CROPLANDS

PEGASUS 8000

STOP

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

Operator's & Parts Manual

Part No. BT-POM8001110 Rev.2

Contents

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Foreword

About This Manual

This manual provides assembly, setting up, operating and maintenance instructions for the Croplands Pegasus sprayer.

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.

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.

NOTE

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

CAUTION

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

WARNING

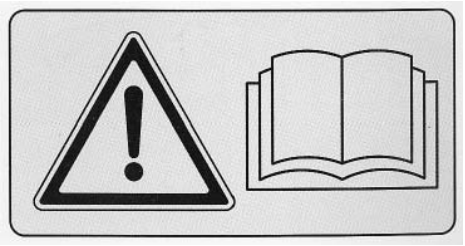
Indicates the strong possiblility of severe personal injury or damage to machinery if instructions are not followed.

Before Operating Your Sprayer

1 Before attempting to use your sprayer, make sure you **read the Operator's Manual** and properly understand:
   - All Safety Issues.
   - Assembly & Installation instructions.
   - Calibration of the sprayer.
   - Sprayer Operation.
   - Sprayer Maintenance.

2 Read and follow instructions on chemical manufacturers' labels.

3 Always wear applicable protective clothing.



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

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 40 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.

In this manual you will find the parts listings you need should you have any breakdowns in the future.

Bear in mind that over time, some parts may become obsolete or be replaced with better options. You can contact us for alternative options if this is the case.

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

Yours sincerely

Sean Mulvaney
General Manager

Contact details:

AUSTRALIA

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e-mail: sales@croplands.com.au
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General Description & Specifications

Tank
8000 litre polyethylene tank with hinged lid, filling strainer, top/bottom fill point, dual agitators and sparge tube, direct chemical induction and dual tanks rinsing jets. Calibrated sight gauge fitted. UV and chemical resistant finish. Separate 35 litre hand-wash tank fitted for safety.

Chassis
Strong, fabricated wide rail chassis, fully welded for maximum strength. Fitted standard with load sensing, adjustable width(2.5 – 3 metres), air-ride suspension axle. Adjustable height drawbar complete with cast swivel eye and safety chain including ARDS air-ride drawbar system, with a hydraulically adjustable, heavy duty jacking stand.

Wheels & Tyres
710/70R 42 standard on 8000 litre model
Mudguards & Mudflaps optional

Pump
AR positive displacement 6 diaphragm pump, chemical resistant, rated to 20bar. Normal operating range 1 – 8bar. Standard output 250 l/min (at zero pressure). Hydraulic drive standard, complete with pressure compensated flow control to minimise chance of pump over-speed, and pump rpm sensor.

Filtration
Five filtration points: Basket (18mesh), Filling filter (32mesh), Suction filter (50mesh), Pressure filter (100mesh), Nozzle filters (50 or 100mesh)

Controller & boom Valves
BA7000 fully automatic spray rate controller fitted. Five electric (motorized) boom section valves fitted as standard with optional 7 or 9 sections, and electric fence-jet nozzle. Arag paddlewheel type flowmeter, with Banjo motor dump and servo valve fitted. Optional Topcon System 110/150, X20 or Raven control systems. Adaptation to GS2 and Trimble systems also available.

Boom & Lift
30, 33 & 36 metre boom options. Booms constructed of high quality steel in a lattice design, epoxy powder coat finish for chemical resistance. Self returning breakaways fitted to outer boom arms. Pendulum type self-levelling operation with yaw spring suspension on boom centre section. Stainless steel boom tubes with single non-drip bodies and airmix air induction nozzles standard. Triplex bodies or dual spray lines optional. Full hydraulic fold with independent outer fold standard, winglift optional. Parallelogram boom lift fitted with nitrogen charged accumulator for added boom suspension.

Agitation
Dual supa-flow agitators with pump bypass agitation through sparge tube aids agitation and mixing.

Chemical Handling
Integrated 100litre chemical mixer/induction hopper fitted with a drop-leg device. Options include a chemical suction / rinse probe, enviro transfer kit and Direct chemical injection systems.

Flushing & Controls
Easy to use operator control station fitted with rotary selection valves. A 700 litre flush tank is fitted for maximum sprayer flushing capability. Independent boom flushing included standard.

Part No. BT-POM8001110 Rev.2

IMPORTANT! Tick the fitted options for your sprayer on this page for future reference.

Tick Your Sprayer's Options (✔)

Tank:

- 8000…… ❑

Wheels & Tyres

- 710/70R/42…… ❑
- 620/70R/42…… ❑
- 520/85R/46…… ❑

Boom Size

- 30m…… ❑
- 33m…… ❑
- 36m…… ❑

Boom Sections

- 5 section..... ❑
- 7 section…… ❑
- 9 section…… ❑
- RH Fence-jet…… ❑
- LH Fence-jet…… ❑

Left/right wing-lift kit…… ❑

Tick Your Sprayer's Options (✔)

Options:

- Triplex Nozzles…… ❑
- Right Hand Fencejet…… ❑
- Left Hand Fencejet…… ❑
- Dual Spray Lines…… ❑
- Mudguards…… ❑
- Mud Flaps…… ❑
- Filling Flowmeter…… ❑
- Chemical Suction Probe…… ❑
- Enviro Transfer Kit…… ❑
- Dosmatic Chemical Injection…… ❑
- Raven Sidekick Chem Injection…… ❑
- Filling Pump (Hydraulic Drive)…… ❑

Spray Rate Controller

- BA7000…… ❑
- Envisio Pro 2…… ❑
- X20…… ❑
- John Deere GS2…… ❑
- Trimble EZ Boom…… ❑
- Other…… ❑

