

OPERATORS MANUAL

Croplands AgriPak Linkage Sprayers

MODELS:

300 Litre

600 Litre

800 Litre

1000 Litre



WELCOME



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

Use the contact details listed on the back page to contact our staff during business hours. After hours, e-mail us and expect a reply the following morning. We trust you will get years of good use from your Croplands AgriPak Linkage Sprayer.

Yours sincerely,

Sean Mulvaney
General Manager.

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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.

About This Manual

This manual provides setting up information, safety tips and operating & maintenance instructions for the Croplands AgriPak Linkage Sprayer range.

Some model types have different options available. Some features explained in this manual may not be installed on your sprayer. Please pass on this manual with the sprayer at the time of resale for usage by the new owner.

Before Operating Your Sprayer

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

SECTION 1: WARRANTY POLICY

NOTE

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

Refer to your Croplands Warranty and Pre-delivery Booklet supplied with your AgriPak sprayer. Always make contact with your Croplands Dealer first and foremost for warranty matters.



SECTION 2: FOREWORD

Croplands Equipment is a subsidiary of Nufarm Australia Ltd and operates as Croplands Equipment Pty Ltd in Australia and Croplands Equipment Ltd in New Zealand. Croplands are a leading importer, manufacturer and supplier of spraying equipment.

This operator's manual covers the Croplands' range of three-point linkage AgriPak sprayers with tank capacities of 300 litres through to 1000 litres.

Manufactured to a high standard for use in Agriculture and Horticulture, every effort has been made to include all information needed for the safe and effective operation of your AgriPak sprayer.

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.

As the owner of a Croplands AgriPak sprayer, please read this manual thoroughly to fully familiarise yourself with all aspects of the safe and correct operation of your sprayer. Maintenance information and useful tips have been included. We trust you will use these tips to get the best from your sprayer.



WARNING

Read and understand this operators' manual before operating the AgriPak Sprayer.

SECTION 3: SAFETY INFORMATION

Rules for Safe AgriPak Sprayer Operation

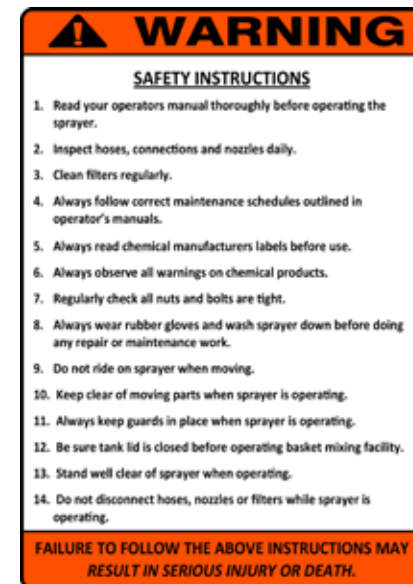
- » Always read your sprayer operator's manual thoroughly before operating. Accidents occur every year because of careless use of farm chemicals and farm machinery. You can avoid these hazards by observing these safety instructions.
- » Dispose of all chemical containers as per instructions on label. 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 exposed to toxic chemicals, which 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 or herbicide concentration that is too high may expose the operator and the environment to danger.
- » Be sure to disconnect all power connections (if applicable) before attempting welding repairs.
- » Always wear relatively tight and belted clothing to avoid entanglement in moving parts. Failure to do so could result in serious injury.

- » When working on your sprayer, 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. ALWAYS have the booms folded and in the parking position when working on the sprayer.
- » 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.
- » Use only genuine Croplands parts for any necessary replacement. All parts are important to the equipment design. Homemade parts may look the same but might be dangerous in operation.
- » Follow the chemical manufacturers precautions before cleaning the sprayer. Exposure to chemicals could result in serious illness or death.
- » Always wear gloves and wash the sprayer 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 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 guards in place. Failure to do this might result in entanglement. This is a leading cause of serious accidents & death on farms.
- » 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 sprayer or tractor.

- » Always stand well clear of sprayer when operating. Any particle or spray drift is dangerous and 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.

- » Should any welding be required on the steel parts of the sprayer, always clean the linkage sprayer and disconnect the power before doing any repairs. Cover rubber hoses, and all other flammable parts. Keep a fire extinguisher near the sprayer when welding. Have good ventilation when grinding or welding painted or galvanised parts. Wear dust mask when grinding. Toxic dust or gas can be produced.

SAFETY DECALS



SAFETY WITH CHEMICALS



WARNING

Every product for sale will have a detailed label with application instructions, rate of application, safety information and withholding periods. Always follow these instructions carefully.

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.
- » What protective clothing and equipment is needed?
- » Know the correct first aid/safety in case of poisoning.
- » Seek medical advice if chemicals affect health.

Mixing the Product

- » Reduce or eliminate operator contact by using closed loading systems such as chemical mixing units, wettable powder mixtures or wettable dispersible 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.

Rate of Absorption

- » While pesticides are absorbed more completely orally and by inhalation, greater exposure and more poisonings occur through skin (dermal) contact. Ensure protective clothing is worn at all times during chemical handling.

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 product?
- » 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?

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 disposal schemes.

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. Replace respirator cartridges at recommended intervals.

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 – check your local regulations to ensure your store complies.
- » 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.

SAFETY WITH CHEMICALS CONTINUED

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, easy-pour 1, 3 and 5 litre measuring jugs and the 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 direct contact with 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.

Head & Face

- » Hard hats, washable hats, goggles, spray helmets and face shields are important when handling concentrates. Purchase Goggles that feature sealed, anti-fog lenses for practical, comfortable eye protection. Croplands Kasco Spray Hood is fully approved for use with agrichemicals.

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 WORK ON**. 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 information.

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. In most cases you have a legal obligation to ensure damage to crops outside your property does not occur.



CAUTION

Always read the chemical label carefully.

1. **Be SURE** the equipment is functioning correctly. Check that nozzles are in good condition. Check all other aspects of machine operation are correct.
2. **Be SURE** pesticides are mixed thoroughly and according to the label.
3. **Be SURE** the recommended registered pesticide is used for the job at hand.
4. **Be SURE** pesticides are applied at recommended rates.
5. **Be SURE** only target plants are sprayed.
6. **Be SURE** to follow the safety precautions on the label.



SECTION 4: SPRAYER SPECIFICATIONS

Product Identification

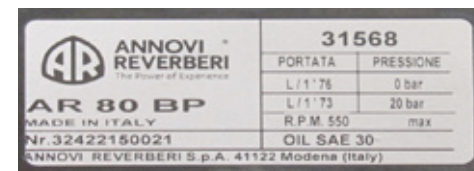
Whenever possible, use the serial number of the AgriPak linkage sprayer when requesting service or parts information.

Where a serial plate is not provided or is no longer on the unit, use the part number from the bar code affixed to this manual or the Warranty & Pre-delivery booklet.



Pump model & Serial number

The Pump model & pump serial number is located on the pump itself. The plate shows the name of the manufacturer, type and model of the pump, serial number, maximum working pressure and oil requirements. For further information on parts for your pump, refer to the parts section on the Croplands website. Use the pump model as the reference.



NOTE

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

LA300 AgriPak	LA600 AgriPak
<ul style="list-style-type: none"> » AR Triple-diaphragm positive displacement pump fitted » Standard Pump capacity 80 litres/min » Optional high-pressure AR30 and AR503 for vertiboom » 10 litre Hand Wash tank » 40 litre Fresh Water Flushing Tank » Fully hot-dipped galvanised frame » Easy access & fully protected suction filter » ARUCM full-bypass 4 or 5 tap control unit fitted with master on/off lever » Isometric pressure gauge for accuracy in setting pressure » Protected pump, rear mounted for excellent PTO angle » Quality PTO shaft supplied » Safety labels » Translucent tank material for easy volume reference » Easy-slide boom mounting » Options for controllers, booms, hoses, reels, spray guns, foam markers & GPS systems - refer Croplands Optima Buyers Guide on-line 	<ul style="list-style-type: none"> » AR Triple-diaphragm positive displacement pump fitted » Standard Pump capacity 80 litres/min » Optional 140 L/min » Optional high-pressure AR30 and AR503 for vertiboom » 15 litre Hand Wash tank » 80 litre Fresh Water Flushing Tank » Fully hot-dipped galvanised frame » Easy access & fully protected suction filter » ARUCM full-bypass 4 or 5 tap control unit fitted with master on/off lever » Isometric pressure gauge for accuracy in setting pressure » Protected pump, rear mounted for excellent PTO angle » Quality PTO shaft supplied » Safety labels » Translucent tank material for easy volume reference » Easy-slide boom mounting » Options for controllers, booms, hoses, reels, spray guns, foam markers & GPS systems - refer Croplands Optima Buyers Guide on-line

LA800 AgriPak	LA1000 AgriPak
<ul style="list-style-type: none"> » AR Triple-diaphragm positive displacement pump fitted » Standard Pump capacity 80 litres/min » Optional 140 L/min » 15 litre Hand Wash tank » 80 litre Fresh Water Flushing Tank » Fully hot-dipped galvanised frame » Easy access & fully protected suction filter » ARUCM full-bypass 4 or 5 tap control unit fitted with master on/off lever » Isometric pressure gauge for accuracy in setting pressure » Protected pump, rear mounted for excellent PTO angle » Quality PTO shaft supplied » Safety labels » Translucent tank material for easy volume reference » Easy-slide boom mounting » Options for controllers, booms, hoses, reels, spray guns, foam markers & GPS systems - refer Croplands Optima Buyers Guide on-line 	<ul style="list-style-type: none"> » AR Triple-diaphragm positive displacement pump fitted » Standard Pump capacity 80 litres/min » Optional 140 L/min » 15 litre Hand Wash tank » Fully hot-dipped galvanised frame » Easy access & fully protected suction filter » ARUCM full-bypass 4 or 5 tap control unit fitted with master on/off lever » Isometric pressure gauge for accuracy in setting pressure » Protected pump, rear mounted for excellent PTO angle » Quality PTO shaft supplied » Safety labels » Translucent tank material for easy volume reference » Multiple bolt holes for boom mounting » Options for controllers, booms, hoses, reels, spray guns, foam markers & GPS systems - refer Croplands Optima Buyers Guide on-line

SECTION 4: SPRAYER SPECIFICATIONS- GENERAL INFORMATION

Tanks

Croplands AgriPak tanks are constructed from a UV stabilised, medium density polythene for low distortion qualities and impact resistance. Tanks come with capacities of 300, 600, 800 and 1000 litres. A screw down main lid is installed on all models and comes standard with a basket strainer. Agitation is provided by a constant bypass system back to tank. A venture agitator is standard on some models and optional on others.

Pumps

Croplands uses positive displacement oil-backed diaphragm pumps. The size and output of pumps vary depending on the machine specifications ordered. The maximum operating pressure is shown below at a PTO output of 540 rpm.

Do not exceed the maximum PTO output of 540rpm.

Pump models	Max L/min	Max Press.
AR45LFP	43.3	20 bar
AR80LFP	76.4	20 bar
AR140LFP	132.9	15 bar
AR30	35	40 bar
AR503	54.1	40 bar

Drive

A 540 rpm PTO shaft with safety shields & safety chains is provided with every AgriPak.

