat Procedure

.....

.....

Step 9

Add Correct Amount of Chemical

- **Chemical**: .....
- **Water Quantity**: .....
- **Chemical Added**: .....

Step 10

Boom Height

.....

Step 11

Record Data	
Date	
Farm location	
Crop to be sprayed	
Spray Volume litres/ha	
Nozzle type	
Nozzle size &colour	
No. of nozzles used	
Nozzle pressure	
Tested Output in l/min	
Actual Litres/Hectare	

CALIBRATION WORK SHEET - BLANKET SPRAY

Step 1

Check the Sprayer is in Good Working Order

Step 2

Determine Actual Speed of Travel

Follow Instructions on page 4.4 (Speed Calibration page).

Tractor model	
Gear	
Range	
Dual power	
Engine RPM	
Speed in Km/h	

Step 3

Measure Boom Widths

Boom section 1: .....

Boom section 2: .....

Boom section 3: .....

Boom section 4: .....

Boom section 5: .....

Boom section 6: .....

Boom section 7: .....

Step 4

Select Nozzle Type & Size

- **Chemical**: .....
- **Type of Nozzle**: .....
- **Pressure Setting**: .....
- **Travel speed** (km/hr): .....
- **Total number of nozzles** to be used .....

Nozzle Flow Rate (l/min)

=

Speed (km/hr) x Swath Width (m) x Application Rate (l/ha) ÷ 600 ÷ Number of nozzles

..... x ..... x ..... ÷ 600 ÷ .....

= ..... l/min for each nozzle

Step 5

Fit Selected Nozzles to Boom

Nozzle Type: .....

Nozzle Size: .....

Nozzle Colour: .....

Step 6

Check Nozzle Accuracy & Determine Nozzle Output

Thoroughly check nozzles & test the actual output of each nozzle.

- **Pressure Setting**: .....
- **Individual Nozzle Outputs**: .....

.....

.....

- **Sum of Nozzle Outputs**: .....

Step 7

Calculate Application Rate

The spray Controller automatically calculates and shows the rate of application.

Application Rate (l/ha)

=

Spray Output (l/min) x 600 ÷ Speed (km/hr) x Swath Width (m)

[..... x 600] ÷ [..... x .....]

= .....

Step 8

If Tested Application is Not Satisfactory - Make Changes & Repeat Procedure

.....

.....

Step 9

Add Correct Amount of Chemical

- **Chemical**: .....
- **Water Quantity**: .....
- **Chemical Added**: .....

Step 10

Boom Height

.....

Step 11

Record Data	
Date	
Farm location	
Crop to be sprayed	
Spray Volume litres/ha	
Nozzle type	
Nozzle size &colour	
No. of nozzles used	
Nozzle pressure	
Tested Output in l/min	
Actual Litres/Hectare	

Step 1

Check the Sprayer is in Good Working Order

Step 2

Determine Actual Speed of Travel

Follow Instructions on page 4.4 (Speed Calibration page).

Tractor model	
Gear	
Range	
Dual power	
Engine RPM	
Speed in Km/h	

Step 3

Measure Boom Widths

Boom section 1: .....

Boom section 2: .....

Boom section 3: .....

Boom section 4: .....

Boom section 5: .....

Boom section 6: .....

Boom section 7: .....

Step 4

Select Nozzle Type & Size

- **Chemical**: .....
- **Type of Nozzle**: .....
- **Pressure Setting**: .....
- **Travel speed** (km/hr): .....
- **Total number of nozzles** to be used .....

Nozzle Flow Rate (l/min)

=

Speed (km/hr) x Swath Width (m) x Application Rate (l/ha) ÷ 600 ÷ Number of nozzles

..... x ..... x ..... ÷ 600 ÷ .....

= ..... l/min for each nozzle

Step 5

Fit Selected Nozzles to Boom

Nozzle Type: .....

Nozzle Size: .....

Nozzle Colour: .....

Step 6

Check Nozzle Accuracy & Determine Nozzle Output

Thoroughly check nozzles & test the actual output of each nozzle.

- **Pressure Setting**: .....
- **Individual Nozzle Outputs**: .....

.....

.....

- **Sum of Nozzle Outputs**: .....

Step 7

Calculate Application Rate

The spray Controller automatically calculates and shows the rate of application.

Application Rate (l/ha)

=

Spray Output (l/min) x 600 ÷ Speed (km/hr) x Swath Width (m)

[..... x 600] ÷ [..... x .....]

= .....

Step 8

If Tested Application is Not Satisfactory - Make Changes & Repeat Procedure

.....

.....

Step 9

Add Correct Amount of Chemical

- **Chemical**: .....
- **Water Quantity**: .....
- **Chemical Added**: .....

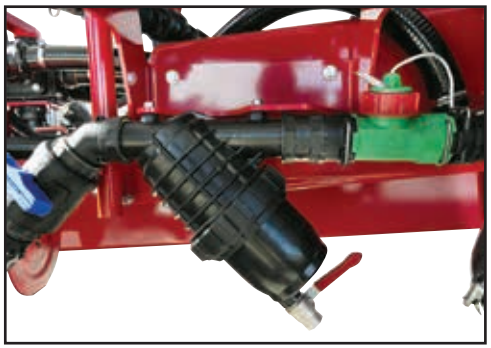
Step 10

Boom Height

.....

Step 11

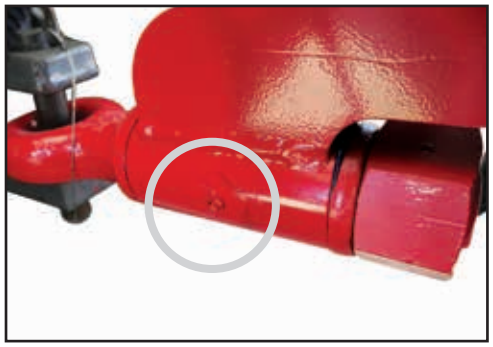
Record Data	
Date	
Farm location	
Crop to be sprayed	
Spray Volume litres/ha	
Nozzle type	
Nozzle size &colour	
No. of nozzles used	
Nozzle pressure	
Tested Output in l/min	
Actual Litres/Hectare	



Clean the Fresh Water Fill filter regularly.

Remove & clean the Spot Sprayline pressure filters.

Change the compressor air filter every 200 hours or 6 months.



Rotating hitch tongue grease point.

Greasing & Service Procedures

1 Clean bottom-fill line filter after each tank fill if necessary.

3 Clean Blanket line pressure line filters.

3 Clean Optical Spot Spray pressure line filters.

4 Check tyre pressures:

- 24 psi (164kPa) for standard sprayer wheels. Optional tyres may be different.
- 15 psi (105kPa) for boom wheels

5 Check wheel nuts are tight.

6 To ensure trouble free spraying, flush the sprayer with fresh water thoroughly each day, and before changing chemicals.

Dispose of tank wash according to chemical manufacturers instructions.

7 Grease all boom joints, height adjuster points and other grease points.

Every 200 Hours or 6 Months - Whichever Comes Sooner

1 Re-pack wheel bearings with grease.

2 Inspect air-axle and adjust if necessary.

3 Change air filter on the Sprayer air compressor pump.

4 Grease all tank lid seals with vaseline.

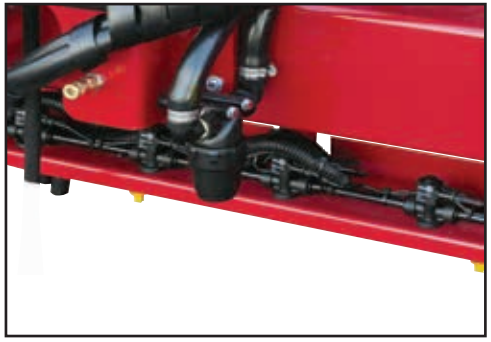
Sprayer Grease Points

Grease points on the Optical Spot Sprayer 7000 litre Dual Line include:

1 Swivel hitch tongue (1).

2 Hitch pivot pins (2).

Clean the centre-section Spot Sprayline pressure filter.

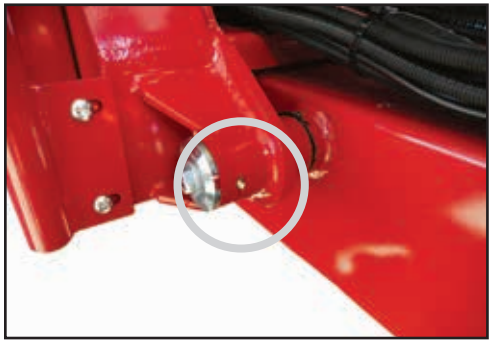


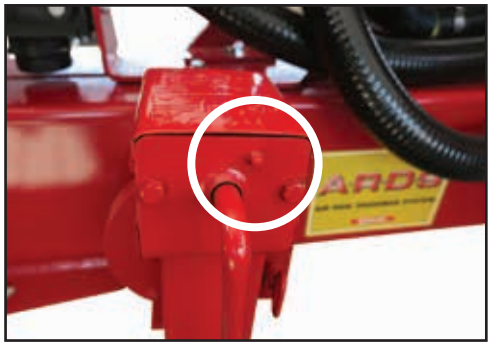
Clean the Blanket Sprayline Pressure filters regularly.

NOTE

The sprayer wheel tyre pressures given above are a general guide - always check and follow the minimum pressure of the supplied tyre.

Grease the hitch pivot pin grease points.

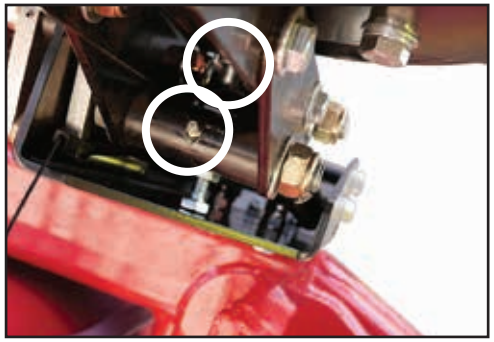




Hitch jack mechanism grease point.

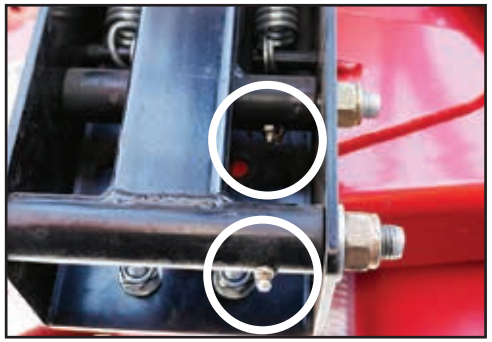
3 Hitch jack mechanism (1).

4 Hitch jack swivel (1).



Chem-E-flush hopper upper hinge grease points.

5 Upper hinges of the Chem-E-flush hopper (2).



Chem-E-flush hopper lower hinge grease points.

6 Lower hinges of the Chemeflush hopper (2).

Pre-delivery checklist.

Pre-Season Servicing

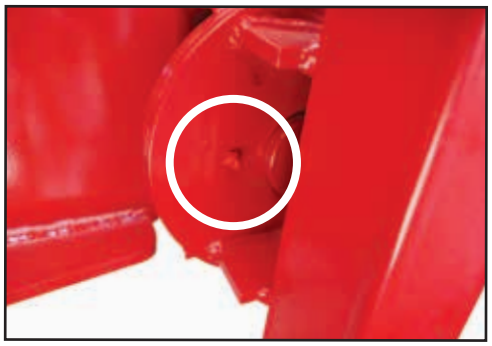
For thorough pre-season servicing - check all aspects of the Optical Spot Sprayer and its operating components as outlined in the pre-delivery check list of the Warranty Booklet.

Check the Speed Sensor

Check the speed sensor for any damage.

Check the spacing between the speed sensor and magnets. The ideal distance is 5mm (4-6mm). Adjust where necessary.

Hitch jack swivel grease point.



CAUTION

It is not necessary nor is it recommended to grease the main wheels of the Optical Spot Sprayer 7000 litre.

Greasing may damage the axle seals.