Tick Your Sprayer's Options (✔)

Guidance System*:*

- Envisio Pro 2…… ❑
- Raven Cruiser…… ❑
- Raven Envisio Pro 2…… ❑
- X20…… ❑
- Other…… ❑

Auto boom leveling…… ❑

Pump

- AR250 Hydraulic Drive…… ❑

Your Product Code……

Your Serial Number……

Date of Purchase……

Flow Calibration Number……

Speed Calibration Number……

Boom Width Calibrations……

……

8000 litre Pegasus with 710/70 Single Wheels

Pic 1: Sprayer serial number plate


Pic 2: Pump serial number plate


Pic 3: Spray Rate Controller serial plate

Shipping Information

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

Approx Weight

Model	Approx Dry Weight
6000 Litre	TBA (30m boom)
8000 Litre	6450Kg (36m boom)

Maximum Towing Speed

Do not exceed 30 km/h when towing on roads.

Dimensions (approx)

Model	W x L x H (boom folded)
6000 Litre	TBA (30m boom)
8000 Litre	3.5m x 9.4m x 3.9m

Product Identification

Always use the serial number of the sprayer when requesting service information or when ordering spare parts.

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

Sprayer Serial Number Plate

The Pegasus serial number plate is located on the chassis above the drawbar mounting pin (refer *pic 1)*.

This plate shows the name of manufacturer, sprayer code, serial number and date of manufacture.

Pump Serial Number Plate

The pump serial number plate is located on the pump (refer *pic 2).*

This plate shows name of manufacturer, serial number, type of pump, year of manufacture, maximum flow rate and maximum working pressure of the pump.

Spray Rate Controller

The spray rate controller supplied with your sprayer may, depending on model, be either a single console or may also have a separate electronic control module. The serial number plate is usually on the back of the console (refer *pic 3)*.
In either case, both console and module should be identified with individual serial numbers.

Warranty Policy

Croplands Equipment Pty Ltd (trading as Croplands) warrants to its authorised Dealer, who in turn, warrants to the original purchaser (Owner) that each new Croplands' sprayer, part or accessory will be free from proven defects in material and workmanship for twelve (12) months from the date of delivery to the first Owner according to the conditions outlined. This warranty does not cover damages resulting from abuse, accidents, alterations, normal wear or failure to maintain or use the Croplands product with due care.

During the warranty period, the authorised Croplands Dealer shall repair or replace, at Croplands option, without charge for parts and labour any part of the Croplands product, which fails because of defects in material or workmanship. The Owner must provide the authorised Dealer with prompt written notice of the defect (within 14 days of its occurrence), and allow reasonable time for replacement or repair. Repair may, at Croplands option, include the replacement of parts with functionally equivalent reconditioned or new parts. Replacement parts will be warranted for the balance of the original warranty period or for ninety (90) days, which ever is longer. Croplands (at its option) may request failed parts to be returned to the factory. Any travel time of a service technician and/or transportation of the Croplands product to the authorised servicing Dealer for warranty work are the responsibility of the Owner.

EXCLUSIVE EFFECT OF WARRANTY AND LIMITATION OF LIABILITY THIS WARRANTY IS IN LIEU OF ALL WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PURPOSE OR OTHER REPRESENTATIONS, WARRANTIES OR CONDITIONS, EXPRESSED OR IMPLIED. The remedies of the Owner set forth herein are exclusive. CROPLANDS neither assumes nor authorises any person to assume for it any other obligation or liability in connection with the sale of covered machines. Correction of defects, in the manner and for applicable period of time provided above, shall constitute fulfillment of all responsibilities of CROPLANDS to the Owner, and CROPLANDS shall not be liable for negligence under contract or in any manner with respect to such machines. IN NO EVENT SHALL THE OWNER BE ENTITLED TO RECOVER FOR INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES SUCH AS BUT NOT LIMITED TO, LOSS OF CROPS, LOSS OF PROFITS OR REVENUE, OTHER COMMERCIAL LOSSES, INCONVENIENCE OR COST OF RENTAL OR REPLACEMENT EQUIPMENT.

Conditions of Warranty

1. The warranty is not transferable.
2. The Warranty Registration Form must be returned to Croplands by the Owner Operator within 14 days of taking delivery of the unit. Only when warranty registration is completed and returned, can Croplands fulfill all warranty obligations.
3. **Schedule of components and conditions <u>not covered</u> by warranty are:**