Controls

Standard Croplands linkage sprayers come with a manual bypass control with a screw type pressure regulator valve (PRV) that has been pressure tested before leaving the factory. A glycerine filled pressure gauge is fitted, with 2 – 6 control outlets depending on sprayer model. If an electric or automatic rate controlled is fitted, refer to the separate manufacturer's manual provided.

Filtration

Refer to the table below for filtration point information. Other combinations are available to order.

Tank lid strainer	18 mesh
Suction filter	50 mesh
Boom nozzle strainers (if fitted)	50 mesh
Optional in-line pressure filter(s)	100 mesh

BOOM OPTIONS

Manual folding, cross-fold booms

MBX series

3, 4 & 6 metre cross-fold galvanised boom, stainless steel boom tubes, AirMix™ nozzles & non-drip nozzle bodies.

MAX series

8, 10 & 12 cross-fold metre galvanised boom, stainless steel boom tubes, AirMix™ nozzles & non-drip nozzle bodies. 8, 10 & 12 metre have flip-over outer wings. Options include leveller and lift device.

Hydraulic crossover fold booms

GEX Series

Galvanised 6, 8 and 10 metre cross-fold with hydraulic cylinders operating the inner arm fold. Outer wings on the 8 & 10 metre are manually folded.

Hydralink series

(Only suitable for use on the 1000 litre model) 12 & 15 metre hydraulic "X-fold" galvanised boom, stainless steel boom tubes, AirMix™ nozzles & non-drip nozzle bodies. Integral self-leveller with manual lock fitted. Breakaway on outer arms as standard.

Under-tree and vine booms

MSC/MSCL-2 covered boom for vines or trees, left, right, double sided & centre section covers available.

Vertiboom

High pressure boom, with left/right upright boom tubes and high pressure nozzles for use in small horticultural vertical row crops such as berries.

NOTE

For more information on booms and the model fitted to your sprayer, please see the Croplands Spray Boom Operator and Parts Manual.

Boom suitability	AgriPak 300	AgriPak 600	AgriPak 800	AgriPak 1000
MBX Series	✓	✓	✓	X
MAX series	MAX08 only	✓	✓	✓
GEX series	X	✓	✓	✓
Hydralink series	X	X	X	✓
MSCL covered boom	✓	✓	✓	X
Vertiboom (high pressure horticultural use only)	✓	✓	X	X

OPTIONAL EQUIPMENT – SEPARATE MANUALS PROVIDED



MBX series booms

3, 4 and 6 metres available – for more information, refer your boom manual or www.croplands.com.au



MAX series booms

8, 10 & 12 metres available – for more information, refer your boom manual or www.croplands.com.au



MAX level



Hydraulic boom height adjuster or lift device

For remote lifting of the spray boom using tractor hydraulic remotes. Shown is lift for LP-800 & MAX booms – for more information visit www.croplands.com.au



GEX series booms

6, 8 & 10 metres available – for more information, refer your boom manual or www.croplands.com.au



MHL series booms

12 & 15 metre as available (1000 litre AgriPak only) – for more information, refer your boom manual or www.croplands.com.au



XP Boom kit

For use where a boom is impractical – for more information, refer your boom manual or www.croplands.com.au



Vertiboom

For use in vertical row crops where high pressure is needed (AgriPak must have a suitable pump fitted) – for more information, refer your boom manual or www.croplands.com.au



Hose reels & guns for hand spraying

For more information, refer your hose reel manual or www.croplands.com.au



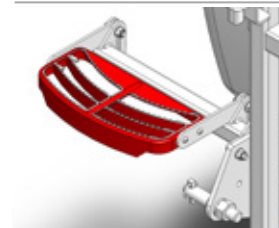
Chemical Mixing and induction hopper

For more information, refer your mixer manual or www.croplands.com.au
30 litre A5033301 version shown here.



Foam marker or GPS unit

For more information refer the manufacturers manual or visit www.croplands.com.au



Optional step for 600, 800 and 1000 litre versions

SECTION 5: OPERATION HOOK UP AND PTO INFORMATION.

Connecting to the tractor

Croplands AgriPak sprayers have models to suit Categories I, II and III tractor linkage connections. 300, 600 & 800 litre models have Cat II for the lower linkage arms, and Cat I for the top link with sleeve if your tractor has Cat II.

The 1000 litre AgriPak sprayer has a clevis-type Cat II & III hitch for the lower arms and Cat II for the top link.



Procedure

Lower the tractor linkage arms and attach the sprayers lower hitch pins, using the suitable category for your setup.



WARNING

Always ensure the tractor PTO is disengaged before attempting to hook up the PTO shaft!

Lift the tractor linkage up to the level you wish to spray at. Now you can adjust the length of the top linkage arm to level the sprayer. Clean off and grease the PTO splines on the sprayer and tractor stub shafts. Put the PTO shaft onto both splines making sure the spring loaded locking pins click into place and is completely secure on the splines. Attach the PTO shaft safety chains (attached on the PTO guards) to the tractor & the pump PTO guard.



CAUTION

Your Croplands sprayer dealer is responsible for correctly setting and installing the supplied PTO shaft for the first time it is set up. This can involve cutting the shaft to length to ensure correct, safe operation. The above information is for reference purposes only.

Raise and lower the sprayer to check that the tubes of the PTO overlap by at least 1/3 of their length, and not less than 150mm, in all operating positions.

Start up

After the pre-delivery checklist has been done and your AgriPak linkage is hooked up correctly to your tractor, it is advised that a water test be done to check for leaks and to familiarise yourself with your new sprayer. These checks have been conducted in the factory; however there is a chance that transit could have loosened some fittings. Running the machine with fresh water is a good safe way to calibrate and learn about your sprayer, and set your sprayer up properly to maximise results in the field.

NOTE

Check all of the individual parts before operation. Check the pump oil level before operating the sprayer. You can use SAE30 or SAE 20/40 multi grade engine oil to top up the oil if needed.



Fill the tank partially with water to allow testing of the sprayer before you start your test or spraying job.

The Suction filter is either fitted with a shut off valve (yellow or red removable twist plug), or with a 3 way ball valve to shut off the flow in the suction line before the filter. This allows you to clean the filter mesh while there is fluid in the spray tank. Always ensure this valve is correctly set prior to start up so that liquid from the main tank can flow through the pump and control unit.



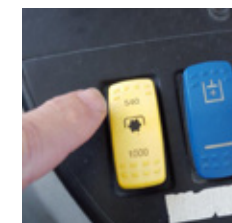
Twist plug to shut off liquid flow.

To start the sprayer, ensure the PTO is set in 540 RPM mode.



WARNING

Double check this step as some tractors have a 1000 RPM setting – this will destroy the pump if engaged!



Make sure the pressure relief valve on the control unit is backed off anti-clockwise prior to engaging the PTO. Increase the tractor PTO speed up to no more than 540rpm.

NOTE

You may not need to run the pump at 540 RPM to achieve the desired spray output. In most cases a PTO speed of 400RPM or thereabouts is sufficient.

The pump will draw liquid from the tank and bypass this until such time as you open the manual taps and flick the main lever on the manual control unit to the open position. Refer to the section below AR UCM controller operation.

Once the boom taps and master on/off lever on the manual control unit are in the open position, the nozzles should spray. Using the rotary pressure relief valve knob, you can now adjust the pressure to the recommended spraying pressure by rotating the PRV knob. Anti-clockwise rotation will reduce the pressure; clockwise rotation will increase the pressure. Using the pressure gauge on the control unit, you can determine the spraying pressure. For most boom-spraying jobs, a pressure between 1 and 5 bar (30 to 70 psi) is the norm. The AirMix™ low-drift nozzles can be safely operated within a 1-6 bar pressure range, but note that the Spray Quality will be influenced by your spraying pressure.


For more information on Spray Quality, you can access the Croplands Buyers Guide on line and check the chart for AirMix™ nozzles – this information is in the nozzle section.

Most chemical labels advise the application rate and spray quality for the product being used. You may wish to discuss this with your local agronomist if you are unsure.

If you have electric controls or an Auto-Rate spray controller fitted to you AgriPak linkage sprayer, please refer to the Croplands manual relevant to the model you have purchased to learn how to use this prior to start up. Croplands Technical support can also be contacted should you need assistance (see back page for contact details)

Flushing tank – standard on 300, 600 and 800 litre models

A 3-way ball valve is provided on the suction line to allow the operator to select suction from either the main spray tank, or the fresh-water flushing tank.


CAUTION

Never use the fresh water flushing or handwash tank for chemical use. These tanks are designed specifically for holding fresh water for either flushing the sprayer, or in the case of the hand-wash tank, for the operator to use for cleaning hands or the suction filter in the field.



To flush the sprayer in the field after spraying, shut off the boom using the liquid controls, stop the PTO and leave the boom in the unfolded operating position. Using the ball valve, select the fresh water flush tank. Climb back into the tractor cab, start the PTO and open the manual or electric control to allow fresh water to flow through the spraying circuit and the nozzles. If you have remaining spray left in the main tank, flush only for one to two minutes to flush the pump and boom lines.

If you have finished your spraying job and the main tank is empty, you can flush the system for 5 minutes, or until the flushing tank is empty, to ensure the system is thoroughly flushed with fresh water. It is recommended to do this in the field so that any chemical residue is deposited in the area you have been spraying to avoid continual deposits back at the spray shed site.

A thorough tank clean once back at the shed is recommended if you have finished your spray job. Always drain the main tank when finished. To avoid algae build up in the fresh water tanks, it is recommended these also be drained and refilled just prior to the next spraying job.



NOTE

Always use gloves when handling filters.

NOTE

Always clean the filters when your spraying job is completed.

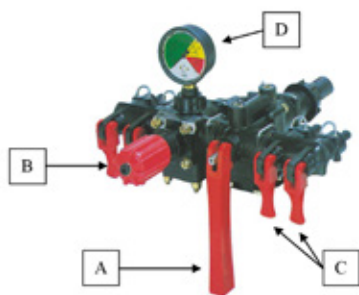
This will ensure your AgriPak sprayer is ready to go prior to its next use. To clean the filters:

- » Ensure the shut-off tap is in the “off” position, or the shut off plug is removed from the filter housing
- » Remove the filter element from the housing by undoing the main filter housing nut
- » Clean the filter element with fresh water (note, if the suction filter does become blocked during spraying, this can be cleaned in the field by using the handwash tank
- » If a pressure filter is fitted (normally if the sprayer has electric controls fitted), also remove the filter cartridge and clean with fresh water
- » Inspect the nozzle filters, at least one from each boom section, and if required, clean these in fresh water. The nozzles filters are up inside the nozzle body and can be accessed by removing the nozzle cap. If care has been taken to have clean water used for spraying, and the suction filter is kept clean, the nozzle filters should not block.

After and extended time of non-use, it is recommended you check the filters before your next spray job. Often spiders or wasps can get into the filter housing.

ARUCM Controller operation

A four or five outlet control unit is used (five outlet where 3 boom sections & a hose reel is fitted) and is standard on all AgriPak linkage models. The main on/off lever "A" will be used in most instances, and when liquid supply to the boom or nozzles is closed, all liquid will be bypassed to the tank. System pressure is regulated by turning the red (or on some valves black) knob "B" and by observing the reading on the pressure gauge (D). Turning the knob clockwise increases the pressure and turning anticlockwise decreases pressure. The pressure can only be accurately set with the boom lines open and the master lever open. Fluid is directed to the boom lines or other spraying devices by the outlet valves "C" which may be operated individually. The outlet valves are marked with a "0" or a "1" to indicate if they are on or off. If you wish to stop spraying but leave the tractor PTO running, either the master on/off lever or the individual taps can be used. For a parts breakdown see the controller manual provided.