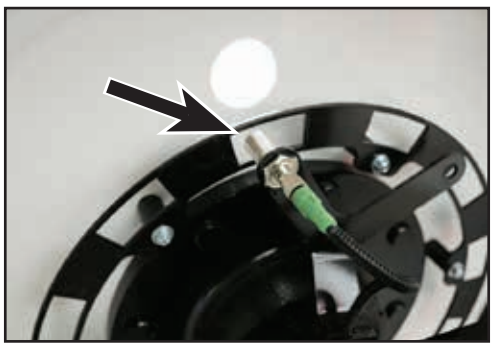
WARNING

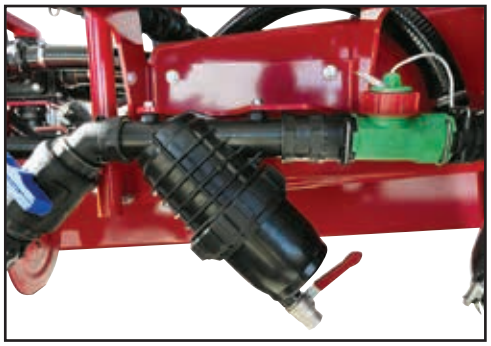
Ensure wheel nuts are tight before every use.

Torque settings:

M16 x 1.5 Stud = 190Nm
M18 x 1.5 Stud = 270Nm
M20 x 1.5 Stud = 380Nm
M22 x 1.5 Stud = 510Nm

Check the spacing between the speed sensor & magnets.





Clean the Remote Fill filter regularly.

Filter Maintenance

Clean filters ensure that no solids enter the spraying system to block or damage pump or nozzles.

All filters should be cleaned regularly or after each spraying period.

Remote Fill Filter

The Remote Fill filter should be cleaned regularly, or after each spray tank has been filled.

See cleaning instructions on page 3.8.

Remove & clean the Blanket sprayline pressure filters.

Blanket Sprayline Pressure Filters

The Blanket sprayline pressure filters (3), should be cleaned regularly, or after each spray tank has been emptied.

See cleaning instructions on page 3.4.

Optical Spot Sprayline Pressure Filters

The Optical Spot sprayline pressure filters (2) should be cleaned regularly, or after each spray tank has been emptied.

See cleaning instructions on page 3.4.

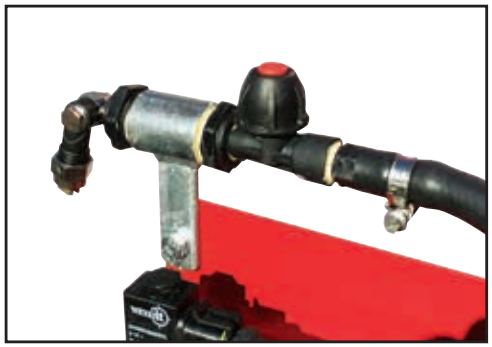
Clean Blanket sprayline nozzle filters regularly.

Blanket Sprayline Nozzle Filters

Blanket Spray Nozzle filters should be cleaned regularly and when a nozzle spray pattern is effected by blockage.

See cleaning instructions on page 3.4.

If leaking occurs from the nozzle cap, check caps are correctly fitted with seals &/or the condition of the seals. Replace if necessary.



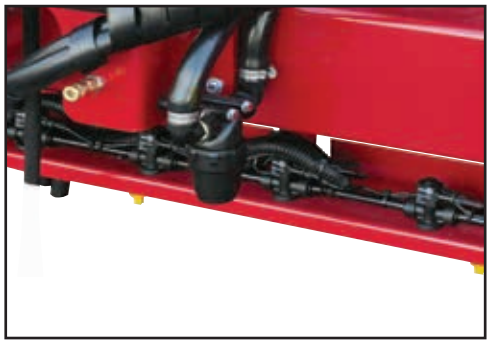
Clean Fenceline nozzle filters regularly (if fitted).

Fenceline Nozzle Filters (Optional)

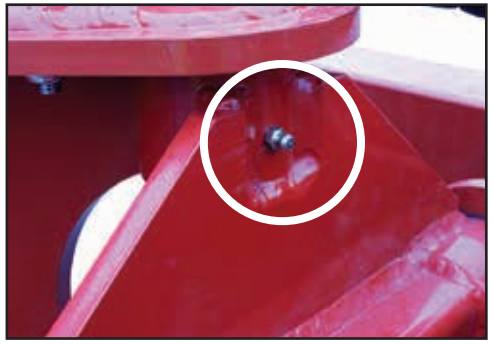
Spray Nozzle filters of the Fencline nozzle option, if fitted, should be cleaned regularly and when a nozzle spray pattern is effected by blockage.

If leaking occurs from the nozzle cap, check caps are correctly fitted with seals &/or the condition of the seals. Replace if necessary.

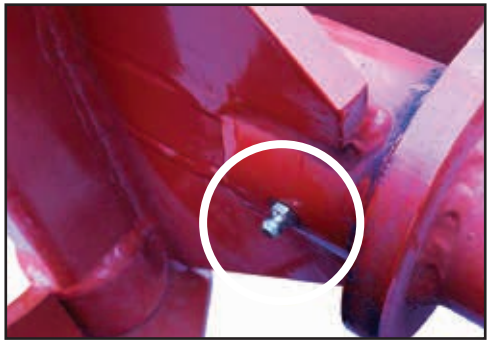
Clean the centre-section Spot Sprayline pressure filter.



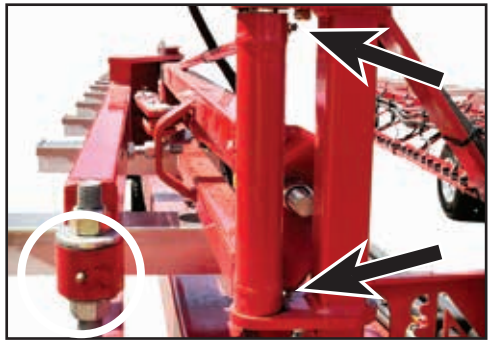
Clean the Optical Spot sprayline pressure filters regularly.



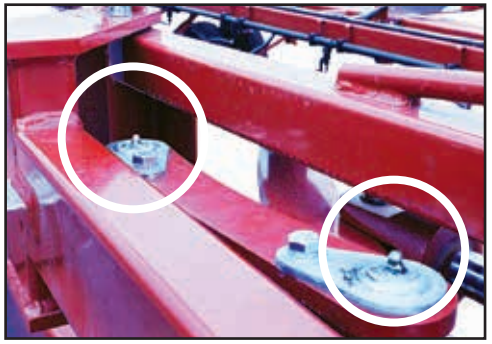
Upper grease point of the main boom hinge.



Right grease point of the main boom hinge.



Pivot grease points on the wing stay fold mechanism.



Pivot grease points on the wing stay fold mechanism.

Boom Maintenance

Careful and regular maintenance will ensure good, long operational life.

Daily Maintenance

Clean the boom at the end of each working day or whenever the equipment is stopped for a period of time exceeding on hour.

Rinse the plumbing lines and let clean water flow from the nozzles. Clean external surface with a water jet.

Ensure nozzles and nozzle bodies are correctly fixed and sealed when operating. also ensure non-drip mechanism are working.

Grease all grease-points.

Every 50 Hours Maintenance

Carry out the following maintenance procedures every 50 hours:

1 Make sure bolt and pin boom components are intact and tightened.

2 Retouch damage painted parts.

3 Grease all grease points.

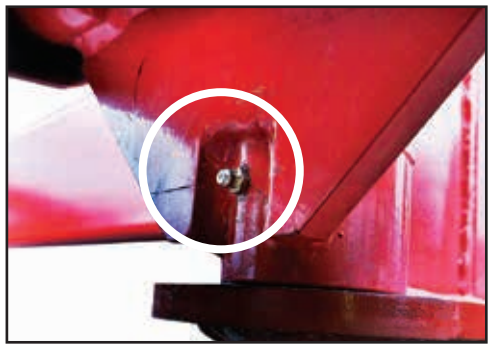
End of Season Maintenance

1 Before storage, clean all equipment thoroughly.

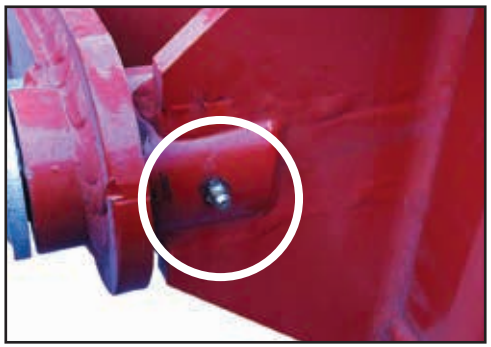
2 If necessary protect sprayer plumbing components with anti-freeze fluid to avoid damage in severe temperatures.

3 Grease all grease points.

Lower grease point of the main boom hinge.

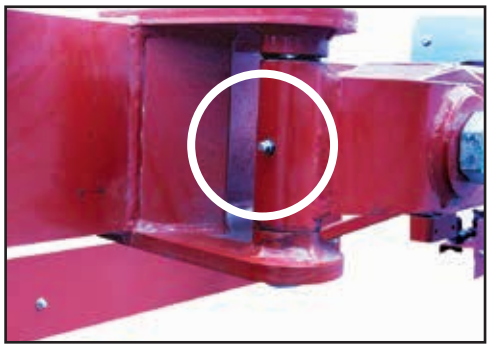


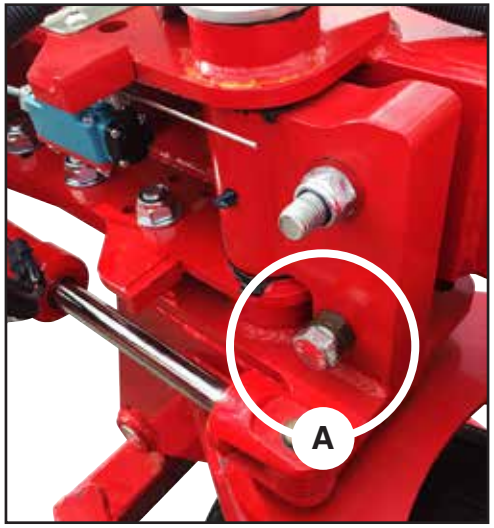
Left grease point of the main boom hinge.



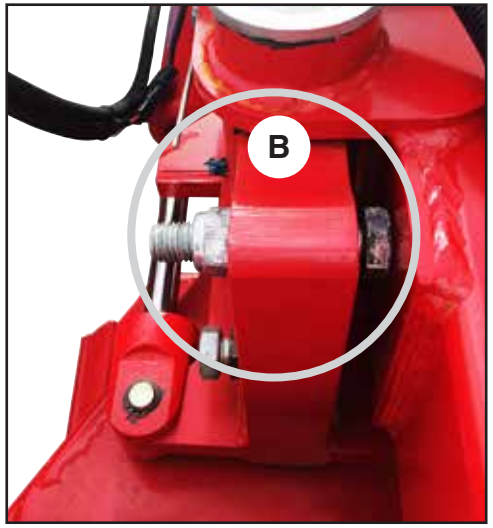
Pivot grease points on the wing stay fold mechanism.

Hinge grease point on the wing stay.

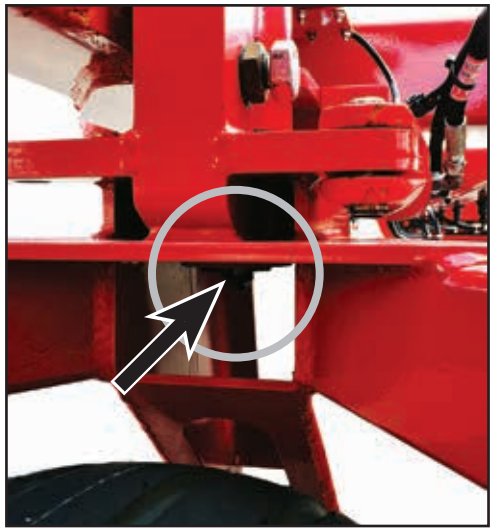




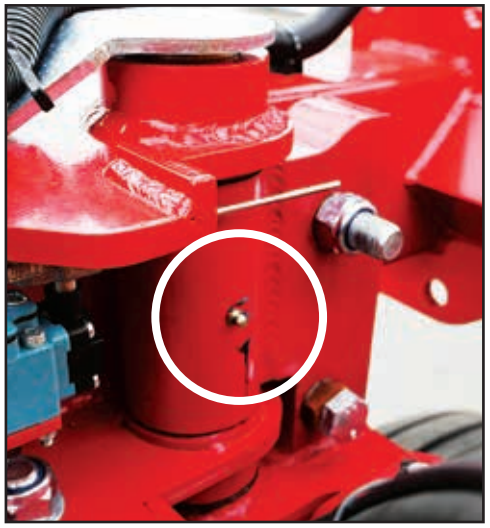
Spray position steering wheel adjustment.



Travel position steering wheel adjustment.