Abuse	Failure resulting from neglect, such as improper operation, lack of required maintenance or continued use of a sprayer after the discovery of a defect which results in greater damage to the unit.
Environmental Conditions and Application	Deteriorated or failed components such as: diaphragms, O-rings, hoses, seals, electrical wiring and connections damaged by corrosive chemicals, dirt and sand, excessive heat or moisture. Owners should en sure the type and strength of chemicals used in the sprayer are compatible with the design of the unit. Warranty determination for these types of failures will be made by Croplands only after inspection of failed components. In most instances these will incur inspection charges and cost of replacement parts.
Normal Wear	Normal wear and consumable items such as: oils and lubricants, diaphragms, filter elements, flowmeters, clutches, fan belts, drive belts, pivot pins, paint, light bulbs and nozzles are considered to be normal wear items and are not warranted.
Maintenance	Component failure caused by not performing scheduled maintenance service such as: oils, grease, failure to clean tanks, pumps, filters, spray lines, nozzles or any other blocked components. Not tightening or replacing loose or missing bolts, nuts, fittings, shields and covers.
Damage	Damages or machine failure caused by carelessness or accidental damage, improper operation, excessive speed during travel and operation, inappropriate transportation or storage of the sprayer or attachment.
Power Source	Failures due to faulty or inadequate electrical sources of power. Owners who use their own 12 volt power source must make sure that it is suitable for operating the spraying equipment.
Alterations	Any unauthorised alteration, modification, attachments or unauthorised repairs to the Croplands sprayer or attachments. Written approval must be obtained from Croplands for any such items to maintain warranty.
Removal & Installation	The time taken to remove and re-install a warranted part or component into other brands of sprayers will not be covered by Croplands warranty. Only parts and labour directly attributable to the repair of the Croplands unit is covered.
Clean-up Time	Croplands do not pay for cleaning the sprayer, parts, accessories or work area before or after the warranty repair. Clean-up time is affected primarily by the application or conditions in which the sprayer is operated and maintained. Since clean-up time can be so variable, cleaning time should be considered a customer expense.
Transportation	Warranty does not cover transportation or insurance costs for sprayers or other equipment needing repair or re placement of warranted components. Nor does it cover any freight or insurance costs in obtaining new parts or returning old parts to Croplands for inspection purposes.
Costs	Warranty does not cover time required to diagnose a war ran ty problem. Diagnostic time is affected greatly by the training and expertise of the technician employed to do the job. With proper training of service personnel, diagnostic time should be at a minimum.
Diagnostic Time	Croplands expects that Dealers will assign a well trained and proficient technician to handle any warranty repairs. Since Croplands is not in control of either of these responsibilities, we elect not to cover diagnostic time.
Non-Genuine Parts	Use of parts other than Croplands parts for repair of war rant ed parts will automatically negate any warranty. Warranted components must be replaced with genuine Croplands repair parts.
Unauthorised Repairs	Repairs by an unauthorised agent will automatically forfeit any warranty. An authorised Croplands Dealer must carry out warranty repairs.

Pre-Delivery Check List

The Pre-Delivery Check List **must be completed by the Dealer & signed by both the Dealer and the Owner**, and the white copy returned by the Dealer to Croplands.

Tick each box to affirm completion ✔

1 Operator's Manuals Supplied:
- Pegasus Parts & Operators Manual ❑

2 Trailer
- Undamaged ❑
- Hitch height adjusted ❑
- Hitch Jack lubricated ❑
- Axle adjustment bolts tight (if applicable) ❑
- Axle nut adjustment, split pin in place ❑
- Check mudguards ❑
- Check paint ❑

3 Wheel Hubs:
- Greased ❑
- Bearings adjusted ❑
- Split pin and dust caps in place ❑
- Wheel nuts tight ❑
- Check tyre pressure ❑

4 Tank
- Undamaged ❑
- Agitators adjusted correctly ❑
- Check main lid opens and seals shut correctly ❑
- Basket strainer in place ❑

5 Check All Tank Fittings Are Sealed
- Agitators ❑
- Sump outlets ❑
- Tank rinse nozzle ❑

6 Boom & Lift Device
- Undamaged ❑
- Check hydraulic height adjustment ❑
- Check boom mounting bolts tight ❑
- Unfold the boom, and ❑
  - Align wing sections ❑
  - Align wing extensions ❑
  - Align balancing device ❑
  - Adjust sliding surfaces ❑
- Grease the lift ❑
- Check gas accumulators ❑
- Check nozzle spacings ❑
- Check nozzle mountings tight ❑
- Check all pins in place ❑

Tick each box to affirm completion ✔

- Lubricate boom hinge points ❑
- Fold boom to transport position, and
  - Check transport cradles ❑
  - Check that hoses are not kinked or jammed on folding ❑

7 Power Drive

(a) PTO
- Check quick release pins operate easily and lock into place ❑
- Check universal joints work correctly ❑
- Adjust PTO length to suit tractor ❑
- Grease telescopic sliding shaft ❑
- Grease universal joints ❑
- Ensure safety shields are in place ❑
- Ensure safety chains are securely f tted ❑

(b) Hydraulic Pump Drive & Filling Pump (if fitted)
- Check pressure & return lines are identif ed for Hydraulic pump drive ❑
- Check revs set correctly for hydraulic pump drive ❑
- Check liquid pump operates correctly ❑
- Check f lling pump operation & control tap ❑

8 Pump
- Check mountings ❑
- Check oil level ❑
- Check air chamber pressure - 70-100kPa (10-15 psi) ❑
- Check operation ❑

9 Suction Lines
- Undamaged ❑
- Hoses - no kinks or restrictions ❑
- All joins sealed (no air leaks) ❑
- Filter clean & sealed ❑

10 Pressure Lines
- Undamaged ❑
- Hoses - no kinks or restrictions ❑
- All hoses sealed (no leakages) ❑
- Filter clean & sealed ❑

Tick each box to affirm completion ✔

11 Nozzles
- Undamaged ❑
- Nozzle f lters clean ❑
- Nozzles correct type throughout ❑
- Nozzle caps sealed (no leakages) ❑
- Non-drip diaphragms working ❑
- Check fenceline sprayer operation ❑

12 Agitation
- Check both agitators work ❑
- Check hoses are properly sealed ❑

13 Bottom-Fill (Spray/Flush Tanks)
- Check bottom-f ll operates ❑
- Filter clean & sealed ❑
- Check hoses properly sealed ❑
- Check caps & plugs in place ❑

14 Chem-E-Flush
- Check unit is undamaged ❑
- Check hoses/f ttings seal correctly ❑
- Check Chem-E-Flush operation ❑

15 Chemical Probe (if ordered)
- Undamaged ❑
- Check f ttings seal correctly ❑
- Check probe operation ❑
- Check caps & plugs in place ❑