Spray guns and hose reels (if fitted)

A variety of spray guns and hose reels are available for use with Croplands AgriPak linkage sprayers. A hose reel may be mounted to the side or rear of the sprayer frame with the inlet end of the hose connected to one outlet of the control unit. When fitted, the standard reel contains 20 metres of 10mm hose at a pressure rating of 20 Bar. The heavy duty steel reel holds 30 metres of hose.

The heavy duty hose reel can hold up to 50 metres of 10mm spray hose. For any unit has a 40-bar pump and a hose reel fitted, the spray hose will have the corresponding higher-rated pressure hose fitted.

The spray lance gun fitted on the standard Croplands hose reel is an RL10, rated up to 20 Bar pressure. On the heavy duty reel, the standard spray gun is a Turbo400 model rated to 50-bar pressure.

Other options include:

- » TeeJet® range of spray guns
- » Spot Gun 300

NOTE

For more information on hose reels and spray guns fitted to your sprayer, please see the Croplands Reels & Spray Guns Operator and Parts Manual.

Talk to your dealer if you want a different spray gun for a specific purpose. To operate the RL10 spray lance or Turbo400 spray gun, start the sprayer and have pressure available in the system. Ensure the tap corresponding to the spray line going to the gun is in the on position. Squeeze the main trigger adjacent to the handle and aim the gun at the plant to be sprayed. For the RL10, you can adjust the spray pattern by rotating the nozzle on the end of the lance. On the Turbo400 gun, adjust the spray pattern with your thumb by pushing the orange side-lever up or down. For a fine "fog" spray, the widest angle should be selected using the side-lever, then the orange end-cone should be adjusted to slide out as far as possible on the gun barrel. This is ideal for very fine spraying such as fungicide application in nursery plants etc.

Spray Booms

A variety of booms may be used with Croplands AgriPak linkage sprayers depending upon the model and field application - see table on page 15-17 for this information. All have non-drip nozzle bodies with AirMix™ flat fan nozzles. Booms are part of the standard equipment on some models, in some cases they may be installed by the dealer or owner. On all types of boom, the setting of the correct operating height is most important to achieve a uniform spraying pattern. This needs to be at a height above the target which will achieve 50% overlap of the spray from adjacent nozzles.

NOTE

Section 6 will only be relevant if your AgriPak Linkage sprayer is fitted with a Croplands boom.

WARNING

Safety information about Spray guns and lances:

- 1. NEVER aim the spray gun at anyone**
- 2. ALWAYS shut the system off when you are not using the spray gun**
- 3. ALWAYS ensure your spray application is not drifting beyond the target**
- 4. NEVER operate the gun beyond the pressure capability of the system**

Secure the gun on the spray unit and roll up the hose when the job is finished.

SECTION 6: SPRAYING INFORMATION

This section also provides information relevant to Calibrations in section 7

When to spray

Spraying results are best when the wind speed and the temperature are low but the relative humidity is reasonably high. An ideal time is at sun up or nearing the end of the day when these conditions are more likely to occur.

For more information, contact Croplands about our SprayWise® program, or purchase a copy of the SprayWise Application Guide from Croplands. Also, the use of the WINDMATE™ Wind meter would be of excellent value to anyone doing regular spraying.

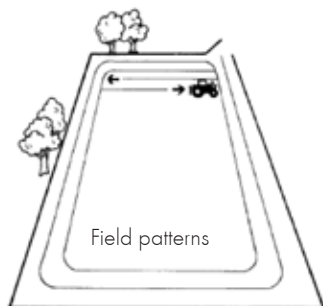
Field patterns

For the best coverage, spray two swath widths around the outer perimeter of the field as shown in the diagram. This establishes a good headland and will give you adequate room to turn around. Turn the booms off when you come back on to the headland to prevent over spraying and wastage. Using a guidance system such as GPS or foam markers can prevent overlaps and ensure you get better coverage.

Ground Speed

Modern tractors should have sufficient speed accuracy for sprayers of this size. To check the speed, fill the tank and open the boom to simulate usual spraying conditions. See section 7 to learn how calculate ground speed if your tractor does not have a reliable speedometer.

For spraying with an AgriPak linkage sprayer, the speed will you can safely & accurately spray at will depend on the conditions, terrain, and product being applied. In general, speeds of 5 to 15 km/hr are most often within the range for linkage spraying.



Spray Quality

Spray quality is becoming extremely important for the correct application of chemicals. Refer to your advisor, local DPI or check the Croplands Buyers Guide for more information. Many chemical labels now specify the spray quality required for the product being used. Loosely, spray quality falls into a droplet range of:

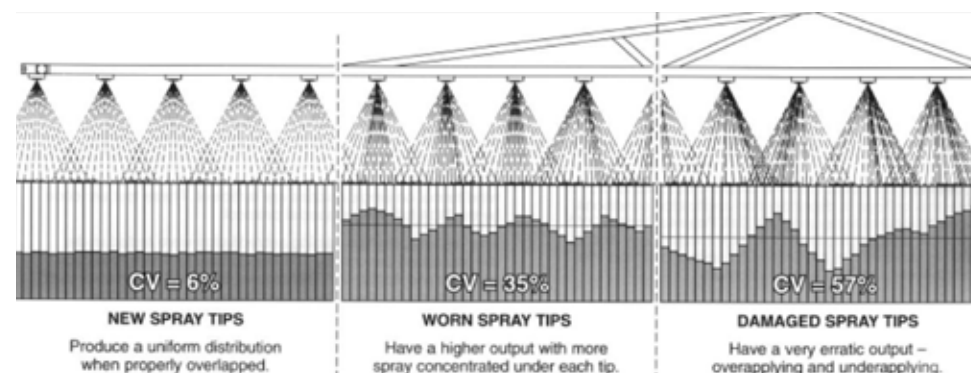
- » Ultra Coarse
- » Extremely Coarse
- » Very Coarse
- » Coarse
- » Medium
- » Fine
- » Very fine

Nozzle spacing and height

Nozzles overlap should be 50% at the point of contact with the spraying surface. Croplands booms operate with a nozzle spacing of 500mm (50cm) with nozzles slightly offset to avoid interference. Nozzles are supplied with 110° angled patterns. The recognized height to achieve the required 50% overlap is 400mm-500mm for 110° nozzles (measured from the target to be sprayed).

Spray pattern and uniformity

Your nozzle spray pattern, overlap and uniformity need to be monitored and can be tested in the following manner. Keep a spare new nozzle to with which you can compare the other nozzles on your unit. Place the new nozzle at a central point on the boom and fill the tank with fresh, clean water and switch the boom on. Examine the spray patterns against a dark background and replace any that show signs of damage or sufficient wear as shown below.



CAUTION

Most spray applications will fall into the Medium to Very Coarse range, depending on the application. Talk to a qualified Agronomist or Advisor if uncertain.

BOOM SPRAYER CALIBRATION

Each Croplands boom is fitted standard with non-drip nozzle bodies so that when the liquid flow is switched off, the bodies will not drip. Supplied on all Croplands' booms are AirMix air-induction ultra-low drift nozzles - now an industry standard to reduce the likelihood of spray drift.

The liquid flow to the boom can be stopped & started as required (such as when turning at headlands or where the operator does not want to spray) by using the spray control unit provided on the sprayer.

To ensure the right application of herbicide or crop protection product is applied to the target crop, the user should calibrate the AgriPak linkage sprayer to ensure the correct application rate is used for the chemical being used.

The information for the product to be applied (spray target rate and spray quality) is usually supplied by the chemical manufacturer on their product label. Alternatively, a trained agronomist should be consulted.

Part of the calibration process is to determine the flow required to meet the required target spray rate, and this information can be used to determine what speed of travel will best suit your application and what nozzle and spraying pressure to use.

Failure to calibrate a sprayer before operating may result in ineffective or crop damage



CAUTION

Check the current Croplands Optima Buyers Guide for Nozzle information, or purchase a copy of the Nufarm Spraywise™ Spray Application Guide.



WARNING

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

Calibration

To accurately apply crop protection or herbicides through a spray boom, the following procedure should be undertaken.

1. Measure your speed of travel.
2. Check the nozzle spacing, and
3. Select an appropriate nozzle for the product being applied, and check nozzle output in Litres per minute (L/min), along with spraying pressure.

1. Speed of travel

Check your tractor speed. If you have an accurate speedometer, this will suffice. If not, measure the distance you have travelled in one minute in metres, and divide this by 16.7:

- » e.g. 120 metres travelled in one minute $\div 16.7 = 7.18$ km/hour.
- » If this is impractical, measure the distance travelled in 30 seconds, double it, and then divide by 16.7.
- » Repeat at least twice, from a running start, to ensure accuracy.

2. Nozzle spacing

Standard nozzle spacing on a Croplands boom is 50cm. This is also an industry standard for the use of 110 degree nozzle tips as fitted standard to Croplands booms.

3. Select Nozzle Type & Size

Select the 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).

The right nozzle, application rate, spray quality and nozzle pressure will best be advised by your agronomist or consulting with the manufacturer of the product you are applying. The Croplands calibration guide covers these options in more detail.

Included on page 29 is a basic nozzle chart to show nozzle sizes, outputs and application rates at varying speeds.

NOTE

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



CAUTION

Do not operate a sprayer without calibration or before calibration has been completed.

4. 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).

5. Fit the selected nozzles to the boom as per the nozzle manufacturers specifications.

6. Check the nozzle accuracy as outlined above in spraying information.

7. Add the correct amount of chemical to the tank as per the directions on the chemical label.

8. Adjust the boom height to suit your nozzles as explained in the Nozzle section in spraying information above.

9. Don't forget to record your data for future reference.

NOTE

To find more information on how to calibrate a boom for varying application rates:

- » Refer to the Croplands web site at www.croplands.com.au or
- » Contact the Croplands Customer Service or
- » Technical Support: Phone 1300 650 724.