Grease pivot points on boom wheels.



Grease pivot points on boom wheels.

Steering Wheel Setup

Boom steering wheels require two steering position adjustments:

- Spraying Postion Wheel Adjustment
- Travel Position Wheel Adjustment.

1 Spray Position Wheel Adjustment

Adjust the bolt (A) [shown above] to set the Steering wheel to its correct position for spraying which is 90 degrees to the boom arm

Note: Picture above is for illustration purposes only and shows the wheel in the road travel position.

2 Travel Position Wheel Adjustment

Adjust the bolt (B) [shown above] to set the Steering wheel to its correct position for road travel which is in-line with boom -1 degree inwards.

Note: The boom should be set so that the protection bars are about 300mm apart.

To do this (requires some trial & error):

1 First set the wheel to be straight ahead or fractionally outwards.

2 Drive forwards for a short distance & stop, then

3 Adjust (bolt head at photo (B) to suit - make fine adjustments (less than ¼ turn), then repeat step 2.

Grease Boom Wheel Pivots Every 10 Hours

Grease each of the steering wheel pivot mechanisms every 10 hours.

Grease wheel swing arm pivot points.

Fully sealed castor wheel hub bearings.

Castor Wheels

The Castor wheel hub bearing are fully sealed and do not require greasing.

This applies to both Steering wheels & Castor wheels.

Castor wheel pivot grease point.

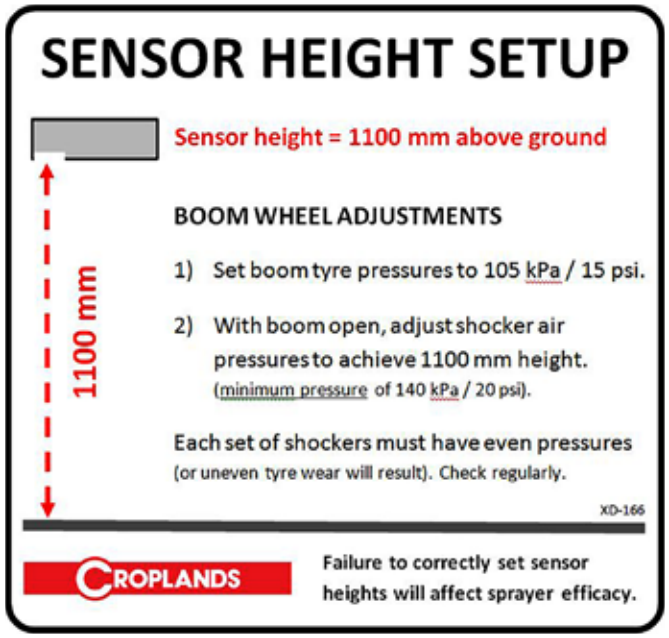
Grease Castor Pivots Every 10 Hours

Grease each of the castor wheel pivot mechanisms every 10 hours.

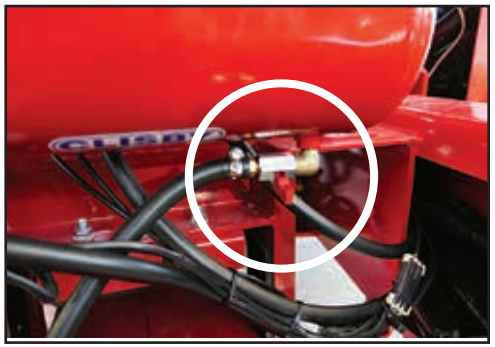
Castor wheel pivot grease point.

Set the Tyre and Shocker Air Pressures

Set the air presssures of boom tyres and shockers according to the "Sensor Height Settings" decal instructions [shown right].



Clean the compressor air filter regularly.



Drain moisture from the compressor tank regularly.

Motor valves.

Air Compressor Filter & Tank Drain Valve

Moisture should be drained from the Air Compressor tank regularly and the air fillter should be cleaned regularly.

The air filter used by the compressor on the Optical Spot sprayer, is located on the top right hand side, rear chassis upright. To clean the air filter:

1 Completely stop all sprayer functions.

2 Remove the air filter cover and then remove the air filter element.

3 Thoroughly clean the air filter by tapping the filter and or using compressed air to remove the dust build-up.

If necessary replace with a new filter element.

4 Re-assemble the clean filter element and cover.

To drain moisture from the Air Compresser tank, open the valve at the base of the tank until all moisture is released, then, close the valve. Do this regularly.

CAUTION

Do not use compressed air when cleaning the air filter as it may damage the air filter element.

Electric Motor-Valve Maintenance

1 Flush system with clean water after each day's use, especially when using wettable powders.

2 Clean and drain the system for storage.

3 Do not apply lubricating oils or other petroleum products to the valves, as this may cause swelling of the rubber parts.

4 Check with the chemical manufacturer to be sure chemicals being used are compatible with the valve parts.

5 Check the ON/OFF operation of the valves periodically, especially if nozzles cannot be seen while operating.

6 Visually check electrical connections to ensure they are clean and secure.

PROBLEM	PROBABLE CAUSE	REMEDY
1 No spray when turned on.	1 Faulty pump.	1 Change pump.
2 Sprays for short time only.	1 Air inlet to tank blocked. 2 Filter on suction side of pump blocking or blocked.	1 Clean air vent. 2 Dismantle, clean & re-assemble the filter. If filter problem persists, clean out the tank & start again.
3 Spray is uneven around the boom.	1 Some nozzle filters or tips are blocked. 2 Nozzle tips worn. 3 Different pressure along the boom.	1 Remove, clean & check. Check output & for streaks. 2 Check nozzle output, replace worn nozzles. 3 Remove a nozzle in each boom section & check that flow rate is the same. If different, check for blockages.
4 Pressure going up - output going down.	1 Nozzle filters blocking.	1 Dismantle, clean & refit. Check pressure returns to normal. Check all filters and spray mixture.
5 Pressure falling.	1 Filter on suction side blocked. 2 Nozzle tips worn. 3 Pressure gauge faulty. 4 Pump worn. 5 Low PAV pressure. 6 Damaged PAV diaphragm.	1 Dismantle & clean the filter. 2 Check nozzle output, replace worn nozzles. 3 Check with new pressure gauge. 4 Repair or replace the pump. 5 Check air pressure regulator operation. 6 Replace diaphragm.
6 Spray pattern narrow.	1 Pressure too low. 2 Pressure too low & spluttering.	1 Check that the correct nozzles are being used. 2 Check that the tank is not empty. If not, there is an air leak between the pump & tank or in the pump. Check plumbing & repair.
7 Foam in the tank.	1 Too much agitation.	1 Check that the return line is at the bottom of the tank. Partly close agitation and valve
8 Spray pattern streaky.	1 Nozzle partly blocked.	1 Remove & clean. If it continues, the nozzle is damaged. Replace with same size tip, check flow rate of replacement nozzle.

PROBLEM	PROBABLE CAUSE	REMEDY
A Hydraulic system overheating	1 Improper hydraulic motor size. 2 Bypass adjustment screw set to bypass too much oil. 3 Insufficient hydraulic hose size.	1 Refer to pump selection guide to determine proper size for your system. 2 Close adjustment screw on side of hydraulic motor to lessen the amount of bypassing oil. 3 Check hydraulic hose size. Hose should be at least ½". For large open-centre systems ¾".
B Blown seal in hydraulic motor	1 Most common cause is failure to correctly connect pressure return line before operating.	1 Always double check return line hose connection.
C Pump overheating/damage to seals	1 Running the pump dry or excessive cavitation.	1 Never run dry/match pump speed to flow.
D Pump does not prime	1 Leak in suction line. 2 Obstruction in suction line. 3 Suction hose stuck to tank. 4 Clogged strainer.	1 Check hose and fittings for leaks and correct. 2 Inspect hose for obstructions and remove. 3 Cut a notch or "V" in end of suction hose. 4 Check strainer and clean regularly.
E Low discharge	1 Pump rotates incorrectly. 2 Blocked suction hose. 3 Pump worn.	1 Correct rotation of pump. 2 Inspect suction hose and repair as necessary. 3 Repair pump.

PROBLEM	PROBABLE CAUSE	REMEDY
1 No return flow coming back from the PAV bypass.	1 Insufficient power to the centrifigul pump, not generating more than 3 bar.	1 Increase centrifugal pump speed in order to generate more than 3 bar pressure.
2 Sun readings/LED reflections.	1 Sun glare on LED's.	1 Take care with readings.
3 Increase centrifugal pump speed in order to generate more than 3 bar pressure.	1 Dirt on camera lenses.	1 Clean lenses every day or when required depending on conditions.
4 Lower than expected activity on inner detectors when viewing the activity of each detector.	1 Sensitivity adjustment required.	1 Adjust level 2 sensitivity.
5 Road transprort flutter.	1 Travel speed above 25 kph. 2 Poor road surface/conditions.	1 Reduce speed. 2 Reduce speed below 18 kph.
6 Chemical only contacting rear of taller targets.	1 4003 Nozzle designed for weeds at ground level.	1 Fit 80 degree nozzles.
7 Not understanding ideal pressures.	1 Lack of training/information.	1 Consult dealer for training/information.
8 Not understanding fuses.	1 Lack of training/information.	1 Consult dealer for training/information.
NOTE: WEEDit AG User Manual (page 33 of version 2011) has 20 common troubleshooting faults listed.		

PROBLEM	PROBABLE CAUSE	REMEDY
1 Docking difficulties, stress & damage to axles.	1 Steering wheels not straightened soon enough.	1 Align steering wheels with docking stay arms 1m away.
2 Docking difficulties, stress & damage to axles.	1 Steering wheels not straightened soon enough.	1 Align steering wheels 1m before docking stay arm.
3 Boom arm latches unlock during field operation.	1 Excess hydraulic pressure in valve block.	1 Disengage tractor hydraulics but leave switch box turned on and in Spray position.
4 Boom bumpers are touching during forward road transport	1 Wheel stops incorrectly set.	1 Adjust so that the boom has minimum of 200mm between the vertical and horizontal bars.
5 Damage to Steer wheels during boom docking process.	1 Wheels being used as a plough.	1 Set at 90 degrees to travel. 2 As per instructions on page 3.11, wheels must be rotated back to the travel direction before final docking.
6 Incorrect spray pattern/coverage.	1 Incorrect air pressures and boom height.	1 Follow label instructions.