16 Automatic Controller
- Check installation ❑
- Check battery connection ❑
- Calibrate controller ❑
- Fully check controller operation ❑

17 Fresh Water & Flushing Tanks
- Undamaged ❑
- Check f ttings ❑
- Check operation ❑

18 Main Control & Drain Valves
- Check there are no leaks ❑
- Check all valves open & close easily ❑

19 Foam Marker
- Check foam tank mountings ❑
- Check battery connection ❑
- Hoses - no kinks or restrictions ❑

Tick each box to affirm completion ✔

- All joins sealed (no air leaks) ❑
- Check f lters are clean ❑
- Check foam marker & in-cab control operation ❑

20 Air-Ride Axle
- Check air reservoir pressure ❑
- Set air suspension ride height ❑

21 GPS Guidance
- Check operation ❑

22 Enviro-Transfer Kit
- Check operation ❑

23 Decals
- Check all decals are in place ❑

OWNER: Farmer ❑ Contractor ❑

Owner's Name: (Print)

.....

Address: .....

.....

..... Postcode: .....

Phone: .....

Mobile: .....

Email: .....

Signature of Owner

.....

Date: .....

DEALER:

Dealership Name: (Print)

.....

Address: .....

.....

..... Postcode: .....

Signature of Dealer Representative

.....

Date: .....

Top Copy (White) - Forward to Croplands; Second Copy (Yellow) - Dealer's Copy; Third Copy (Blue) - Owner's Copy.

1.8

CROPLANDS

Warranty Registration

Warranty Registration: The Owner acknowledges that the Owner has read & understood all terms & conditions of the Croplands' warranty policy contained in this manual. The warranty policy will commence upon installation.
This Warranty Registration **must be completed & signed by both the Owner & the Dealer,** & the white copy returned by the Dealer to Croplands.

Implement Type: .....

Model: .....

Size: .....

Product Code: .....

Serial No: .....

Purchase Date: .....

Pre-Delivery Completion Date: .....

IMPORTANT:

By executing this Warranty Registration:

1 The Owner:

(a) Agrees that the Owner will read the Operator's Manual before using the Sprayer; will follow all procedures in the operator's manual for the use of the Sprayer, and will exercise due care in the use of the Sprayer;

(b) Agrees that Croplands' liability for any loss or damage suffered by the Owner in connection with the Owner's use of the Sprayer is limited to the cost of repair or replacement of the Sprayer;

(c) Agrees that the Owner will bear any loss the Owner suffers as a consequence of any failure by the Owner to comply with 1.1 above;

(d) Acknowledges that the owner is trained and is fully responsible for the safe and correct operation of the Sprayer; and

(e) Agrees that the Owner will fully train any person who might be required to operate the Sprayer as to how to operate the Sprayer in a safe and proper manner.

2 The Dealer undertakes that the Dealership has met the obligations of Sprayer pre-delivery, installation, service and warranty start up.

OWNER:

Owner's Name: (Print)

.....

Address: .....

.....

..... Postcode: .....

Phone: ..... Mobile: .....

Email: .....

Signature of Owner:

.....

Date: .....

DEALER:

Dealership Name: (Print)

.....

Address: .....

.....

..... Postcode: .....

Phone: ..... Mobile: .....

Email: .....

Signature of Dealer Representative:

.....

Date: .....

Owner's Machinery Register: *(This information will assist us in providing first class back-up and parts service)*

1 Type of purchaser (please tick): ❑ Owner/Farmer ❑ Share Farmer ❑ Contractor

2 Major activities (please number in order of importance):

❑ Sheep	❑ Nuts	❑ Nurseries	❑ Vineyards
❑ Beef	❑ Vegetables	❑ Fruit Trees	❑ Council/Govt
❑ Cereal Grain	❑ Flowers	❑ Parks & Lanes	❑ Other
❑ Cotton	❑ Dairy	❑ Sugar Cane	❑ .....

3 What is the size of your holding (hectares)? .....

4 What are your reasons for purchasing the Croplands Sprayer? .....

.....

.....

5 What other Croplands' machinery do you currently use?

Serial No.	Implement Type	Size	Age	Comments
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....

Top Copy (White) - Forward to Croplands; Second Copy (Yellow) - Dealer's Copy; Third Copy (Blue) - Owner's Copy.

Safety is the Operator's Responsibility

The Pegasus is designed to meet the most demanding farming conditions, where large areas, uneven terrain, and weather-controlled deadlines set the toughest challenges.

The Pegasus is capable of spraying a wide range of pesticides and fungicides and the operator must be aware of the hazards associated with the Pegasus operation.

The dealer explains the capabilities, application and restrictions of the Pegasus.

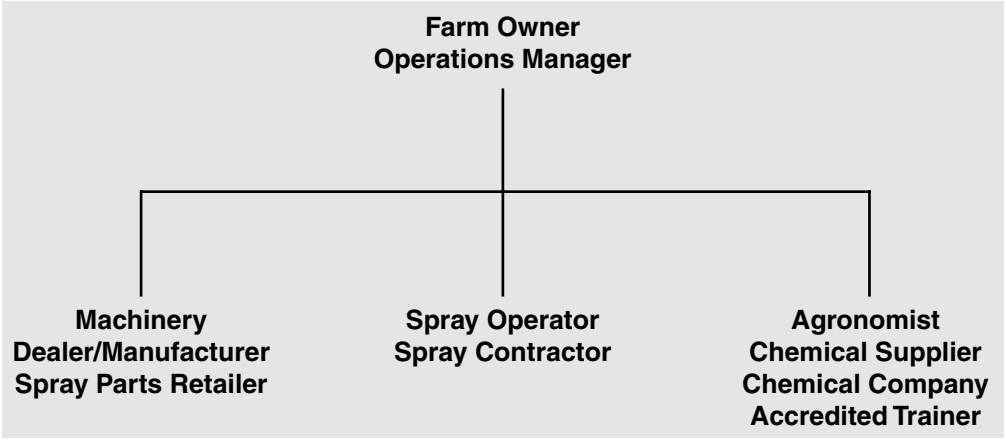
The dealer demonstrates the safe operation of the Pegasus according to Croplands instruction material, which are also available to operator.