BROADCAST AND TURF APPLICATIONS

L/HA 50CM NOZZLE SPACING

Nozzle type	Pressure bar	Flow rate l/min	5 kph	6 kph	7 kph	8 kph	10 kph	12 kph	16 kph
110-015	1.0	0.346	81.6	68.0	48.3	51.0	40.8	34.0	25.5
	1.5	0.424	101	84.0	72.0	63.0	50.4	42.0	31.5
	2.0	0.490	115	96.0	82.3	72.0	57.6	48.0	36.0
	3.0	0.600	142	118	101	88.5	70.8	59.0	44.3
	4.0	0.693	163	136	117	102	81.6	68.0	51.0
	5.0	0.775	182	152	130	114	91.2	76.0	57.0
	6.0	0.849	199	166	142	125	99.6	83.0	62.3
110-02 STANDARD	1.0	0.462	110	92.0	78.9	69.0	55.2	46.0	34.5
	1.5	0.566	134	112	96.0	84.0	67.2	56.0	42.0
	2.0	0.653	156	130	111	97.5	78.0	65.0	48.8
	3.0	0.800	190	158	135	119	94.8	79.0	59.3
	4.0	0.924	218	182	156	137	109	91.0	68.3
	5.0	1.033	245	204	175	153	122	102	76.5
	6.0	1.131	269	224	192	168	134	112	84.0
110-025	1.0	0.577	137	114	97.7	85.5	68.4	57.0	42.8
	1.5	0.707	168	140	120	105	84.0	70.0	52.5
	2.0	0.816	194	162	139	122	97.2	81.0	60.8
	3.0	1.000	238	198	170	149	119	99.0	74.3
	4.0	1.154	274	228	195	171	137	114	85.5
	5.0	1.291	310	258	221	194	155	129	97.0
	6.0	1.414	339	283	242	212	170	141	106
110-03	1.0	0.693	163	136	117	102	81.6	68.0	51.0
	1.5	0.849	199	166	142	125	100	83.0	62.3
	2.0	0.980	230	192	165	144	115	96.0	72.0
	3.0	1.200	283	236	202	177	142	118	88.5
	4.0	1.386	326	272	233	204	163	136	102
	5.0	1.549	365	304	261	228	182	152	114
	6.0	1.697	401	334	286	251	200	167	125
110-04	1.0	0.924	218	182	156	137	109	91.0	68.3
	1.5	1.113	269	224	192	168	134	112	84.0
	2.0	1.306	310	258	221	194	155	129	96.8
	3.0	1.600	379	316	271	237	190	158	119
	4.0	1.848	437	364	312	273	218	182	137
	5.0	2.066	490	408	350	306	245	204	153
	6.0	2.263	535	446	382	335	268	223	167

SECTION 7: DAILY START UP AND USEFUL FORMULA

Daily start up procedure

A careful, common sense approach to water quality, mixing of chemicals and care of filters, hoses and tank will ensure trouble free spraying.

To ensure trouble free operation, follow the procedure below at the start of each day:

1. Ensure that no solids enter the system to block or damage pump or nozzles.
2. Check that suction line filter is clean and not damaged. It should be checked & cleaned regularly (see Page 21 for more information). Be careful not to damage or deform the mesh or O-Ring while cleaning and refitting the suction line filter. If a filter screen is damaged, replace with a new screen.



3. Put enough clean water into the spray tank to operate the pump and hand gun or boom (if fitted). The tank can be fully filled once your start up check is completed.

4. Activate the pump (see Page 19 for tips on start up).

5. If fitted, adjust the pressure relief valve to obtain the required pressure. Excess liquid will bypass back to the tank. Once the pressure is set, it is normal for minor fluctuations to show on the pressure gauge when switching the hand gun or boom on & off if you have these options fitted. For more information on your pressure control unit, refer to Page 22 or the separate manual supplied for electric controls (if fitted).



6. Check that all hoses, hose clamps and connections do not leak. Repair or replace damaged components.
7. Read and follow the instructions on the chemical manufacturers label before mixing and adding chemicals to the spray tank. For safety information refer to section 3 in this manual.
8. Add chemical to the tank and proceed with your spraying application.



CAUTION

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

Operating Pointers

While spraying continually observe that:

1. Adequate operating pressure is being maintained.
2. Your hand gun coverage is correct and constant for effective cover and that your nozzle is operating correctly (if you have a hose reel & gun fitted).
3. Periodically check and clean filters – between tanks is ideal
4. Your boom height is maintained at the correct height above your target (if you have a boom fitted).
5. Avoid going too slow because over application will occur. Conversely, avoid going to fast because under application will occur. Refer to your calibration information.

Useful Formula

1. Calculating the Tank Spray Area

Use this formula to calculate the area each tank full of spray will cover.

$$\text{Area Covered (ha)} = \frac{\text{Tank Volume (litres)}}{\text{Spray Application Rate (L/ha)}}$$

$$\text{eg. } \frac{300 \text{ (litres)}}{100 \text{ (L/ha)}} = 3 \text{ hectares.}$$

2. Calculating the Total Liquid Volum Required

Use this formula to calculate the amount of spray liquid required to spray a given area.

$$\text{Total Liquid Volume Required (litres)} = \text{Area (ha)} \times \text{Spray Application Rate (L/ha)}$$

$$\text{eg. } 2 \text{ (Ha)} \times 100 \text{ (L/ha)} = 200 \text{ litres required}$$

SECTION 8: LUBRICATION AND MAINTENANCE

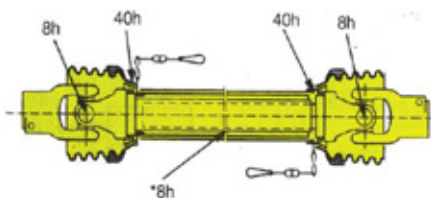
Daily Sprayer maintenance



WARNING

Make sure the tractor is switched off, the machine is lowered to the ground and the PTO drive shaft is disconnected.

In the first few days of sprayer usage, thoroughly check the machine before starting each day of spraying. Check all nuts and bolts and check plumbing for leaks. Grease the PTO shaft at the time intervals shown on the diagram below. The diagram is only a guide, greasing may need to be more frequent if spraying under extreme conditions.



* Pull shaft apart – apply grease to inside of outer telescopic profile.

Pump

Check the oil level on the pump sight gauge and top up with SAE 20/40 multi grade engine oil if needed.

Filters

It is important to clean filters daily as they can have a major impact on your sprayer's performance. Wash them out with a soft brush and constantly

check for holes or tears. Clean the suction filter every time the tank is filled and at the end of the days spraying. Make sure O rings are in good condition and grease them with O ring grease in necessary. Clean out nozzle filters if installed. See page 22 for picture of filter screen.



Spray lines

Never leave chemicals in the tank or the pump. Rinse the tank out completely with fresh water and operate machine to clear all spray lines. Remove boom lines caps if you have a boom fitted and flush boom lines.



CAUTION

Do not leave water in the machine, particularly in cooler climes as this can freeze and ruin the pump.

Annual sprayer maintenance

General sprayer care

When spraying season has finished, clean the machine completely.

Check all electrical fuses as these can easily blow if corroded in the off season.

Pump

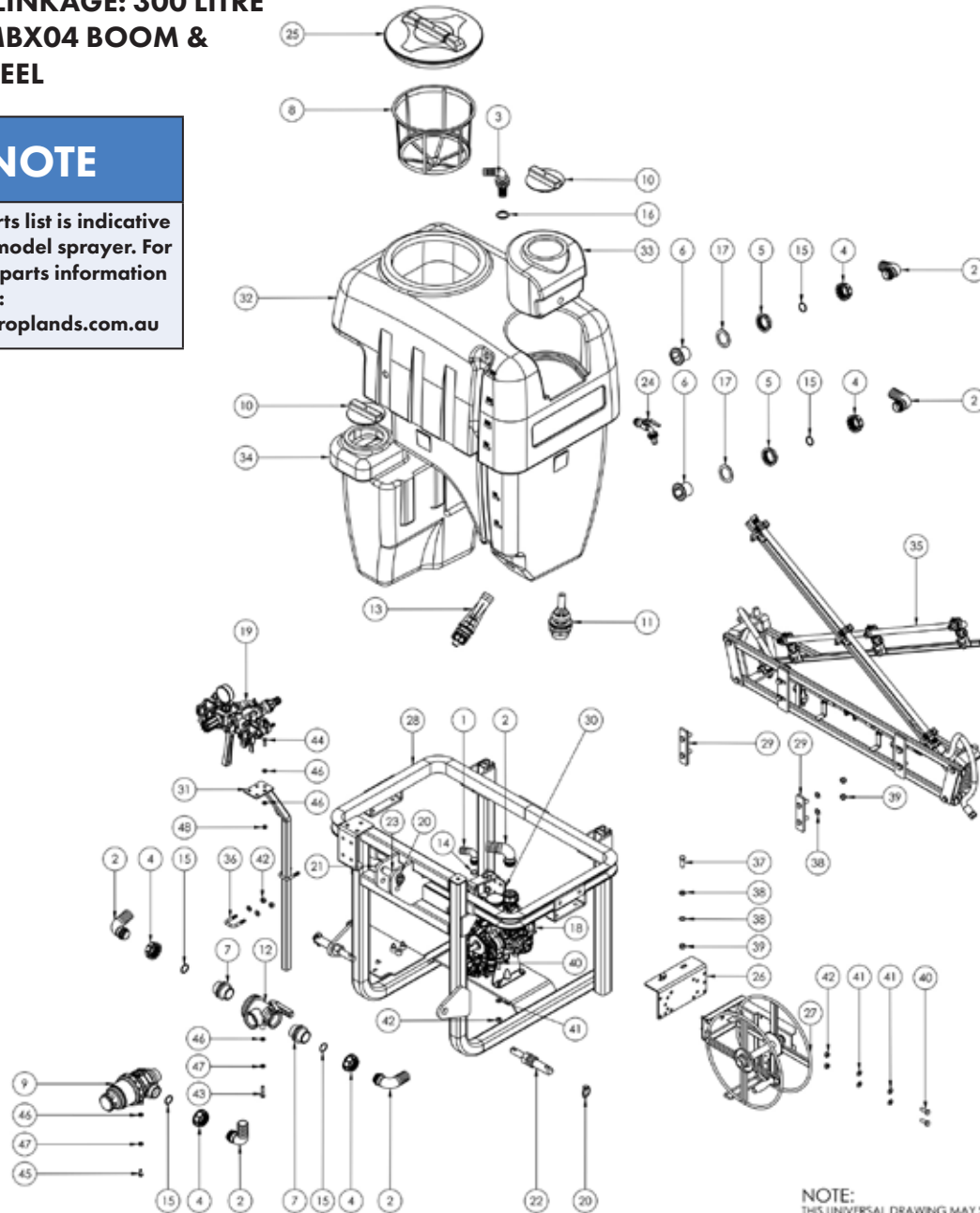
Flush and drain the pump completely before storage. Check the valves and diaphragms for wear and damage before the start of the new season. Set the air pressure in the chamber to around 10 – 20% of the usual operating pressure. Drain the oil before the commencement of the next season and replace completely with new oil (SAE 20/40 multi grade engine oil).

NOTES:

LA300 LINKAGE: 300 LITRE WITH MBX04 BOOM & HOSE REEL

NOTE

» This parts list is indicative of this model sprayer. For further parts information refer to:
www.croplands.com.au



NOTE:
THIS UNIVERSAL DRAWING MAY SHOW FEATURES AND OPTIONS THAT VARY FROM YOUR PRODUCT.
REFER TO CROPLANDS CUSTOMER SERVICE FOR MORE INFORMATION.