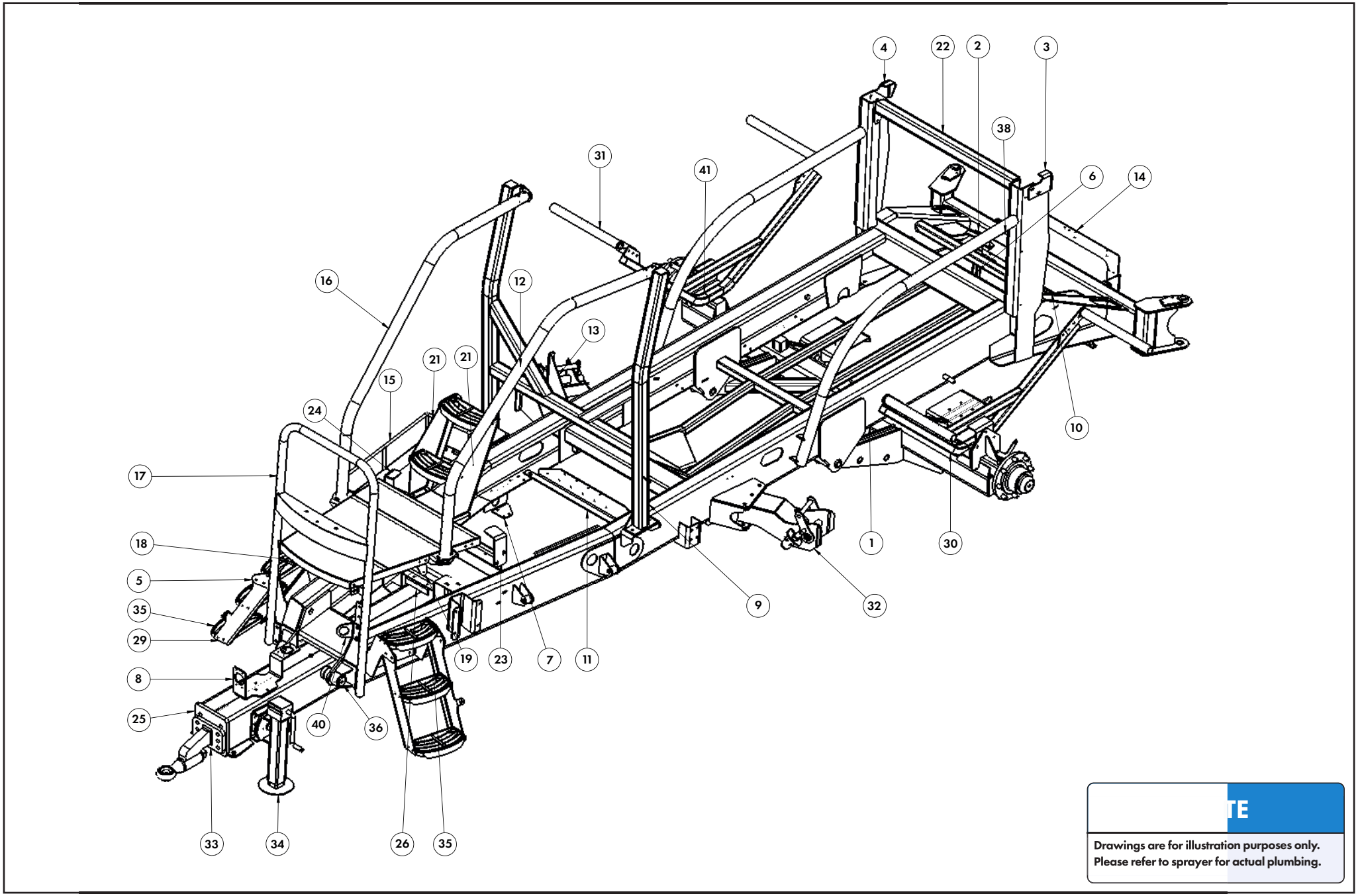
MOTOR VALVE PROBLEMS - BLANKET SPRAY

PROBLEM	PROBABLE CAUSE	REMEDY
A Boom line valve opens when it should be closed and closes when it should be open.	1 Wiring incorrect.	1 Reverse polarity of valve by changing wires at the valve cap.
B Water leaks past valve when valve is shut.	1 Worn seat.	1 Replace seat/hosetail and/or valve system if necessary.
C Valve won't operate.	1 No power to valve. 2 Motor failure. 3 Valve clogged.	1 Check all connections, supply - loom. 2 Replace motor. 3 Clean internals of valve and/or put a new valve kit in the valve.
D Servo valve not regulating flow.	1 Valve jamming. 2 No power. 3 Valve clogged.	1 Clean our valve or replace. 2 Check all power leads and supply, or replace motor. 3 Clean out valve and/or put a new valve kit in the valve.
E Dump valve not releasing pressure in system on shut-off.	1 No power to valve. 2 Valve motor failed. 3 Dump-line blocked.	1 Check power supply and all connections. 2 Check motor and replace if required. 3 Clean valve and return line.

PROBLEM	PROBABLE CAUSE	REMEDY
Hydraulic system overheating	1 Improper hydraulic motor size. 2 Bypass adjustment screw set to bypass too much oil. 3 Insufficient hydraulic hose size.	1 Refer to pump selection guide to determine proper size for your system. 2 Close adjustment screw on side of hydraulic motor to lessen the amount of bypassing oil. 3 Check hydraulic hose size. Hose should be at least ½". For large open-centre systems ¾".
Chemical hopper operation is too slow	1 Insufficient flow through venturi.	1 Increase oil flow to Centrifugal pump (increase tractor rpm), OR 2 Check pump bypass screw - close if neccessary.
Self-fill function is too slow	1 Insufficient pump speed.	1 As above.

ALL PARTS INFORMATION is now listed on the Croplands website:

- Go to www.croplands.com.au
- Search in the Parts Information section linked to the home page.



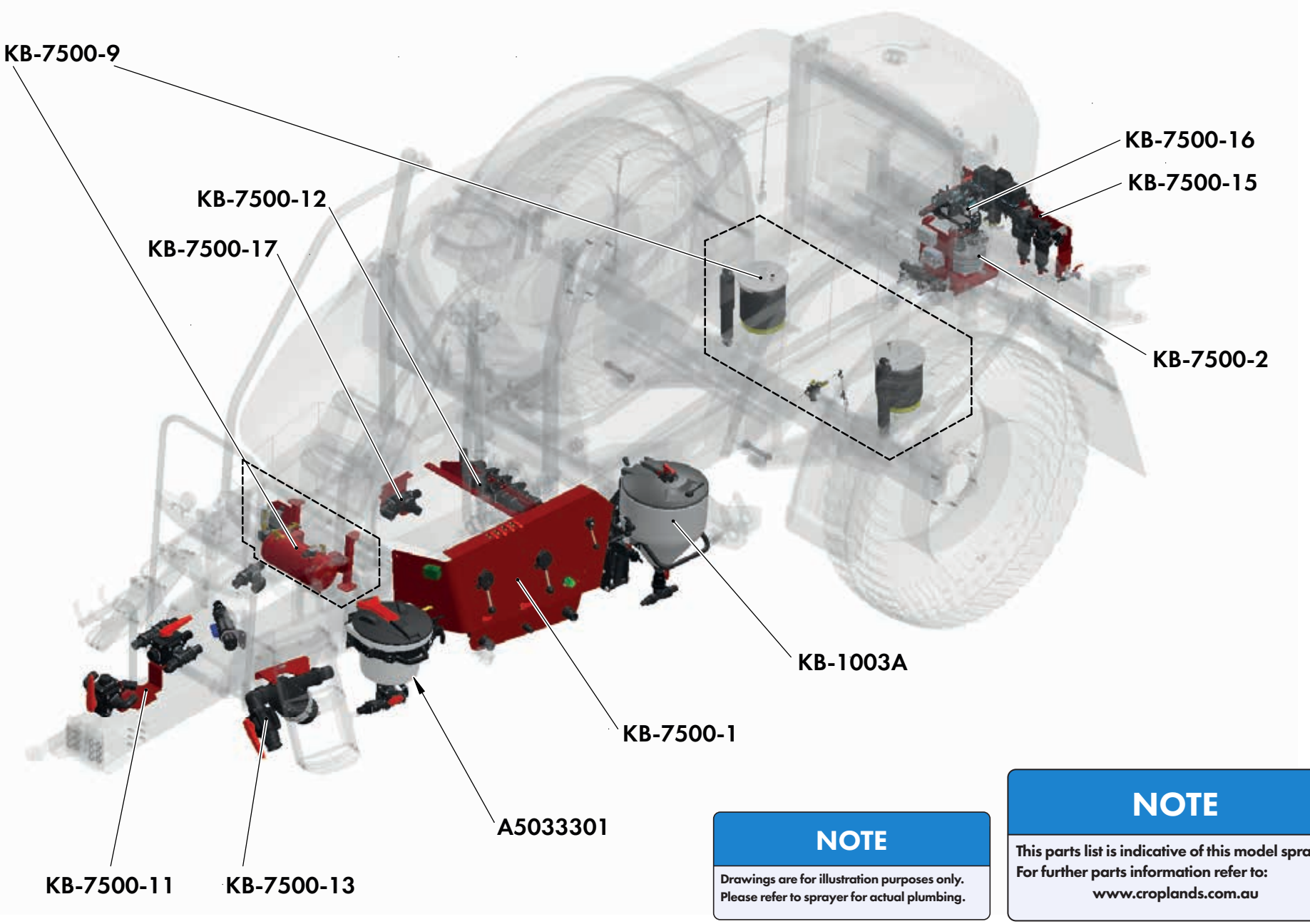
Drawings are for illustration purposes only.
Please refer to sprayer for actual plumbing.

Pos	Part No	Description	Qty
1	BP-750-1	WEEDit 7000 CHASSIS REVISIONS JUNE 2016	1
2	BP-750-10	CLAMP REAR, P1500B TANK	2
3	BP-750-11L	CLAMP LH, P800A TANK	1
4	BP-750-11R	CLAMP RH, P800A TANK	1
5	BP-750-13	STEP BRACKET	2
6	BP-750-15	CENTRE SPRAY RAIL BRACKET	2
7	BP-750-16	7000 DRAIN VALVE MOUNT	1
8	BP-750-18	CENTRIFUGAL VALVE MOUNT	1
9	BP-750-2	MAIN TANK SUPPORT BRACKET	1
10	BP-750-20	WEEDit 7000 PAV PANEL	1
11	BP-750-21	MANIFOLD BRACKET 7000	1
12	BP-750-22	R 7000 WALD BOX MOUNT R.H.	1
13	BP-750-22l	7000 WALD BOX MOUNT L.H.	1
14	BP-750-23	REAR FILTER MOUNT BRACKET	1
15	BP-750-24	WEEDit 7000 DRUM RACK	1
16	BP-750-3	MAIN TANK SUPPORT BRACE	2
17	BP-750-4	GRAB RAIL	1
18	BP-750-5	MAIN PLATFORM	1
19	BP-750-5-1	BRACKET STOPPER	2
20	BP-750-6L	SIDE FRAME STEP LH	1
21	BP-750-6R	SIDE FRAME STEP RH	1
22	BP-750-7	CROSS MEMBER	1
23	BP-750-8	CLAMP LH, P1500B TANK	1
24	BP-750-9	CLAMP RH, P1500B TANK	1
25	BP-800-1A	DRAWBAR 8000LT PEGASUS VER 2	1
26	BP-800-2-5	SUPPORT CHANNEL RUBBER BUFFER	1

Pos	Part No	Description	Qty
27	BP-800-4-2-1	SPACER CAST STEP	4
28	BP-800-4L	SIDE FRAME STEP LH	2
29	BP-800-4R	SIDE FRAME STEP RH	2
30	BP-750-14L	MUDGUARD BRACKET LH 7000LT	1
31	BP-750-14	MUDGUARD ARM WEEDIT 7000L	4
32	AB243200-001L	OUTRIGGER KIT LH	2
33	BP-800-3	TOW EYE SWIVEL 8000LT PEGASUS	1
34	BP-525BA	WEEDit 7000 JACKING LEG	1
35	BP-800-4-2	STEP CAST 8000LT PEGASUS	8
36	BP-750-26	PIN DRAWBAR 8000LT PEGASUS	1
37	BP-628A	ADAPTOR PLATE AIRBAG	1
38	KB-7500-16	CETOP 3 VALVE AND BRACKET	1
39	BP-700C-9C	3M FIXED AIR RIDE	1
40	BP-750-4-1	2" CAM LOCK MOUNT	1
41	BP-750-14R	MUDGUARD BRACKET RH 7000LT	1
42	BP-750-25	ARDS DRAWBAR AIRBAG SUPPORT	1

NOTE

This parts list is indicative of this model sprayer. For further parts information refer to: www.croplands.com.au