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 Pegasus and attachments:

- The Operator's Manual delivered with the Pegasus gives operating information, as well as routine maintenance and service procedures. It is a part of the Pegasus and must stay with the machine when it is sold.
- Replacement Operator's Manuals can be ordered from your Croplands dealer, Pegasus Part No. BT-POM8001110.
- The Pegasus 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 Pegasus Operation & Maintenance Manual and on machine 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 Pegasus is delivered.
- The new operator must start in an area without bystanders and use all the controls until they can operate the Pegasus safely all conditions of the work area.

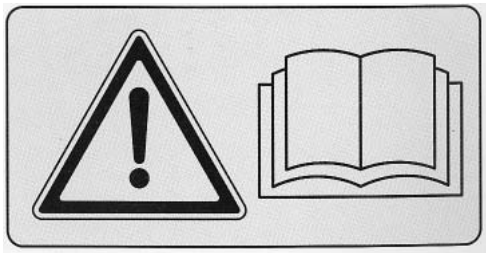
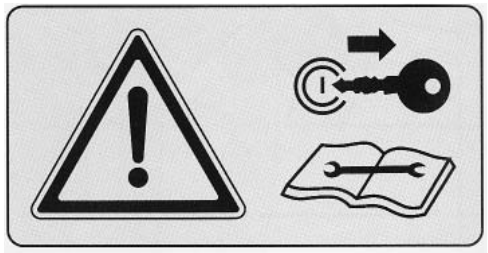
3 Know The Work Conditions

- 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 Pegasus.
- 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.

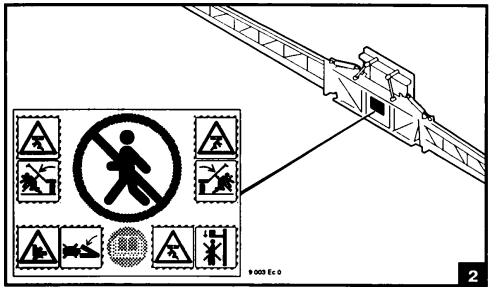
NOTE

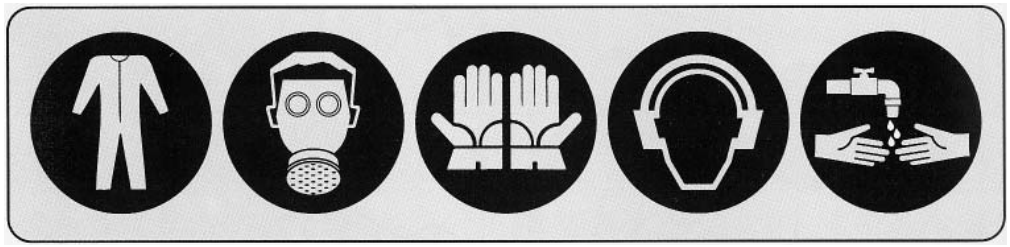
There are accredited training programmes for spray application in each state. We recommend all operators have accredited training.

Rules for Safe Pegasus 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 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 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 might result in entanglement.
- Be sure to disconnect the battery 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.
- 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 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.
- Always clean the Pegasus and disconnect the battery before doing any welding repairs. Cover rubber hoses, and all other flammable parts. Keep a fire extinguisher near the Pegasus when welding. Have good ventilation when grinding or welding painted parts. Wear dust mask when grinding painted parts. Toxic dust or gas can be produced.





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

Danger of arms crushing.
This area must be kept clear during equipment operation.

Danger of body crushing.
This area must be kept clear during equipment operation.

Danger of body crushing.
This area must be kept clear during equipment operation. do not stand within range of boom arms

Danger of PTO entanglement.
This is a common injury in farming. Ensure PTO covers are always in place.

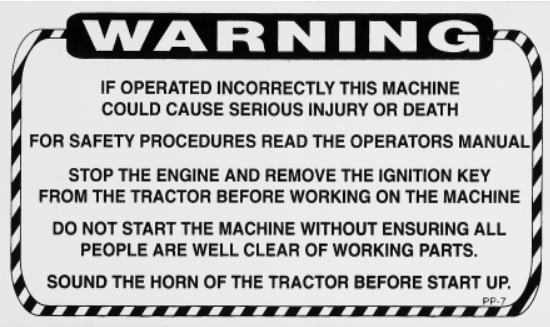
Rules for Safe Use of Chemicals

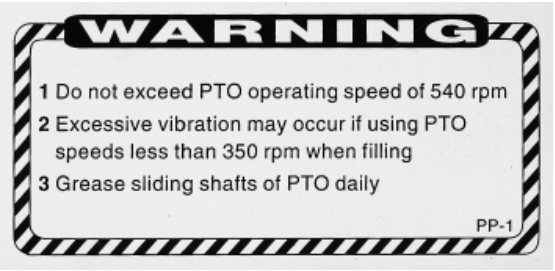
- Always read the label before using chemicals. Follow instructions from chemical manufacturer on how to select, use and handle each chemical. Note protection information each time before opening the container.
- Always observe all warnings on chemical products. Failure to do so could result in operator or others being exposed to toxic chemicals 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 and water.