ITEM NO.	PART NUMBER	DESCRIPTION	Default/Qty.
1	A116425	ELBOW 0.25 FOR FLY	1
2	A116440	ELBOW 1 1/2"	6
3	A118426	PIPE 1 X 1 SINGLE PIECE 90 DEG	1
4	A200040	FLY NUT 1 1/2"	5
5	A205060	BACK NUT 1 1/2"	2
6	A220060	TANK OUTLET 1 1/2"	2
7	A250040	NIPPLE 1 1/2"	2
8	A300120	FILTER BASKET MEDIUM 254MM DEEP	1
9	A314463	FILTER 1 1/2" 50M SH/THR SOV	1
10	A3522000	BREATHER FOR 355MM & 455MM LID	2
11	A452107	VALVE 2" ANTI POLLUTION DRAIN	1
12	A454236	BALL VALVE POLY 1 1/2" 3 WAY	1
13	A5022042	AGITATOR STRAIGHT #2 CERAMIC JET	1
14	AG10041	O RING 1"	1
15	AG10061	O RING 1 1/2"	6
16	AG40004	FLAT SEAL 1" EPDM	1
17	AG40006	FLAT SEAL 1 1/2" EPDM	2
18	AR80LFP-C	PUMP AR80 POLY BP C+PC	1
19	ARUCM-4	UCM 4 WAY LESS FILTER #30029	1
20	80005	BARE LUNCH PIN 7/16" DIA	3
21	80075	TOP LINK PIN CAT 1 (MF35)	1
22	80205	CAT 1-2 IMPLMENT PIN 1" NUT	2
23	80353	BUSH CONVERSION CAT 1 TO CAT 2	1
24	BALL348B	BALL 8/8 COCK 3/4"	1
25	GB155000	LID/RING KIT 355MM	1
26	HP-229	MANIFOLD BRACKET HP-223C2	1
27	L-R0160	HOSEREEL SP250 20MM X 10MM RL10	1
28	LF030	FRAME 300LT AGRIPAK FARMATE	1
29	LF030-7-2	BOOM MOUNT 300LT	2
30	LF060-1	FLUSH TANK BRACKET	1
31	LF-121	CONTROLLER BRACKET LINKAGE	1
32	P300L	300LT LINKAGE CHEMICAL TANK	1
33	P300-10L	10LT HAND WASH TANK TO SUIT 300LT	1
34	P300-45L	45LT FLUSH TANK TO SUIT 300LT LINKAGE	1
35	MBX04	BOOM 4M CROSS FOLD COMPLETE	1
36	X8MBB32	U BOLT 32MM	2
37	M12X35	M12 X 35 SET SCREW HT ZP	2
38	M12FWASHER	M12 FLAT WASHER ZP	8
39	M12NNUT	M12 NYLOC NUT HT ZP	6
40	M10X30	M10 X 30 SET SCREW HT ZP	10
41	M10FWASHER	M10 FLAT WASHER ZP	24
42	M10NNUT	M10 NYLOC NUT HT ZP	14
43	M8X40BOLT	M8 X 40 HEX HEAD BOLT HT ZP	3
44	M8X25	M8 X 25 SET SCREW HT ZP	2
45	M8X20	M8 X 20 SET SCREW HT ZP	3
46	M8FWASHER	M8 FLAT WASHER ZP	10
47	M8SWASHER	M8 SPRING WASHER ZP	6
48	M8NNUT	M8 NYLOC NUT HT ZP	2

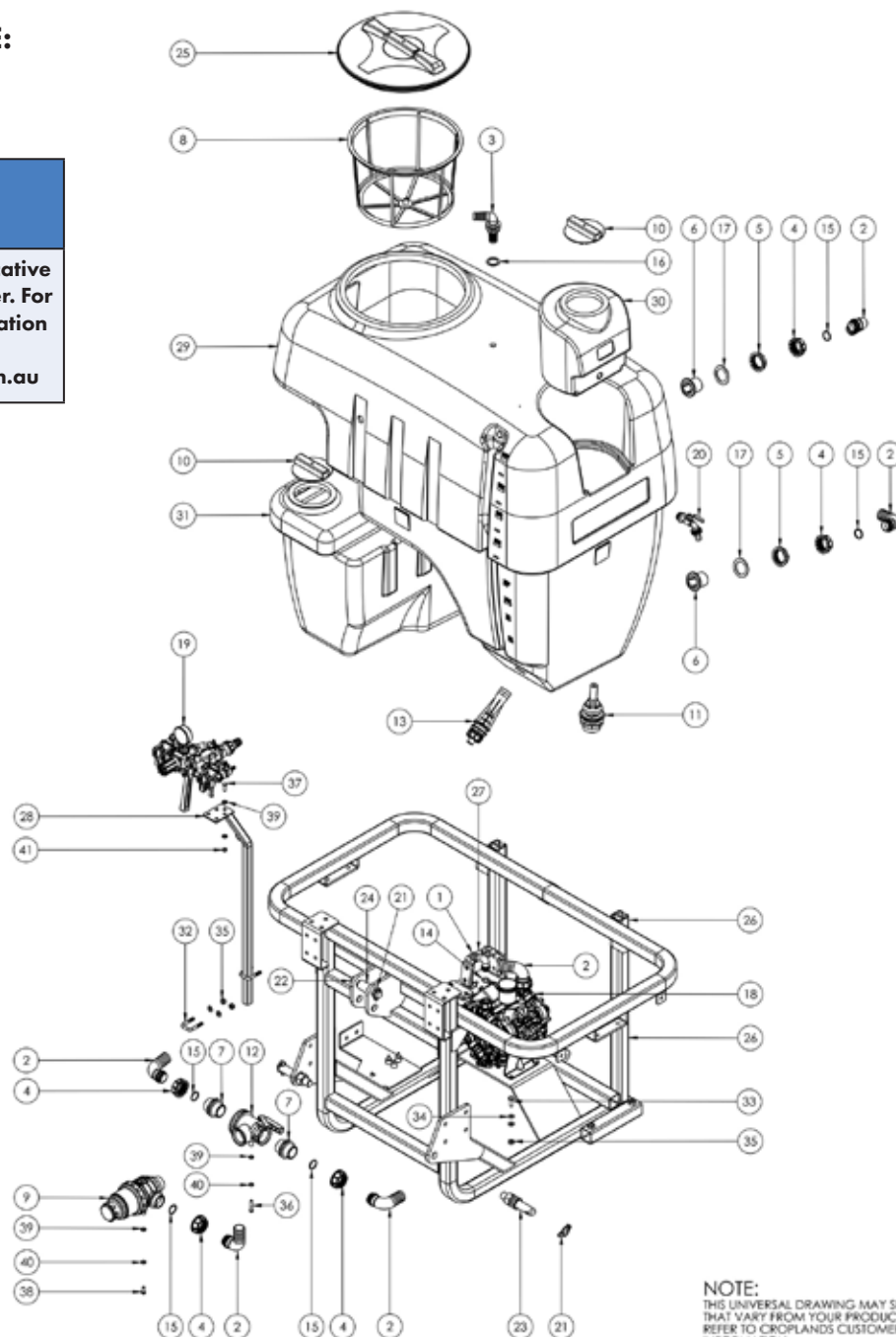
LA300/MBX04 PARTS ILLUSTRATION
THIS DRAWING IS FOR ILLUSTRATION PURPOSE ONLY
PLEASE REFER TO THE PARTS LIST.

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LA300/MBX04 PARTS ILLUSTRATION		DRAWING NO: LA300MBX04		SCALE: 1:1		SHEET 1 OF 1		A2	

LA600 LINKAGE: 600 LITRE WITH AR80 PUMP

NOTE

» This parts list is indicative of this model sprayer. For further parts information refer to:
www.croplands.com.au



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5	A205060	BACK NUT 1 1/2"	2
6	A220060	TANK OUTLET 1 1/2"	2
7	A250060	NIPPLE 1 1/2"	2
8	A300130	FILTER BASKET LARGE 254MM DEEP	1
9	A314463	FILTER 1 1/2" 50M SH/THR SOV	1
10	A3522000	BREATHER FOR 355MM & 455MM LID	2
11	A452107	VALVE 2" ANTI POLLUTION DRAIN	1
12	A454236	BALL VALVE POLY 1 1/2" 3 WAY	1
13	AS022042	AGITATOR STRAIGHT #2 CERAMIC JET	1
14	AG10041	O RING 1"	1
15	AG10061	O RING 1 1/2"	6
16	AG40004	FLAT SEAL 1" EPDM	1
17	AG40006	FLAT SEAL 1 1/2" EPDM	2
18	AR80LFP-C	PUMP AR80 POLY BP C4PC	1
19	ARUCM-4	UCM 4 WAY LESS FILTER #30029	1
20	BALL348B	BALL 8/8 COCK 3/4"	1
21	B0006	BARE UNCH PIN 7/16" DIA	3
22	B0076	TOP LINK PIN 3" X 7/16"	1
23	B0102	IMPLEMENT PIN CAT 2	2
24	B0519	BUSH CAT 2-3	1
25	G8161000	LID/RING KIT 455MM	1
26	LP60	FRAME 600LT AGRIPAK FARMATE	1
27	LP60-1	FLUSH TANK BRACKET	1
28	LP-121	CONTROLLER BRACKET LINKAGE	1
29	P600L	600LT LINKAGE CHEMICAL TANK	1
30	P600-15L	15LT HAND WASH TANK TO SUIT 600/800LT	1
31	P600-90L	90LT FLUSH TANK TO SUIT 600/800LT	1
32	X3AMB32	U BOLT 32MM	2
33	M10X30	M10 X 30 SET SCREW HT ZP	6
34	M10FWASHER	M10 FLAT WASHER ZP	16
35	M10NNUT	M10 NYLOC NUT HT ZP	10
36	M8X40BOLT	M8 X 40 HEX HEAD BOLT HT ZP	3
37	M8X25	M8 X 25 SET SCREW HT ZP	2
38	M8X20	M8 X 20 SET SCREW HT ZP	3
39	M8FWASHER	M8 FLAT WASHER ZP	10
40	M8SWASHER	M8 SPRING WASHER ZP	6
41	M8NNUT	M8 NYLOC NUT HT ZP	2