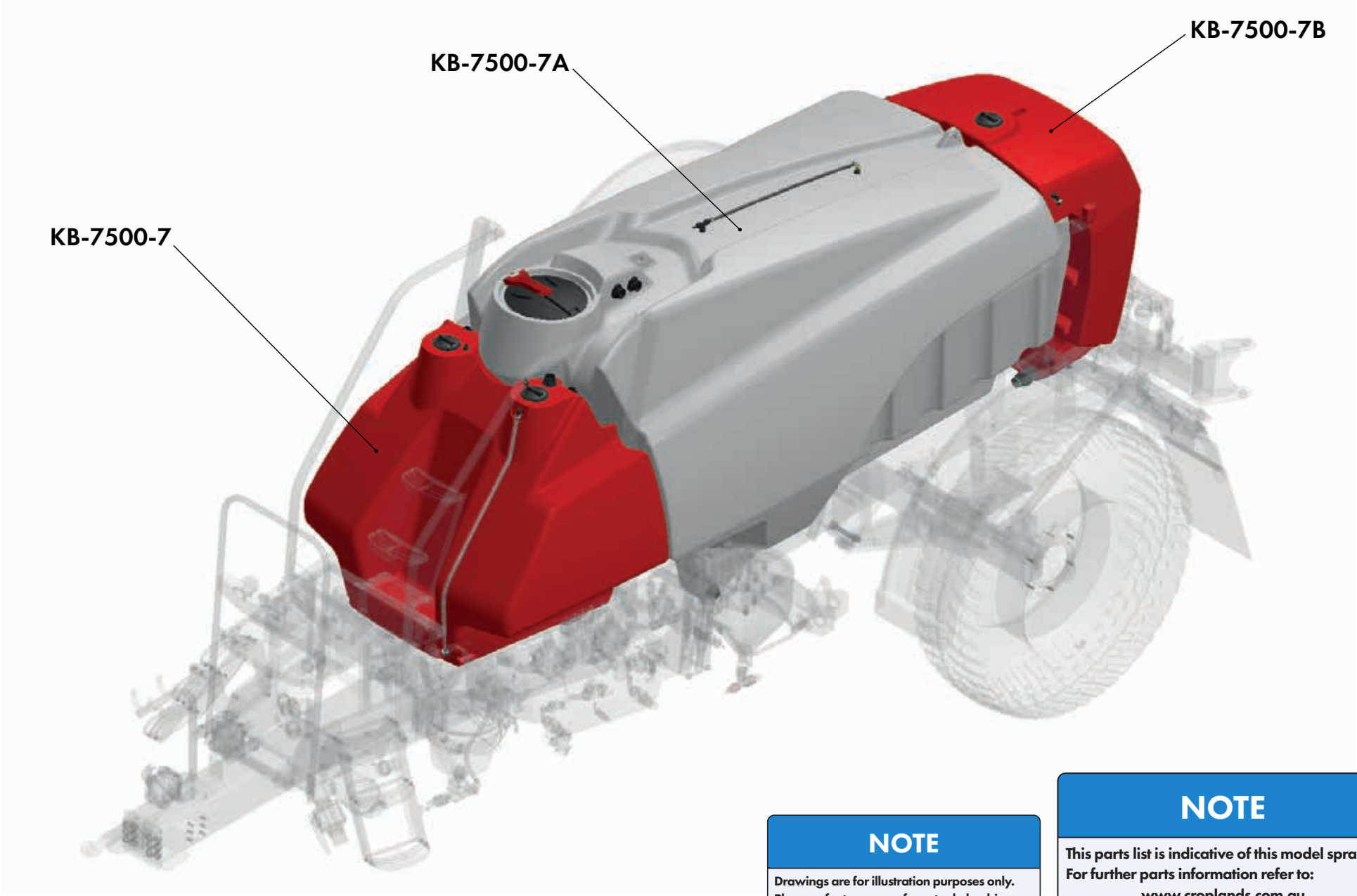


NOTE

Drawings are for illustration purposes only.
Please refer to sprayer for actual plumbing.

NOTE

This parts list is indicative of this model sprayer.
For further parts information refer to:
www.croplands.com.au



NOTE

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Please refer to sprayer for actual plumbing.

NOTE

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For further parts information refer to:
www.croplands.com.au

2" Rotary Valve

Part No: POL10405899.
Seal Kit (5 pieces).

(Kit includes seals & O-rings,
but not the ball, body or fittings).

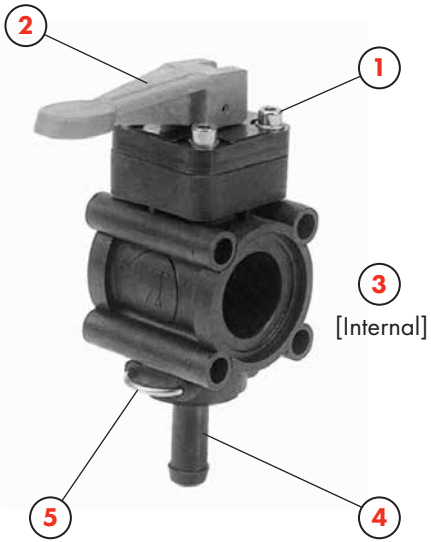
NOTE

Drawings are for illustration purposes only.
Please refer to sprayer for actual plumbing.

NOTE

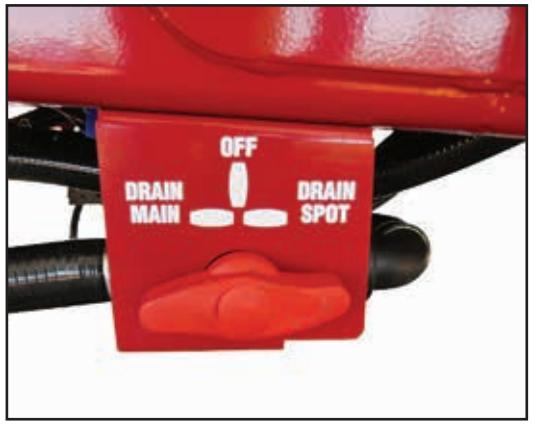
This parts list is indicative of this model sprayer.
For further parts information refer to:
www.croplands.com.au

Shut-Off Taps - Tank Rinse, Probe Rinse & Agitators



Pos	Part No	Description	Qty
1	A463051	Complete Valve	1
2	A463051.140	Handle	1
3	A463051.550	Regulator Stem Kit	1
4	A463001.A13	Tail	1
5	A010002	Clip	1

Pressure Gauges



Drain Valve 2"

Pos	Part No	Description	Qty
1	A454137	Valve Complete	1
2	A454236.050	Tap Handle	1
3	A-EL200	Tail	1

NOTE

Drawings are for illustration purposes only.
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NOTE

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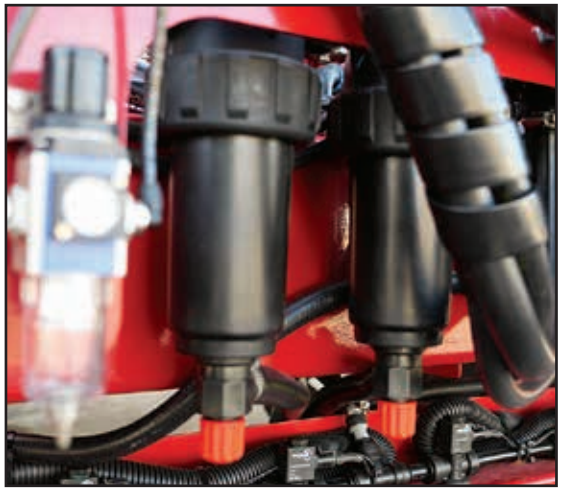
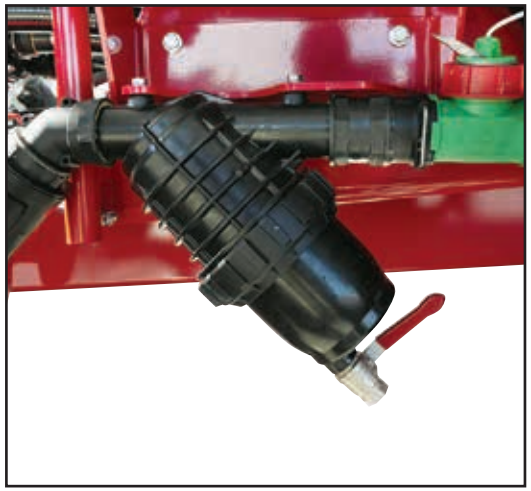


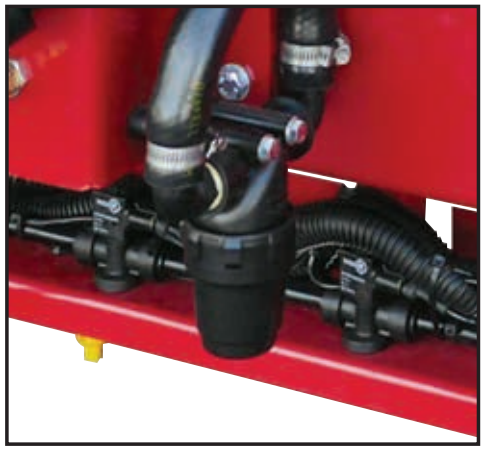
Pressure Filters Optical Spot Sprayline
(shown above on sprayer)



Bottom-Fill Filter
(shown above on sprayer)

Compressor Air Filter
(shown above on sprayer)

Pressure Filters Blanket Sprayline
(shown on sprayer)



Pressure Filter Blanket Sprayline Centre Boom Section
(shown on sprayer)

NOTE

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NOTE

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Main Tank Lid

Tank Lid

Pos	Part No	Description	Qty
1	A356060	Lid Complete	1
2	A356660.02	Seal Ring	1

Spot Tank Lids

Spot Tank Lids

Pos	Part No	Description	Qty
1	?		1

NOTE

Drawings are for illustration purposes only. Please refer to sprayer for actual plumbing.

Tank Rinsing Jet & Agitator

Tank Rinse Jet

Pos	Part No	Description	Qty
1	POL63408399	Tank Rinsing Jet	1

NOTE

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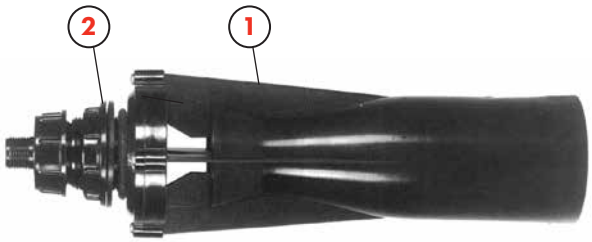
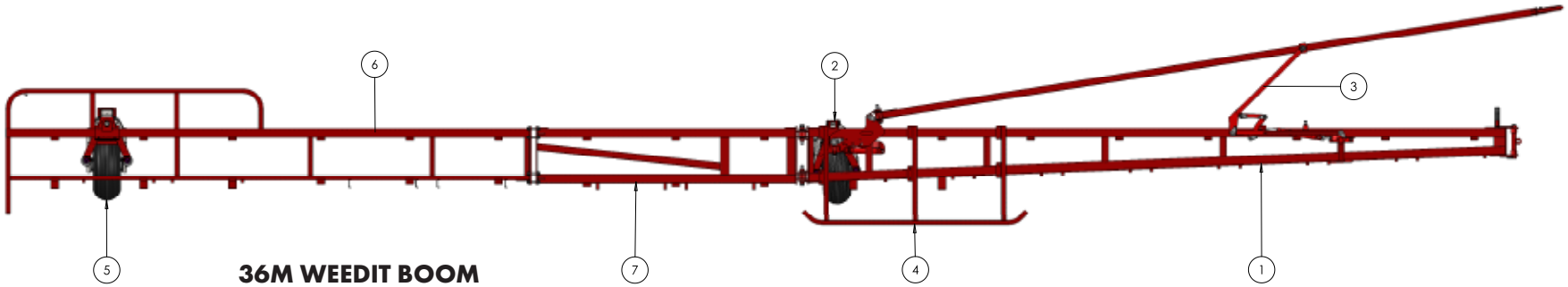
Agitator



Pos	Part No	Description	Qty
1	A502163	Agitator Complete	1
2	A200050	Fly nut 1¼"	1



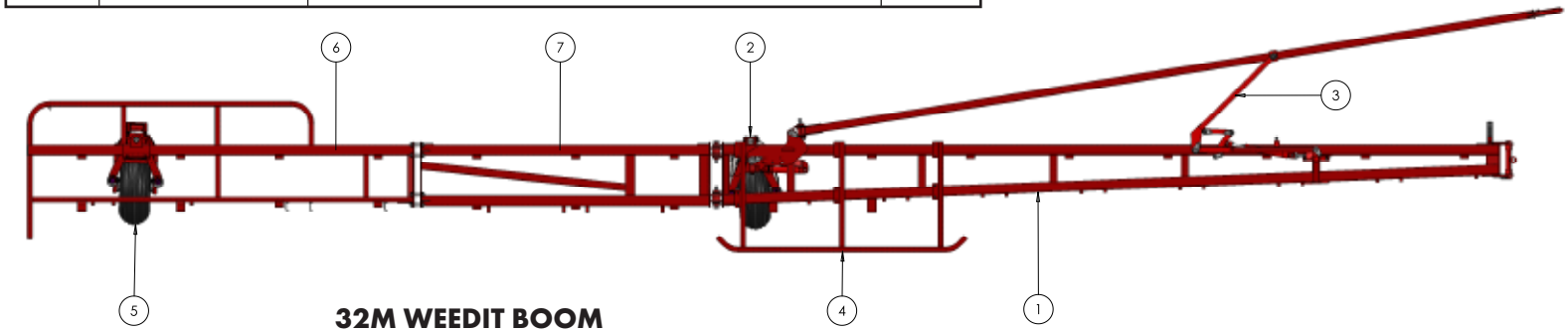
36M WEEDIT BOOM

Pos	Part No	Description	Qty
1	AB243000-200	FIRST ARM WING KIT SHADOW BOOM	1
2	AB243000-110A	STEERING CASTOR ASSY VER 2	1
3	AB243000-400L	OUTRIGGER DOCKING KIT LH	1
4	AB243000-700A	BOOM BUMPER KIT 18-36M	1
5	AB243000-120A	OUTER CASTOR KIT VER 2	1
6	AB243000-600A	OUTER WING KIT 36M VER 2	1
7	AB243000-500A	SECOND ARM 36M VER 2	1

THIS INFORMATION IS AN OVERVIEW OF THE SERIES 3 WEEDIT BOOM - FOR DETAILS REFER TO THE INDIVIDUAL BOOM DRAWINGS ON PAGES 7.5 - 7.11.