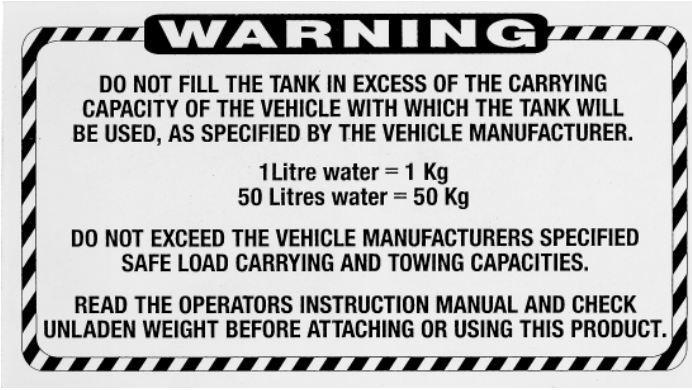
  Wash hands and face with soap and water and change clothing after spraying. Wash clothing each day before reuse.
- The spray tank and system should be emptied of chemical mixture and flushed with clean water before servicing the spray system or spraying components. Clean the Pegasus of all chemical residue 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.

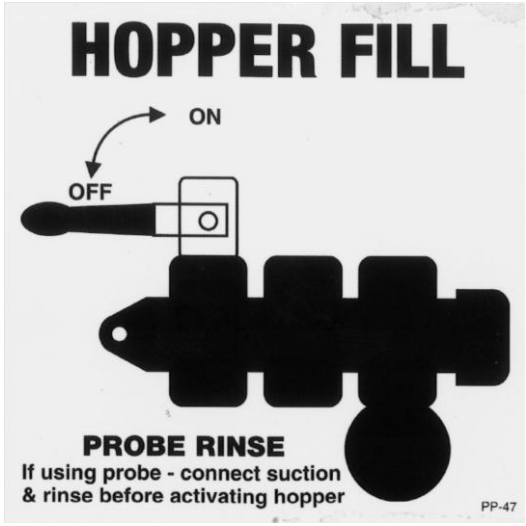
Decals - Please order replacements if required

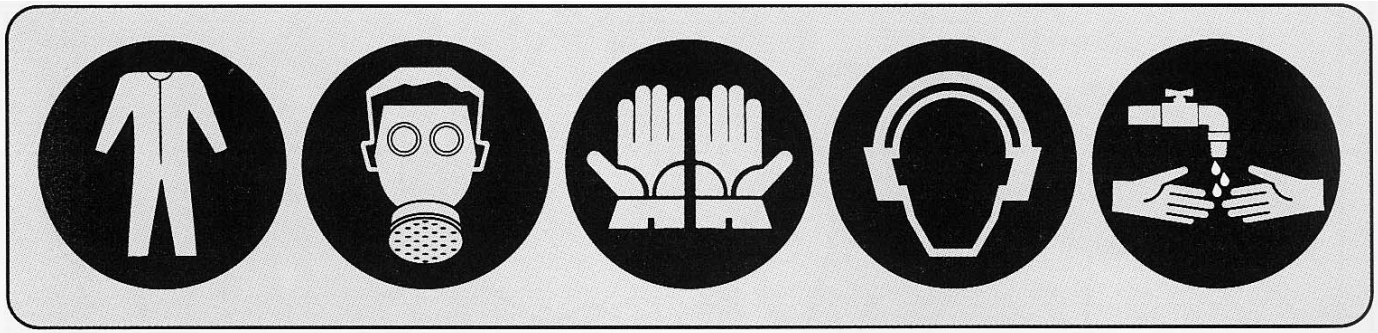






Decals – Please order replacements if required





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 disposal schemes.

Fresh water on the sprayer for personal safety

1, 3, 5 litre measuring jugs and 25L mixing bucket

Kasco helmet, Respirator and Nitrile Gloves

Respirator, Breathable spray suit and gloves

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

Clothing

- ☞ Cover as much 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.

Safety goggles for eye protection.

Respirator.

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 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 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.

☞ **Be SURE** to follow the safety precautions on the label.

Fully assembled Pegasus ex factory


Hydraulic connectors for sprayer


Lever for Jacking Leg operation

Assembly Instructions

The Pegasus 8000 is fully assembled from the factory with exception to the Electronic controllers, applicable looms and safety chain.
The air-ride axle and drawbar suspensions should be inflated before setting the hitch height – refer to instructions on page 2.15.
For correct setup of your electronic controls please refer to page 2.14.
For information regarding correct setup for your hydraulic connections please refer to page 2.11

Connect the Pegasus to the Tractor

Five steps are initially required to hook up the Pegasus 8000 to your tractor.

1) Connect the hydraulic hoses for the sprayer hydraulic controls and spray pump to the tractor.
2) Connect the Pegasus hitch to the tractor drawbar and connect safety chain.
3) Install the spray rate control and hydraulic control consoles to the tractor.
4) Connect all power leads direct to the battery.
5) Activate the air-ride suspension system and set sprayer ride height.

1) Connect Hydraulic Hoses to the Tractor

Connect the 2 x pairs of hydraulic hoses to the tractor's hydraulic remote couplers.

ENSURE the ¾" remote coupler is connected to a direct return to tank connection on the tractor to eliminate back pressure in the sprayer hydraulic return line. Your tractor dealer may be required to assist with this connection.

One pair of hoses is for the sprayer hydraulic functions, namely:

A) Jacking leg
B) Boom lift and fold
C) Hydraulic drive fill pump (if fitted)

The other pair is for the hydraulic drive operation of the spray pump.