LA600 PARTS ILLUSTRATION

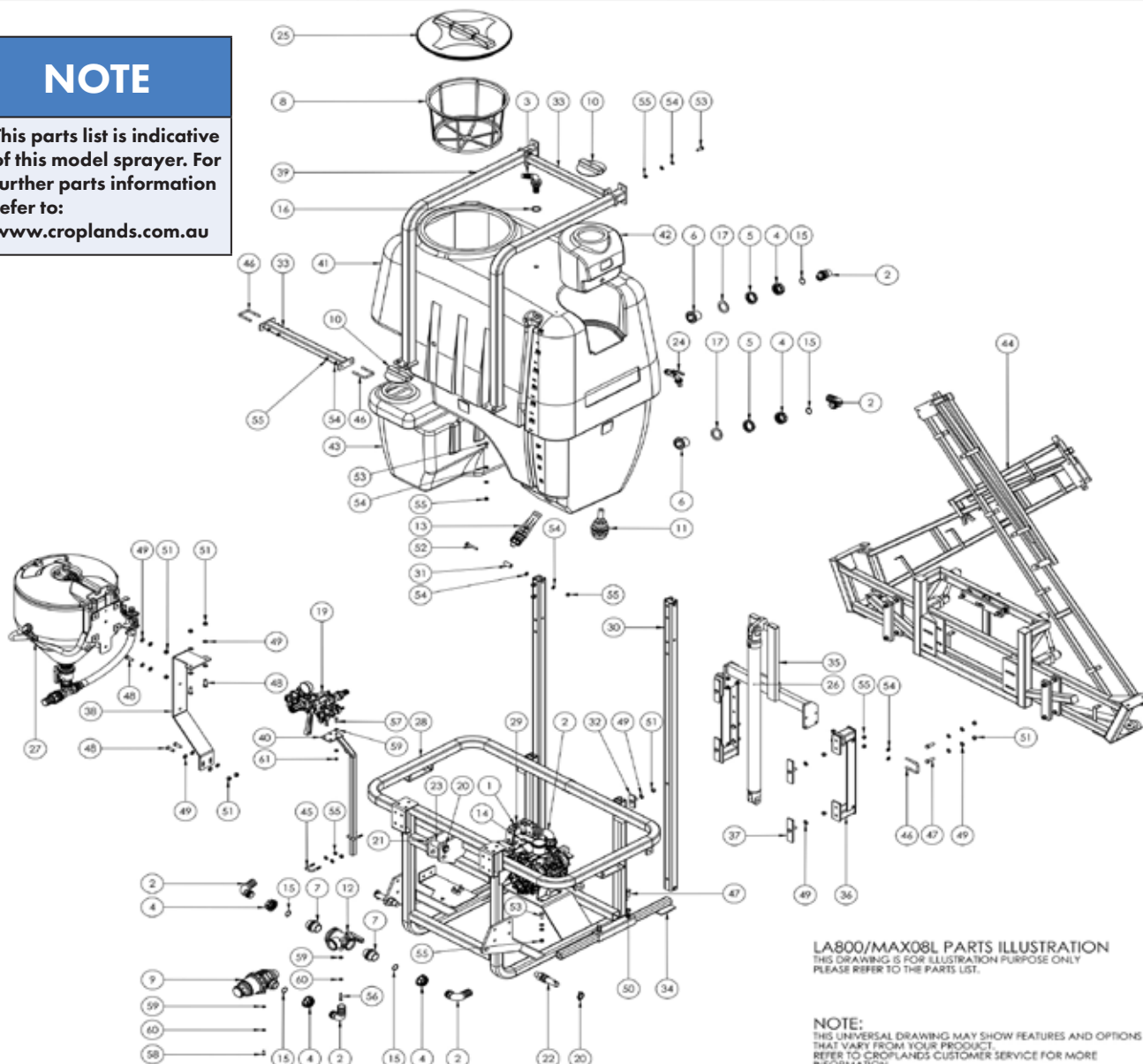
THIS DRAWING IS FOR ILLUSTRATION PURPOSE ONLY
PLEASE REFER TO THE PARTS LIST.

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S/A:										LA600	
UNRECAL:						AS SHOWN		CHG NO:		A2	
SCALE: 1:12										SHEET 1 OF 1	

LA800 LINKAGE: 800 LITRE WITH MAX10 BOOM, LEVELLER, LIFT & HOPPER

NOTE

» This parts list is indicative of this model sprayer. For further parts information refer to:
www.croplands.com.au



LA800/MAX08L PARTS ILLUSTRATION
THIS DRAWING IS FOR ILLUSTRATION PURPOSE ONLY
PLEASE REFER TO THE PARTS LIST.

NOTE:
THIS UNIVERSAL DRAWING MAY SHOW FEATURES AND OPTIONS
THAT VARY FROM YOUR PRODUCT.
REFER TO CROPLANDS CUSTOMER SERVICE FOR MORE
INFORMATION.

ITEM NO.	PART NUMBER	DESCRIPTION	Default/Qty.
1	A116425	ELBOW 0.25 FOR FLY	1
2	A116440	ELBOW 1 1/2"	6
3	A118426	PIPE 1 X 1 SINGLE PIECE 90 DEG	1
4	A200040	FLY NUT 1 1/2"	5
5	A200040	BACK NUT 1 1/2"	2
6	A220040	TANK OUTLET 1 1/2"	2
7	A250060	NIPPLE 1 1/2"	2
8	A300130	FILTER BASKET LARGE 254MM DEEP	1
9	A314463	FILTER 1 1/2" 50M SH/THR SOV	1
10	A3522000	BREATHER FOR 355MM & 455MM LID	2
11	A452107	VALVE 2" ANTI POLLUTION DRAIN	1
12	A454236	BALL VALVE POLY 1 1/2" 3 WAY	1
13	A5022042	AGITATOR STRAIGHT #2 CERAMIC JET	1
14	AG10041	O RING 1"	1
15	AG10041	O RING 1 1/2"	6
16	AG40004	FLAT SEAL 1" EPDM	1
17	AG40006	FLAT SEAL 1 1/2" EPDM	2
18	AR80LFP-C	PUMP AR80 POLY BP C-PPC	1
19	ARUCM-4	UCM 4 WAY LESS FILTER #30029	1
20	B0006	BARE LINCH PIN 7/16" DIA	3
21	B0076	TOP LINK PIN 3" X 7/16"	1
22	B0102	IMPLEMENT PIN CAT 2	2
23	B0519	BUSH CAT 2-3	1
24	BALL348B	BALL BR/COCK 3/4"	1
25	G8161000	LID/RING KIT 455MM	1
26	HP-029	HYDRAULIC CYLINDER 2.0 X 36	1
27	KB-1003A	CHEMICAL MIXING UNIT 60LT PROD	1
28	LP060	FRAME 600LT AGRIPAK FARMATE	1
29	LP060-1	FLUSH TANK BRACKET	1
30	LP060-2	LIFT SLIDE TUBE	2
31	LP060-2-1	SPACER SLIDE TUBE	4
32	LP060-2-2	ATTACHMENT PLATE	4
33	LP060-4	LIFT CROSS BRACE	2
34	LP060-5	FOOT EXTENSION	2
35	LP060-6	LIFT SLIDE FRAME	1
36	LP060-7	LIFT BOOM MOUNT	2
37	LP060-7-1	LIFT SLIDE	4
38	LP060-8	CHEMIFLUSH BRACKET LINKAGE	1
39	LP080-3	LIFT SUPPORT BRACKET 800LT	2
40	LP-121	CONTROLLER BRACKET LINKAGE	1
41	P800L	800LT LINKAGE CHEMICAL TANK	1
42	P600-15L	15LT HAND WASH TANK TO SUIT 600/800LT	1
43	P600-90L	90LT FLUSH TANK TO SUIT 600/800LT	1
44	MAX08L	MAX 8M LEVEL BOOM COMPLETE	1
45	XBM8832	U-BOLT 32MM	2
46	XBM8850	U-BOLT 50MM X 10	8
47	M12X40	M12 X 40 HEX HEAD SET SCREW HT ZP	8
48	M12X35	M12 X 35 SET SCREW HT ZP	6
49	M12FWASHER	M12 FLAT WASHER ZP	29
50	M12HNUT	M12 HEX NUT HT ZP	4
51	M12NNUT	M12 NYLOC NUT HT ZP	19
52	M10X45BOLT	M10 X 45 BOLT HT ZP	4
53	M10X30	M10 X 30 SET SCREW HT ZP	14
54	M10FWASHER	M10 FLAT WASHER ZP	56
55	M10NNUT	M10 NYLOC NUT HT ZP	38
56	M8X40BOLT	M8 X 40 HEX HEAD BOLT HT ZP	3
57	M8X25	M8 X 25 SET SCREW HT ZP	2
58	M8X20	M8 X 20 SET SCREW HT ZP	3
59	M8FWASHER	M8 FLAT WASHER ZP	10
60	M8SWASHER	M8 SPRING WASHER ZP	6
61	M8NNUT	M8 NYLOC NUT HT ZP	2

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS TOLERANCES: FRACTIONS DECIMALS HOLE DIA. HOLE DIA.		NAME: N/A SIGNATURE: _____ DATE: _____ REVISED: _____		CROPLANDS A NUFARM LIMITED COMPANY 800LT AGRIPAK LINKAGE LA800/MAX08L PARTS ILLUSTRATION LA800/MAX08L A2	
DRAWN: _____ CHKD: _____ APPRO: _____ SQA: _____		REVISION: _____ DATE: _____ BY: _____		PAGE 1 OF 1	

NOTE

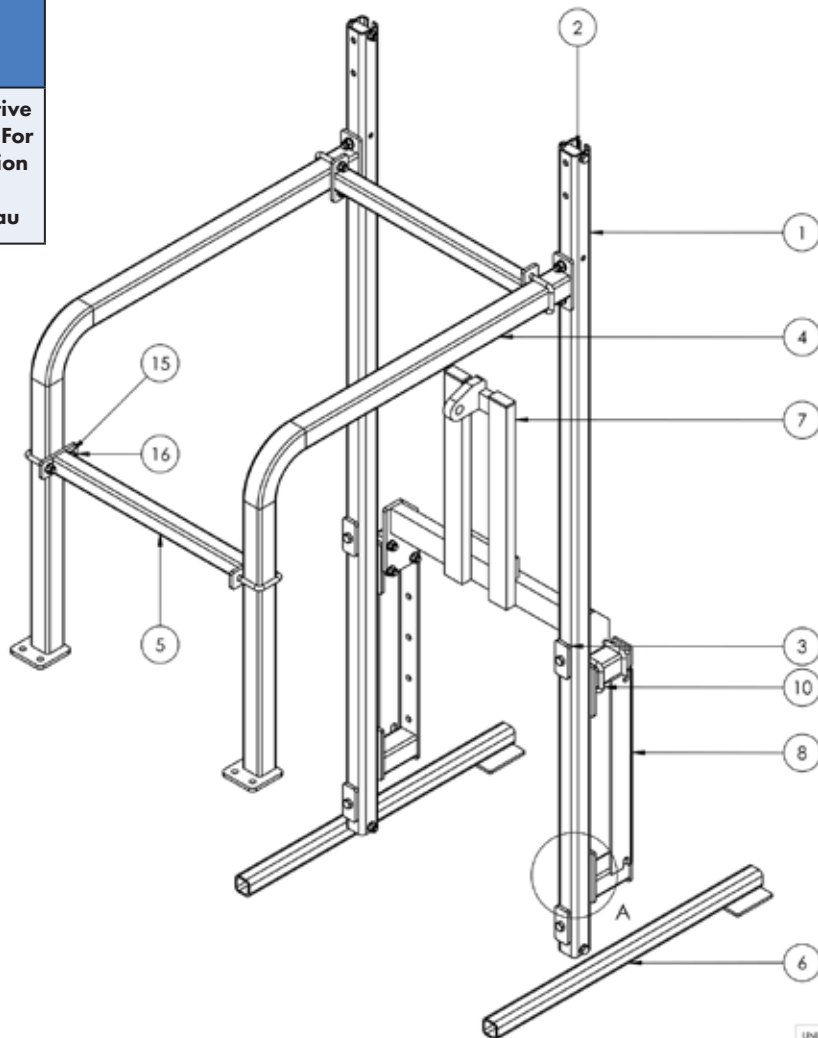
LINKAGE 1000 ILLUSTRATION



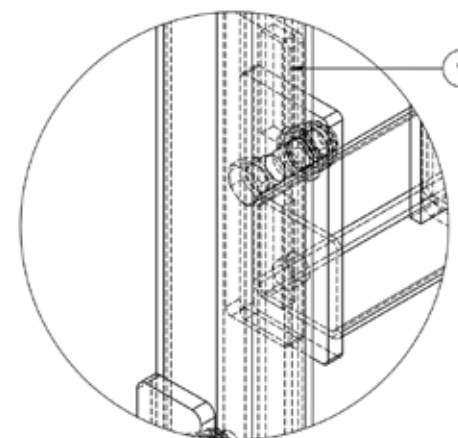
LIFT DEVICE FOR 600 AND 800 LITRE AGRIPAK MODELS