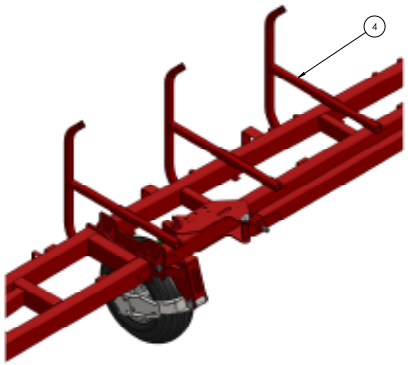
QUANTITIES ARE SHOWN FOR LH BOOM ONLY WITH THE EXCEPTION OF AB243000-700A.

ALL PARTS ARE SYMMETRICAL EXCEPT AB243000-400L - USE AB243000-400R FOR THE RH BOOM.



32M WEEDIT BOOM

Pos	Part No	Description	Qty
1	AB243000-200	FIRST ARM WING KIT SHADOW BOOM	1
2	AB243000-110A	STEERING CASTOR ASSY VER 2	1
3	AB243000-400L	OUTRIGGER DOCKING KIT LH	1
4	AB243000-700A	BOOM BUMPER KIT 18-36M	1
5	AB243000-120A	OUTER CASTOR KIT VER 2	1
6	AB243000-900	OUTER WING KIT 32M	1
7	AB243000-500A	SECOND ARM 36M VER 2	1



FITTING OF AB243000-700A ON RIGHT HAND BOOM

NOTE

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NOTE

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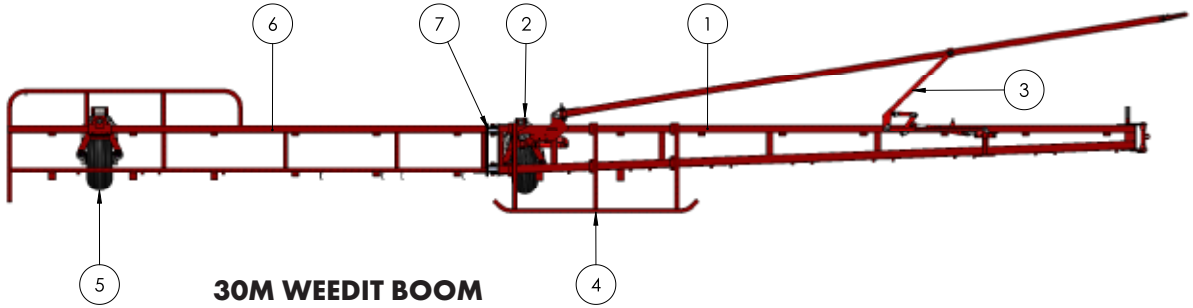
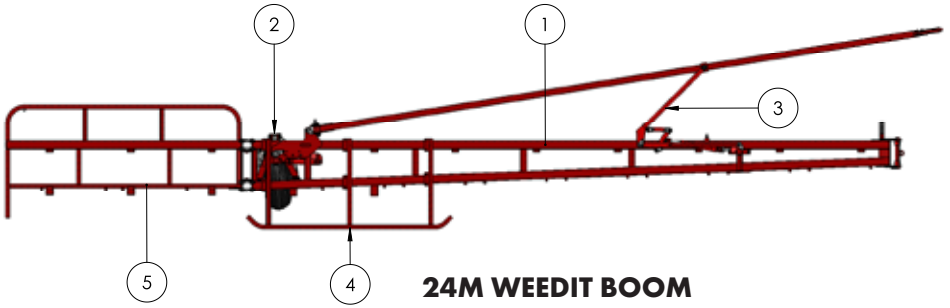


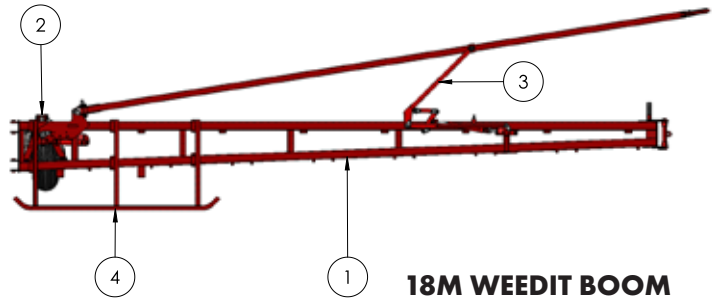
30M WEEDIT BOOM

Pos	Part No	Description	Qty
1	AB243000-200	FIRST ARM WING KIT SHADOW BOOM	1
2	AB243000-110A	STEERING CASTOR ASSY VER 2	1
3	AB243000-400L	OUTRIGGER DOCKING KIT LH	1
4	AB243000-700A	BOOM BUMPER KIT 18-36M	1
5	AB243000-120A	OUTER CASTOR KIT VER 2	1
6	AB243000-600A	OUTER WING KIT 36M VER 2	1
7	AB243308-100A	HINGE PLATE 30M SERIES 3 WEEDIT	1



24M WEEDIT BOOM

Pos	Part No	Description	Qty
1	AB243000-200	FIRST ARM WING KIT SHADOW BOOM	1
2	AB243000-110A	STEERING CASTOR ASSY VER 2	1
3	AB243000-400L	OUTRIGGER DOCKING KIT LH	1
4	AB243000-700A	BOOM BUMPER KIT 18-36M	1
5	AB243000-800A	OUTER WING KIT 24M VER 2	1



18M WEEDIT BOOM

Pos	Part No	Description	Qty
1	AB243000-200	FIRST ARM WING KIT SHADOW BOOM	1
2	AB243000-110A	STEERING CASTOR ASSY VER 2	1
3	AB243000-400L	OUTRIGGER DOCKING KIT LH	1
4	AB243000-700A	BOOM BUMPER KIT 18-36M	1

NOTE

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NOTE

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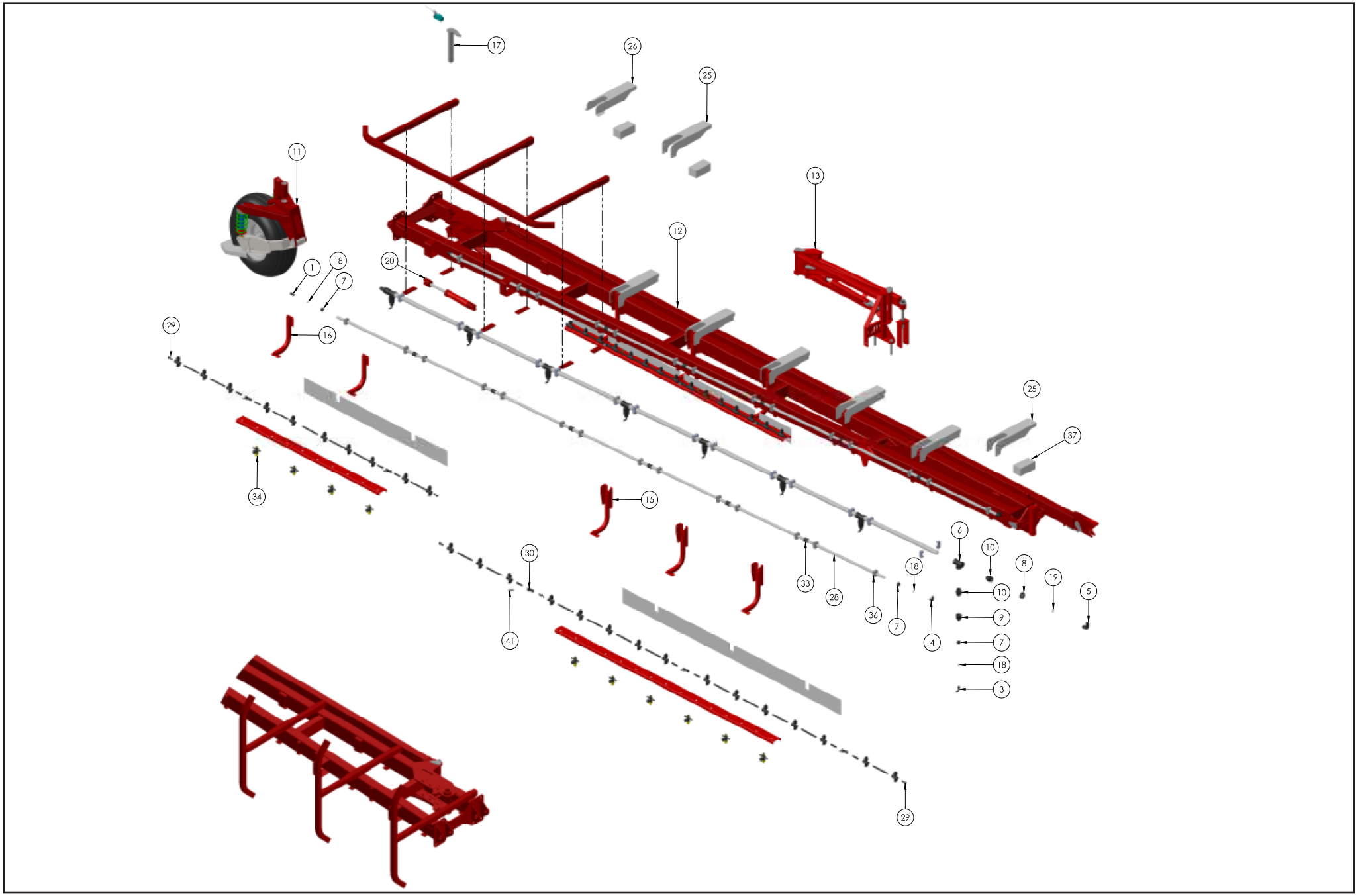
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Pos	Part No	Description	Qty
1	A106320	TAIL 3/4"	2
2	A106533	TAIL 1 1/4" TO 32MM	1
3	A116313	ELBOW D13 FOR FLY NUT 3/4"	8
4	A116320	ELBOW 3/4" - 20MM HOSE	2
5	A116533	ELBOW 1 1/4" - 32MM HOSE	1
6	A1302050	TEE 1 1/4"	8
7	A200030	FLY NUT 3/4"	12
8	A200050	FLY NUT 1 1/4"	2
9	A245035	REDUCER 3/4" MALE - 1 1/4" FEMALE	8
10	A250050	NIPPLE 1 1/4"	10
11	AB243000-110A	STEERING CASTOR KIT SHADOW BOOM	1
12	AB243000-200	FIRST ARM WING KIT SHADOW BOOM	1
13	AB243000-400	OUTRIGGER SUPPORT KIT SHADOW BOOM	1
14	AB243000-700A	BOOM BUMPER KIT 18-36M	1
15	AB243130-300A	SPRAYBAR BRKT WITH CAMERA BRKT	6
16	AB243130-300B	BRACKET SPRAYBAR	2
17	AB243204-110	50MM PIN	1
18	AG10031	O RING 3/4"	12
19	AG10051	O RING 1 1/4"	2
20	HP-015	HYDRAULIC CYLINDER 2.0 X 8	1
21	MP-320	2 SENSOR NOZZLE BRK	1
22	MP-321	3 SENSOR NOZZLE BRK	2
23	MP-330	NOZZLE PROTECTION RAIL 10 HOLES	1
24	MP-331	NOZZLE PROTECTION RAIL 15 HOLES	2
25	MP-340	SENSOR BRACKET	7
26	MP-340A	SENSOR BRACKET	1
27	MP-350	POLYPIPE 1 1/4" 950MM	7
28	MP-354 3/4"	2200 POLYTUBE	14
29	MP-360	END CAP 15mm JOHN GUEST	6
30	MP-361	TEE 15mm JOHN GUEST	6
31	MP-361	TEE 15MM JOHN GUEST	2
33	PH4322	SOCKET 3/4"	12
34	QJ39685-2-500-N	TEE BODY	16
35	UP-429	CLAMP PP SINGLE 43MM	14
36	UP-431	3/4" Stauff Clamp	28
37	WI46004407	WEEDIT SENSOR VER2011	8
38	WI46004491L	195MM LONG **SPARE COMES IN 1 METRE LENGTH**	29
39	WI46004491L	70MM LONG **SPARE COMES IN 1 METRE LENGTH**	16
40	WI6004450	SOLENOID SET COMPLETE NOZZLE ASSY	40
41	WI6004492	PUSH FIT 15MM TO HOSE CON 12MM	6