A) To operate the hydraulic jacking leg:

i. Ensure the applicable tractor remote lever is engaged

ii. Operate the 'jacking leg' lever to raise or lower jacking leg

Hydraulic control switchbox for sprayer

200PHY Hydraulic Drive Fill Pump

Spray pump rpm flow control valve

1) Connect Hydraulic Hoses to the Tractor cont./

Your sprayer is fitted with an electric/ hydraulic system, for the boom fold and lift functions, thus providing for the operation of sprayer hydraulic functions from a single bank of tractor remotes.

B) To operate the boom hydraulic functions:

i. Install the electric/hydraulic control console in the cab in a suitable location.
ii. Ensure power leads are connected to the battery terminals (see page 2.14 “auxiliary power leads)
iii. Connect the round AMP connectors at drawbar.
iv. When the boom fold and lift hydraulic system is hooked up correctly, engage the applicable tractor remote lever and test the boom hydraulic functions.

C) If your sprayer is fitted with the optional hydraulic drive fill pump:

i. Ensure the applicable tractor remote lever is engaged
ii. Operate the ‘fill pump’ lever to operate the filling pump (refer to page 3.3 for fill pump operation)

WARNING

Prior to operating the boom hydraulics, ensure sprayer tow hitch is securely connected to the tractor drawbar.

WARNING

Ensure your working / testing area is clear of by-standers before operating boom hydraulic functions.

1a) Connect Hydraulic Drive Spray Pump to the Tractor

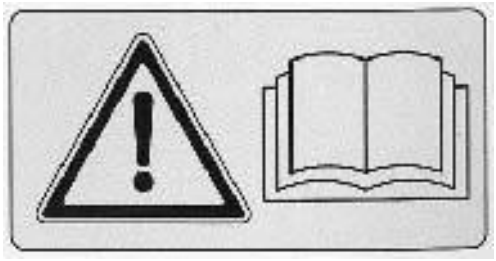
Your sprayer is fitted with a hydraulic drive spray pump. This system features a pressure compensated flow control valve to minimise chance of pump over-speed (maximum pump operating speed not to exceed 550 rpm), and to allow for easy reduction of pump speed during some chemical transfer operations.

A) To operate the sprayer’s hydraulic drive spray pump:

i. Connect the hydraulic pressure and tank hoses to your tractor remote.
ii. Ensure the flow control knob on the flow control valve of the hydraulic motor is fully opened (anti-clockwise).
iii. Engage the applicable tractor remote lever to operate spray pump.
iv. Confirm spray pump does not exceed 550rpm.
v. Pump speed can be slowed by turning flow control valve clockwise until desired operating rpm is achieved.

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.



WARNING

Maximum spray pump operating speed is 550rpm.
Do not operate pump above this rpm or pump damage may result

Open Centre vs Closed Centre Hydraulics.

For the best operation of your hydraulic-drive Diaphragm pump or hydraulic-drive filling pump, there are some adjustments that can be made by your dealer on your tractor hydraulics for best performance & lower heat generation to protect your tractor.

In general terms, there are three systems, which are described below:

Open Centre Systems

In an open centre system, the hydraulic pump on the tractor puts out a constant flow. If the pump puts out more oil than the hydraulic-drive motor can use, a portion of the oil must be bypassed around the motor.
When the oil is bypassed around a loop and does no work, the energy put into it by the pump turns into heat. Therefore, the amount of oil bypassed should be kept to a minimum. Tractor adjustments may be necessary, consult your dealer if you are unsure.

Closed Centre (Pressure Compensated) Systems.

The closed centre pressure-compensated system has a variable displacement pump which will deliver flow at the necessary rate to maintain a specified pressure.

It is best to have the pump operating at around 1800 to 2100 psi with the relatively low-flow hydraulic drive motor fitted to the Pegasus (if fitted).

Tractor adjustments may be necessary, consult your dealer if you are unsure.

Closed Centre Load Sensing Systems (Flow and Pressure Compensating).

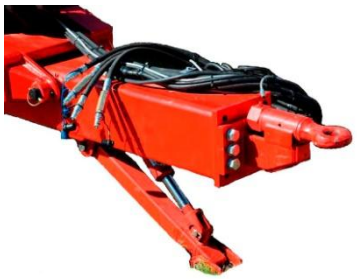
The closed centre flow-compensated system is a variation of the pressure-compensated system, designed primarily for more efficient operation and the generation of less heat.

It works on the principle of maintaining a constant pressure drop from the pump to the work port of the selector valve.

Any variation in the demand at the motor will cause a change in flow.

The system senses this change in flow due to the change in pressure drop across the valve, and causes the pump to compensate by varying the pump flow. No restrictor is required in the pressure line and no oil is bypassed.

Check with your dealer to see if your tractor has this system.



Adjustable height tow hitch

Bolt-on hitch can be adjusted to suit most tractors

2) Connect the Tow Hitch to the Tractor Drawbar

To connect the sprayer to a suitable tractor:

i. Check Pegasus is level fore and aft. The front platform should be level and the rear parallelogram vertical. If not, adjust the jacking leg until this is achieved.
ii. Align the Pegasus tow hitch with the tractor drawbar.
iii. If the tow hitch is higher or lower than the tractor, adjust the height of the tow hitch to match the height of the tractor.
iv. Ensure the drawbar pivot pin for ARDS operation is greased.
v. Connect the safety chain between the sprayer and the tractor.

NOTE

The hitch adjustment is best completed with both the drawbar and axle Air-ride suspension inflated to working height.

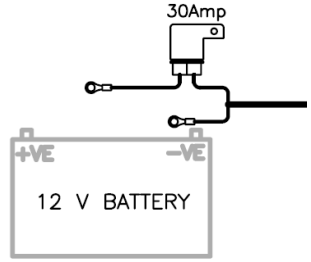
WARNING

Ensure Wheel Nuts are tight before every use and after wheels have been removed.