NOTE

» This parts list is indicative of this model sprayer. For further parts information refer to:
www.croplands.com.au

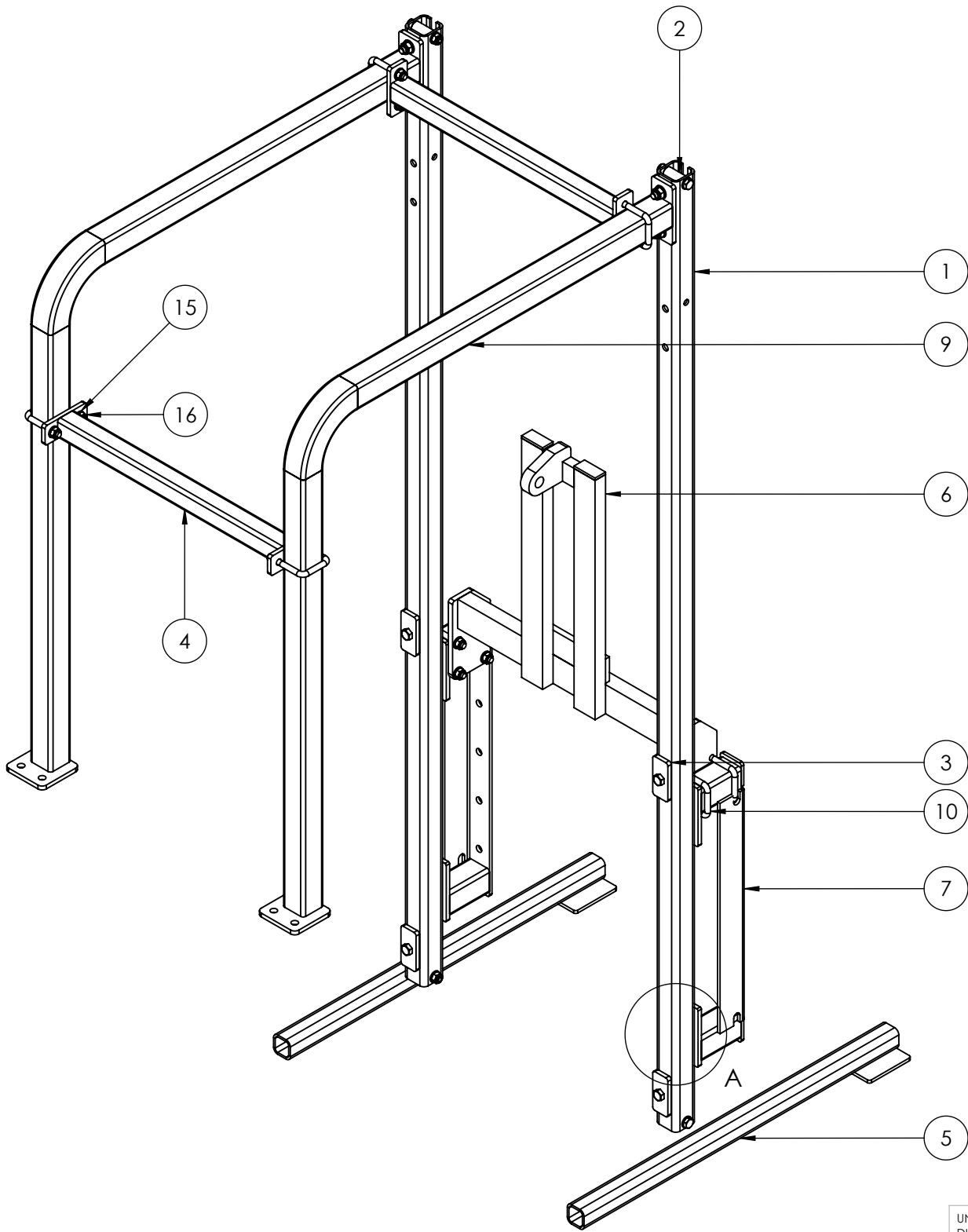


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	LP060-2	LIFT SLIDE TUBE	2
2	LP060-2-1	SPACER SLIDE TUBE	4
3	LP060-2-2	ATTACHMENT PLATE	4
4	LP060-3	LIFT SUPPORT BRACKET 600LT	2
5	LP060-4	LIFT CROSS BRACE	2
6	LP060-5	FOOT EXTENSION	2
7	LP060-6	LIFT SLIDE FRAME	1
8	LP060-7	LIFT BOOM MOUNT	2
9	LP060-7-1	LIFT SLIDE	4
10	XBM8B50	U-BOLT 50MM X 10	8
11	M12X35	M12 X 35 SET SCREW HT ZP	4
12	M12FWASHER	M12 FLAT WASHER ZP	17
13	M12NNUT	M12 NYLOC NUT HT ZP	12
14	M10X65BOLT	M10 X 65 BOLT HT ZP	4
15	M10FWASHER	M10 FLAT WASHER ZP	24
16	M10NNUT	M10 NYLOC NUT HT ZP	20

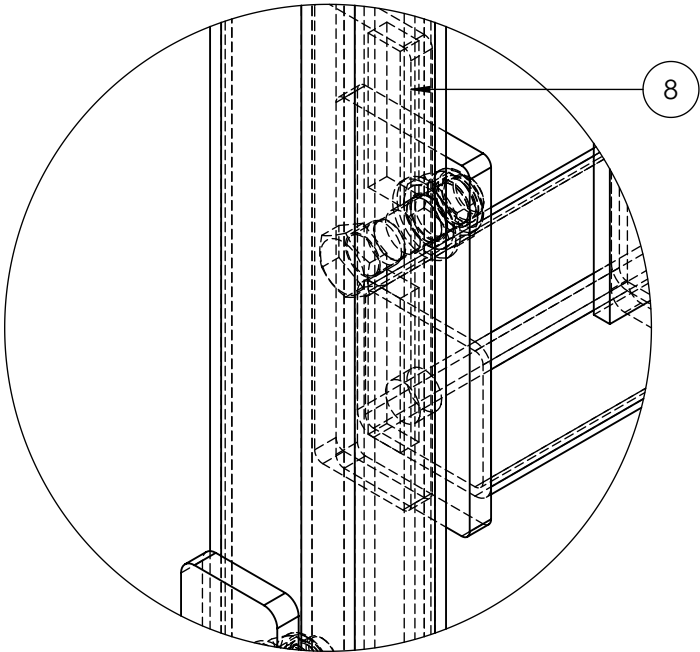


DETAIL A
SCALE 1 : 2

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: ± 0.2 TOLERANCES: LINEAR: ± 0.5 ANGULAR: ± 0.5				FINISH: N/A		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		ISSUE	A
DRAWN RPA/CO				SIGNATURE		DATE 100215		REVISION		TITLE: CROPLANDS A NUFARM LIMITED COMPANY FARMATE LINKAGE	
CHKD										HYDRAULIC LIFT KIT	
APPRD										DWG NO. LP600 HYD	
MFG										A3	
Q.A										SCALE: 1:10	
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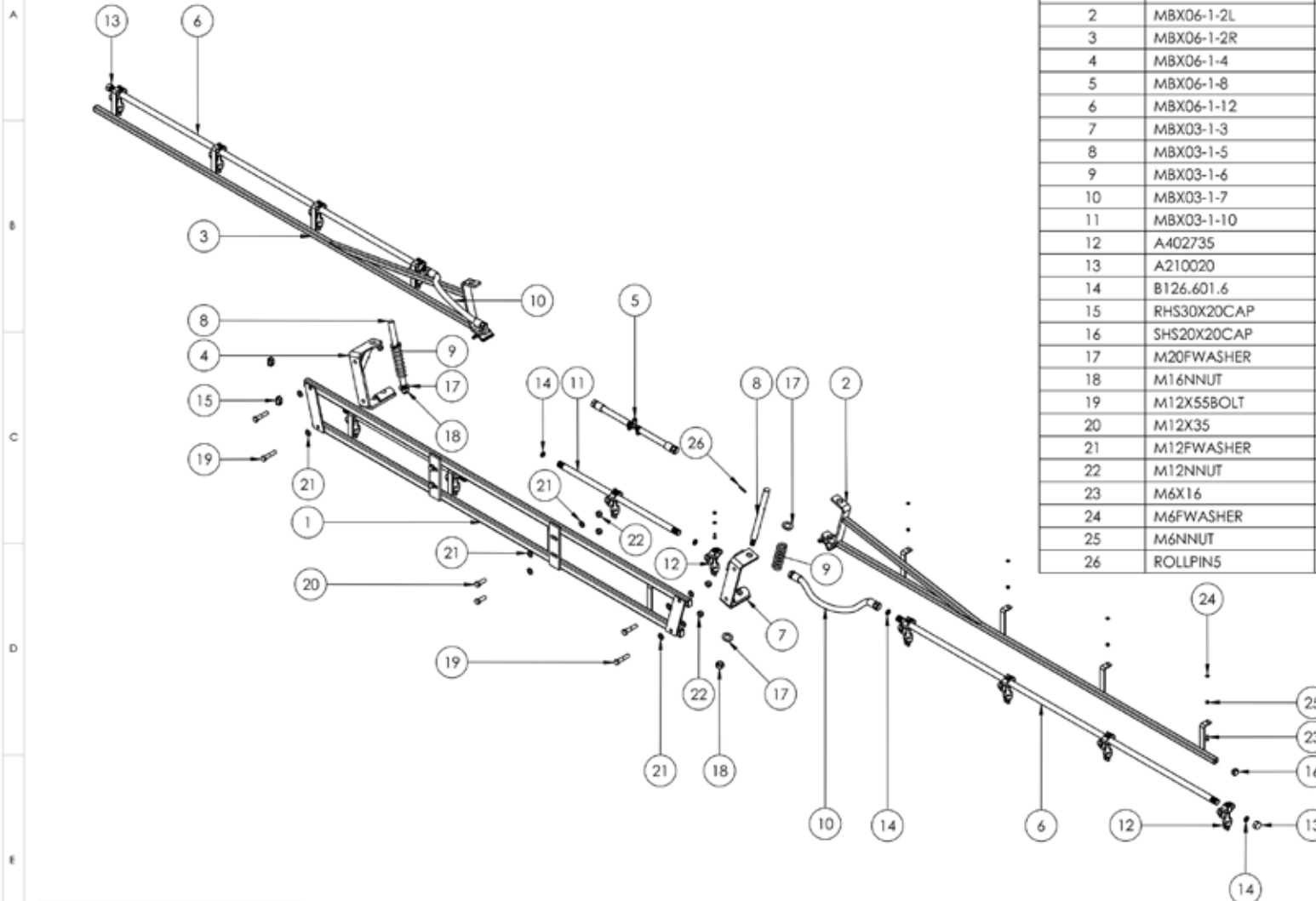
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	LP060-2	LIFT SLIDE TUBE	2
2	LP060-2-1	SPACER SLIDE TUBE	4
3	LP060-2-2	ATTACHMENT PLATE	4
4	LP060-4	LIFT CROSS BRACE	2
5	LP060-5	FOOT EXTENSION	2
6	LP060-6	LIFT SLIDE FRAME	1
7	LP060-7	LIFT BOOM MOUNT	2
8	LP060-7-1	LIFT SLIDE	4
9	LP080-3	LIFT SUPPORT BRACKET 800LT	2
10	XBMBB50	U-BOLT 50MM X 10	8
11	M12X35	M12 X 35 SET SCREW HT ZP	4
12	M12FWASHER	M12 FLAT WASHER ZP	16
13	M12NNUT	M12 NYLOC NUT HT ZP	12
14	M10X65BOLT	M10 X 65 BOLT HT ZP	4
15	M10FWASHER	M10 FLAT WASHER ZP	24
16	M10NNUT	M10 NYLOC NUT HT ZP	20