NOTE

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NOTE

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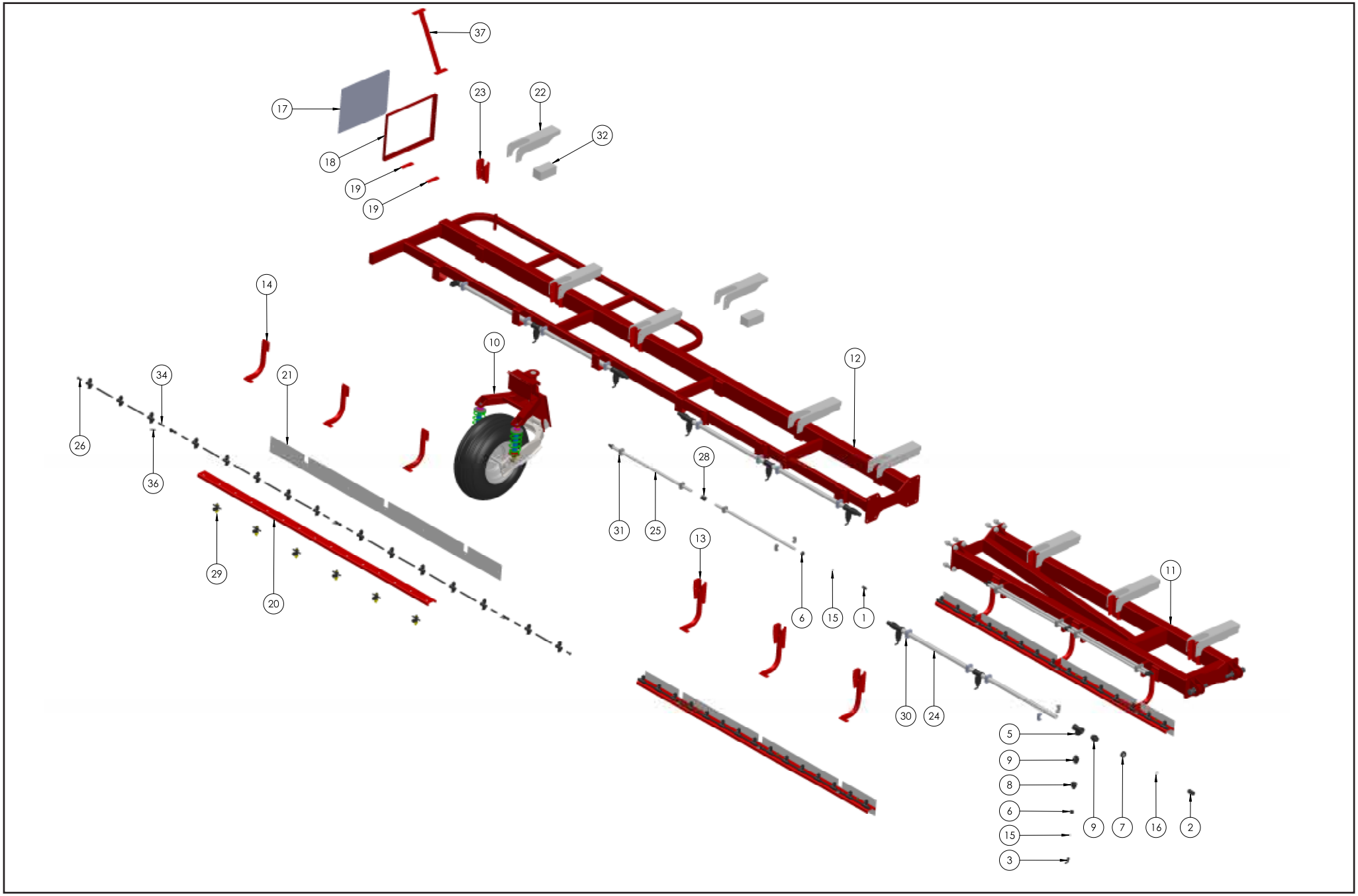
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Pos	Part No	Description	Qty
1	A106320	TAIL 3/4"	6
2	A106533	TAIL 1 1/4" TO 32MM	7
3	A116313	ELBOW D13 FOR FLY NUT 3/4"	8
4	A126055	ELBOW 1 1/4" X 1 1/4" MALE/FEMALE	1
5	A1302050	TEE 1 1/4"	8
6	A200030	FLY NUT 3/4"	14
7	A200050	FLY NUT 1 1/4"	7
8	A245035	REDUCER 3/4" MALE - 1 1/4" FEMALE	9
9	A250050	NIPPLE 1 1/4"	15
10	AB243000-120A	OUTER CASTOR KIT VER 2	1
11	AB243000-500A	SECOND ARM 36M VER 2	1
12	AB243000-600A	WEEDIT BOOM OUTER ARM	1
13	AB243130-300A	SPRAYBAR BRKT WITH CAMERA BRKT	3
14	AB243130-300B	BRACKET SPRAYBAR	6
15	AG10031	O RING 3/4"	14
16	AG10051	O RING 1 1/4"	7
17	BP-700-8FA	OVERSIZE SIGN 2 PIECE	1
18	MP-310	FRAME TOP	1
19	MP-312	WEEDIT OVERSIZE SIGN PLATE	2
20	MP-321	3 SENSOR NOZZLE BRK	3
21	MP-331	NOZZLE PROTECTION RAIL 15 HOLES	3
22	MP-340	SENSOR BRACKET	9
23	MP-341A	CAMERA BRACKET MOUNT	6
24	MP-350	POLYPIPE 1 1/4" 950MM	6
25	MP-354 3/4"	2200 POLYTUBE	6
26	MP-360 END CAP 15mm	JOHN GUEST	6
27	MP-361	TEE 15mm JOHN GUEST	9
28	PH4322	SOCKET 3/4"	3
29	QJ39685-2-500-N	TEE BODY	18
30	UP-429	CLAMP PP SINGLE 43MM	12
31	UP-431	3/4" Stauff Clamp	12
32	WI46004407	WEEDIT SENSOR VER2011	9
33	WI46004491L	195MM LONG **SPARE COMES IN 1 METRE LENGTH**	33
34	WI46004491L	70MM LONG **SPARE COMES IN 1 METRE LENGTH**	18
35	WI6004450	SOLENOID SET COMPLETE NOZZLE ASSY	45
36	WI6004492	PUSH FIT 15MM TO HOSE CON 12MM	9
37	MP-311	WEEDIT OVERSIZE SIGN BRACKET	1

NOTE

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NOTE

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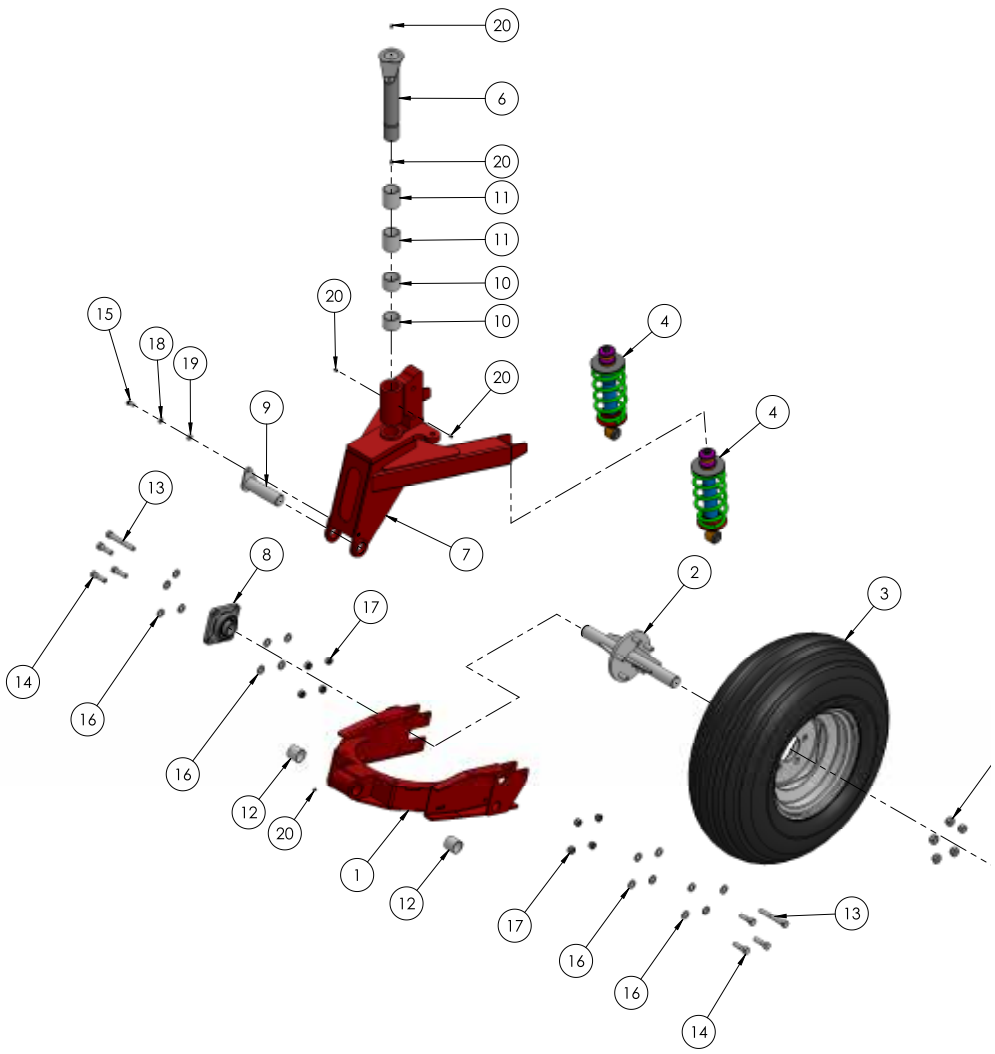

Pos	Part No	Description	Qty
1	AB243901-110	STEERING WHEEL SWING ARM	1
2	AB243903-100	WEEDIT BOOM SUSPENSION AXLE	1
3	HP-202R	WHEEL 12Lx15 MULTI RIB 5/140	1
4	MP-391A	SHOCK ABSORBER HI RISE W/ COIL	2
5	MP-392	WHEEL NUT M16 X 1.5	5
6		50MM PIN	1
7		TOP MOUNT	1
8		40MM BEARING 102MM MOUNTING HOLES	2
9		STEERING WHEEL SWING ARM PIN	1
10		PERMAGLIDE BUSH 50 X 40	2
11		PERMSGLIDE BUSH 50 X 60	2
12		PERMAGLIDE BUSH 40 X 40	2
13		M14 X 110 BOLT HT ZP	2
14		M14 X 50 BOLT HT ZP	6
15		M10 X 20 SET SCREW HT ZP	1
16		M14 FLAT WASHER ZP 1	6
17		M14 NYLOC NUT HT ZP	8
18		M10 SPRING WASHER ZP	1
19		M10 FLAT WASHER ZP	1
20		M6 GREASE NIPPLE	5

NOTE

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NOTE

Items without a Part No are non stocked items and may need to be specially ordered.

NOTE

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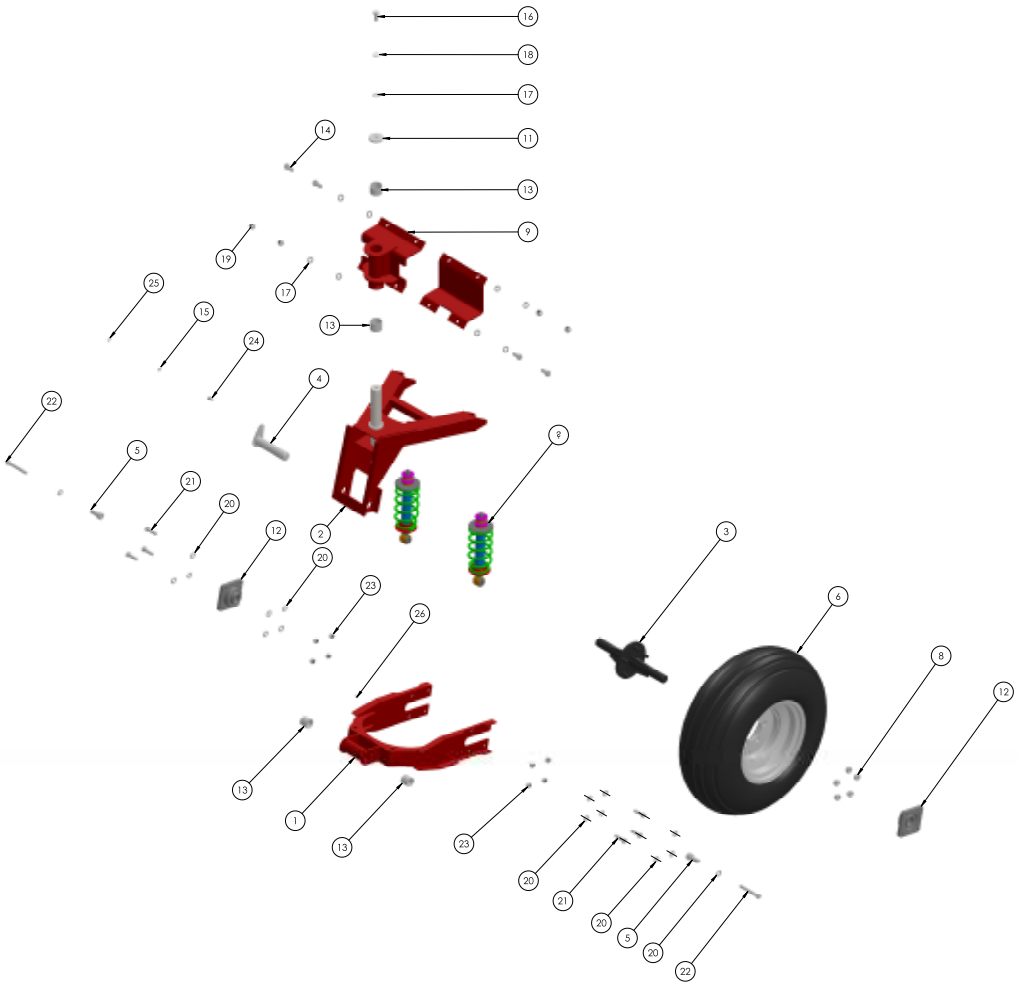
CASTOR WHEEL ASSEMBLY



Pos	Part No	Description	Qty
1	AB243901-100	WEEDIT OUTER CASTOR SWING ARM	1
2	AB243902-004	OUTER CASTOR WHEEL PIVOT	1
3	AB243903-100	WEEDIT BOOM SUSPENSION AXLE	1
4	AB243904-100	OUTER WHEEL SWING ARM PIN	1
5	AB243905-100	SHOCK ABSORBER FERULE	2
6	HP-202R	WHEEL 12Lx15 MULTI RIB 5/140	1
7	MP-391A	SHOCK ABSORBER HI RISE W/ COIL	2
8	MP-392	WHEEL NUT M16 X 1.5	5
9		PIVOT TOP PLATE	1
10		PIVOT BOTTOM PLATE	1
11		RETAINING PLATE	1
12		40MM BEARING 102MM MOUNTING HOLES	2
13		PERMAGLIDE BUSH 40 X 40	4
14		M16 X 45 HEX HEAD SET SCREW HT ZP	4
15		M10 FLAT WASHER ZP	1
16		M16 X 40 HEX HEAD SET SCREW	1
17		M16 FLAT WASHER ZP	9
18		M16 SPRING WASHER	1
19		M16 NYLOC NUT HT ZP	4
20		M14 FLAT WASHER ZP	16
21		M14 X 50 BOLT HT ZP	6
22		M14 X 110 BOLT HT ZP	2
23		M14 NYLOC NUT HT ZP	8
24		M10 X 20 SET SCREW HT ZP	1
25		M10 SPRING WASHER ZP	1
26		M6 GREASE NIPPLE	2

NOTE

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NOTE

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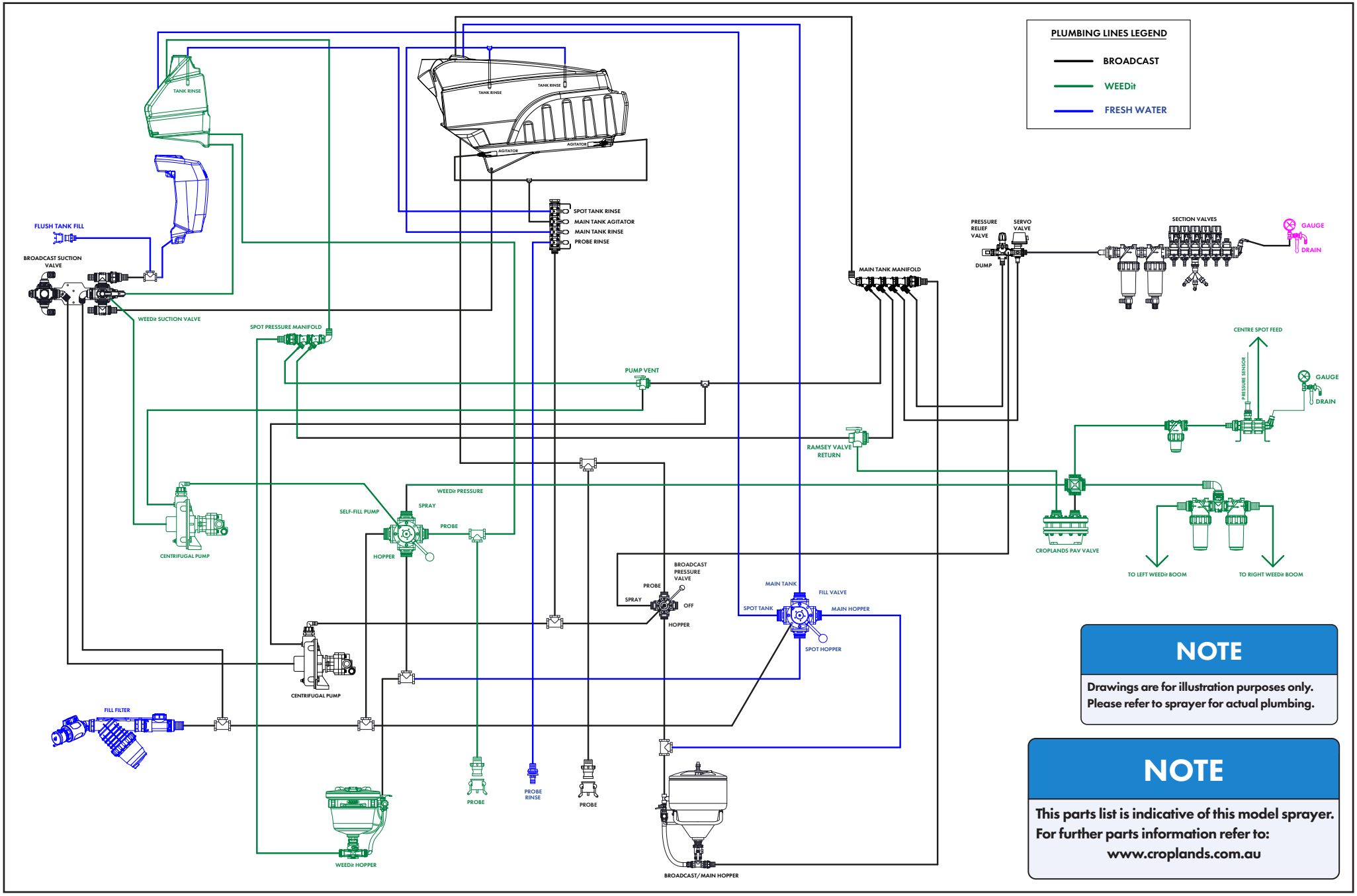

NOTE

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NOTE

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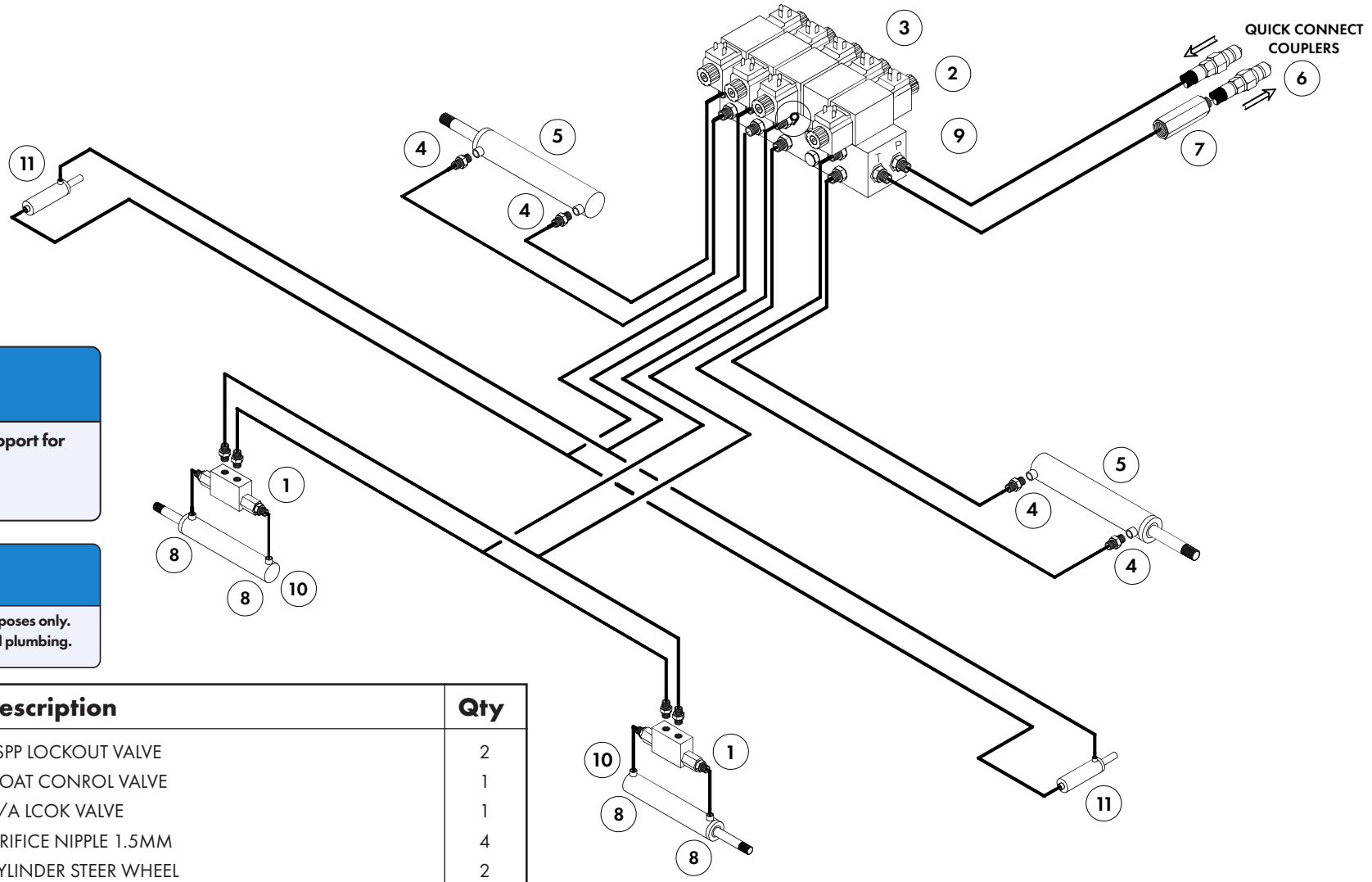
NOTE

Contact Croplands Technical Support for further information:
1800 999 162



NOTE

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1800 999 162

NOTE

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Please refer to sprayer for actual plumbing.

Pos	Part No	Description	Qty
1	FFD14	BSPP LOCKOUT VALVE	2
2	MP-630-5	FLOAT CONROL VALVE	1
3	MP-630-5	D/A LCOK VALVE	1
4		ORIFICE NIPPLE 1.5MM	4
5	HP-05	CYLINDER STEER WHEEL	2
6	R81-08M	½" BSPP MALE QUICK CONNECTOR	2
7	RV-12-01	½" BSPP INLINE CHECK VALVE	1
8		ORIFICE NIPPLE 1.5MM	4
9	MP630	HYD VALVE MANIFOLD 4 FUNCTION	1
10	HP-012	CYLINDER ARM FOLD	2
11	AB20800	HYD CYLINDER OUTER FOLD LOCK	2

NOTE

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NOTE

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