DETAIL A
SCALE 1 : 2

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: ± 0.2 TOLERANCES: LINEAR: ± 0.5 ANGULAR: ± 0.5				FINISH: N/A		<div>DEBUR AND BREAK SHARP EDGES</div>	DO NOT SCALE DRAWING		ISSUE		A		
<div>CROPLANDS</div> <div>A NUFARM LIMITED COMPANY</div>													
		NAME		SIGNATURE		DATE		REVISION		TITLE:			
DRAWN		RPJUCO				100215				HYDRAULIC LIFT KIT 800LT			
CHK'D													
APPV'D													
MFG													
Q.A													
<div>COPYRIGHT PROPRIETOR</div> <div>THIS DRAWING IS THE PROPERTY OF CROPLANDS PTY. LTD. AND MUST BE TREATED AS CONFIDENTIAL. REPRODUCTION OF THIS DRAWING (OR PART THEREOF) OR COMMUNICATION OF ITS CONTENTS IS PROHIBITED WITHOUT THE CONSENT OF CROPLANDS PTY. LTD.</div>						MATERIAL:		DWG NO.				A3	
						N/A		LP800 HYD				A3	
WEIGHT:						SCALE: 1:10				SHEET 1 OF 1			

MBX06 BOOM



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	MBX06-1-1	CENTRE SECTION 6M CROSS FOLD	1
2	MBX06-1-2L	BOOM L.H. 6M CROSS FOLD	1
3	MBX06-1-2R	BOOM R.H. 3M CROSS FOLD	1
4	MBX06-1-4	HINGE BRACKET R.H.	1
5	MBX06-1-8	HOSE KIT WITH 1/2" TEE	1
6	MBX06-1-12	STAINLESS TUBE 1/2NB 1600MM 4 HOLES	2
7	MBX03-1-3	HINGE BRACKET L.H.	1
8	MBX03-1-5	PIN	2
9	MBX03-1-6	SPRING	2
10	MBX03-1-7	HOSE KIT 12MM	2
11	MBX03-1-10	STAINLESS TUBE 1/2NB X 600MM 2 HOLES	2
12	A402735	EYELET 1/2" NON DRIP FARMATE	12
13	A210020	BRASS END CAP	2
14	B126.601.6	FLAT SEAL 1/2" EPDM	8
15	RHS30X20CAP	PLASTIC END CAP 30 X 20 RHS	4
16	SHS20X20CAP	PLASTIC END CAP 20 X 20 SHS	2
17	M20FWASHER	M20 FLAT WASHER ZP	4
18	M16NNUT	M16 NYLOC NUT HT ZP	2
19	M12X55BOLT	M12 X 55 BOLT HT ZP	4
20	M12X35	M12 X 35 SET SCREW HT ZP	4
21	M12FWASHER	M12 FLAT WASHER ZP	16
22	M12NNUT	M12 NYLOC NUT HT ZP	8
23	M6X16	M6 X 16 SET SCREW HT ZP	12
24	M6FWASHER	M6 FLAT WASHER ZP	12
25	M6NNUT	M6 NYLOC NUT HT ZP	12
26	ROLLPIN5	ROLL PIN 5MM DIA ZP	2

NOTE

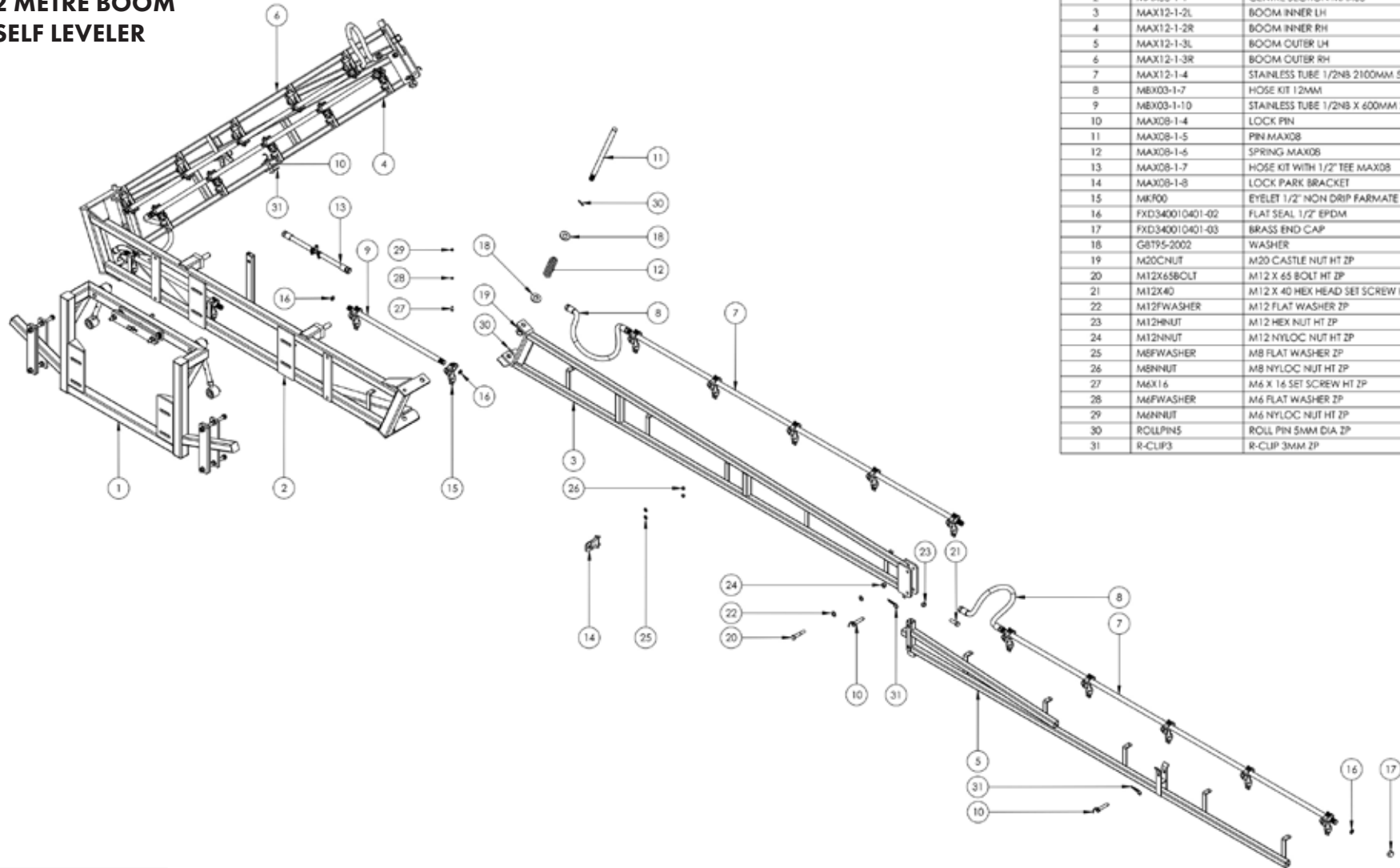
» This parts list is indicative of this model sprayer. For further parts information refer to: www.croplands.com.au

MBX06-1 PARTS ILLUSTRATION NO NOZZLES

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PLEASE REFER TO THE PARTS LIST.

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DRAWN RFA/CO		SIGNATURE		DATE 29/7/13		REVISION		TITLE: CROPLANDS A NUFARM LIMITED COMPANY BOOM			
CHKD								BOOM 6M CROSS FOLD			
APPVD								DWG NO.		A3	
MFG								MATERIAL: STEEL GRADE GB/T6728-2002 Q235		MBX06-1	
Q.A.								WEIGHT:		SCALE: 1:15	
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MAX12 METRE BOOM WITH SELF LEVELER



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	MAX-LEVEL	MAX BOOM LEVELER	1
2	MAX08-1-1	CENTRE SECTION MAX08	1
3	MAX12-1-2L	BOOM INNER LH	1
4	MAX12-1-2R	BOOM INNER RH	1
5	MAX12-1-3L	BOOM OUTER LH	1
6	MAX12-1-3R	BOOM OUTER RH	1
7	MAX12-1-4	STAINLESS TUBE 1/2NB 2100MM 5 HOLES	4
8	MBX03-1-7	HOSE KIT 12MM	4
9	MBX03-1-10	STAINLESS TUBE 1/2NB X 600MM 2 HOLES	2
10	MAX08-1-4	LOCK PIN	5
11	MAX08-1-5	PIN MAX08	2
12	MAX08-1-6	SPRING MAX08	2
13	MAX08-1-7	HOSE KIT WITH 1/2" TEE MAX08	1
14	MAX08-1-8	LOCK PARK BRACKET	1
15	MK900	EYELET 1/2" NON DRIP FARMATE	24
16	FXD340010401-02	FLAT SEAL 1/2" EPDM	12
17	FXD340010401-03	BRASS END CAP	2
18	GB795-2002	WASHER	4
19	M20CNUT	M20 CASTLE NUT HT ZP	2
20	M12X65BOLT	M12 X 65 BOLT HT ZP	2
21	M12X40	M12 X 40 HEX HEAD SET SCREW HT ZP	2
22	M12FWASHER	M12 FLAT WASHER ZP	4
23	M12HNUT	M12 HEX NUT HT ZP	2
24	M12HNUT	M12 NYLOC NUT HT ZP	2
25	M8FWASHER	M8 FLAT WASHER ZP	2
26	M8NNUT	M8 NYLOC NUT HT ZP	2
27	MAX16	M6 X 16 SET SCREW HT ZP	24
28	M6FWASHER	M6 FLAT WASHER ZP	24
29	M6NNUT	M6 NYLOC NUT HT ZP	24
30	ROLLPINS	ROLL PIN 5MM DIA ZP	4
31	R-CLIP3	R-CLIP 3MM ZP	5

NOTE

» This parts list is indicative of this model sprayer. For further parts information refer to: www.croplands.com.au

MAX12L-1 PARTS ILLUSTRATION
THIS DRAWING IS FOR ILLUSTRATION PURPOSE ONLY
PLEASE REFER TO THE PARTS LIST.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS TOLERANCES: LINEAR ANGULAR		FRACTION N/A		DEBUR AND GREAT SHARP EDGES		DO NOT SCALE DRAWING		BUREAU		A	
DRAWN DWG APP'D S.A.		SIGNATURE DATE 10/04		REVISION		N/A		CROPLANDS A NUFARM LIMITED COMPANY		MAX BOOM	
								MAX12L-1 PARTS ILLUSTRATION			
								MAX12L-1 Illustration		A2	
								SCALE 1:12.5		SHEET 1 OF 1	

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e-mail: sales@croplands.com.au
website: www.croplands.com.au

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