Torque Setting = 813Nm

BA7000 Spray Rate Controller

Connect the main loom couplings



Fused power supply for Spray Controls and Air-ride Compressor

3) Install the Spray Rate Controller

The Spray Rate Controller supplied form Croplands, has been fitted and tested to your sprayer at the factory and disconnected and packed for transit.

To fit the Spray Controller

i. Unpack the monitor and cables.
ii. Connect the leads at the rear of the Spray Controller (as shown below).
iii. Fit the Spray Controller console into the tractor cab in a convenient and safe location for the operator.
iv. Connect and lock together the main loom couplings at the rear of the tractor.

NOTE

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

4) Connect all Power Leads

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

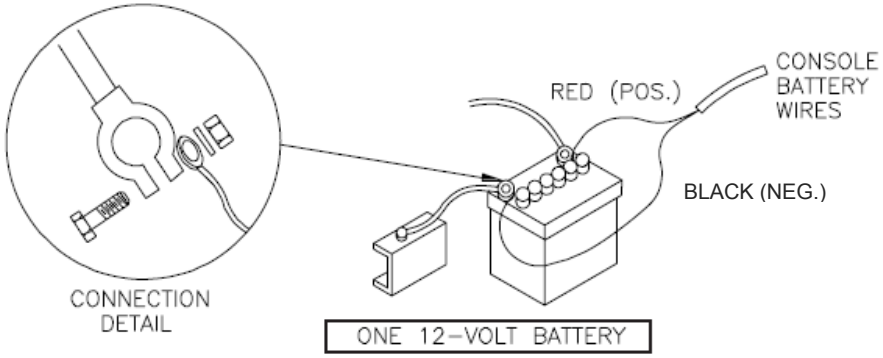
- Spray Controller leads
- Hydraulic controller leads
- Air-ride compressor leads

⚠ WARNING

Make absolutely certain that:

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

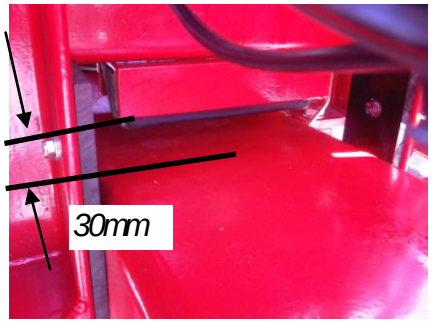
Damage can occur to units if power leads are reversed or incorrectly fitted.



Sprayer Air-Ride System

Air Ride Drawbar System fitted standard

ARDS ride leveler valve



Adjust ride height to top of drawbar bump rubber

5) Activate the Air-Ride Suspension System

Your sprayer is fitted with a 12volt electric air compressor, complete with a pressure activation switch for supplying air pressure to the Air-Ride system.

The power to the compressor is energised through a relay system when the Spray Rate Controller is turned on, and the Air System pressure is lower than the preset cut-in pressure of the switch (approx 70psi).

i. Ensure the air reservoir drain valve is shut.
ii. Connect the power leads for the Air-Ride system – refer to instructions on page 2.14.
iii. Power up the correctly installed Spray Rate Control Monitor.
iv. The air reservoir pressure reading on gauge will increase.

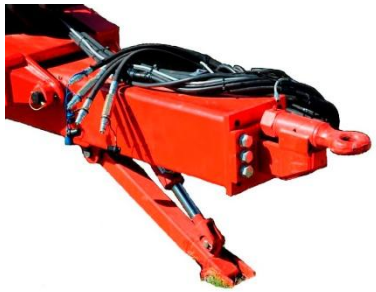
There are two systems within the Air-Ride suspension for your sprayer.

1. The A.R.D.S setup provides suspension for the tow hitch of the sprayer.
   i. Ensure the drain valve for the tow hitch air spring is closed.
   ii. Set the pressure control valve to required pressure – higher pressure = more rigid suspension (approx 35psi starting point).

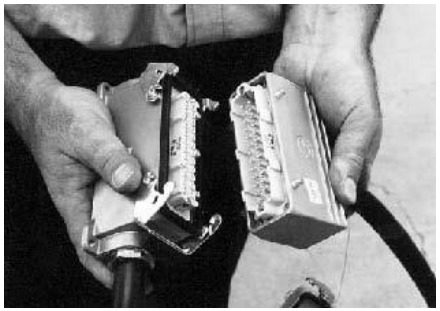
ARDS pressure control and drain valve

2. Independent ride leveller valves control the ride height for the axle Air-Ride and draw-bar ARDS suspension.
   i. Ensure the ride leveller valve control levers are correctly attached.
   ii. Adjust control rod to set required ride height for suspension.

Adjust ride leveler valves as necessary to obtain correct Axle air bag ride height.



Lower Jacking leg for parking



Disconnect Electrical connectors

Disconnect electrical connectors

Disconnect hydraulic hoses

Unhitching the Pegasus from the Tractor

To disconnect the Pegasus sprayer from the tractor, follow procedure as laid out below:

1) Ensure the booms arms are in the fully folded in position. THIS IS IMPERATIVE FOR SAFE UN-HOOKING OF THE SPRAYER (See warning below).
2) Locate the sprayer on level ground.
3) Lower the hydraulic jacking leg using the lever on the sprayer.
4) Disconnect all electrical looms.
5) Disconnect all hydraulic hoses and fit dust covers to hydraulic connectors.
6) Unlock and remove the tractor drawbar pin.

⚠ WARNING

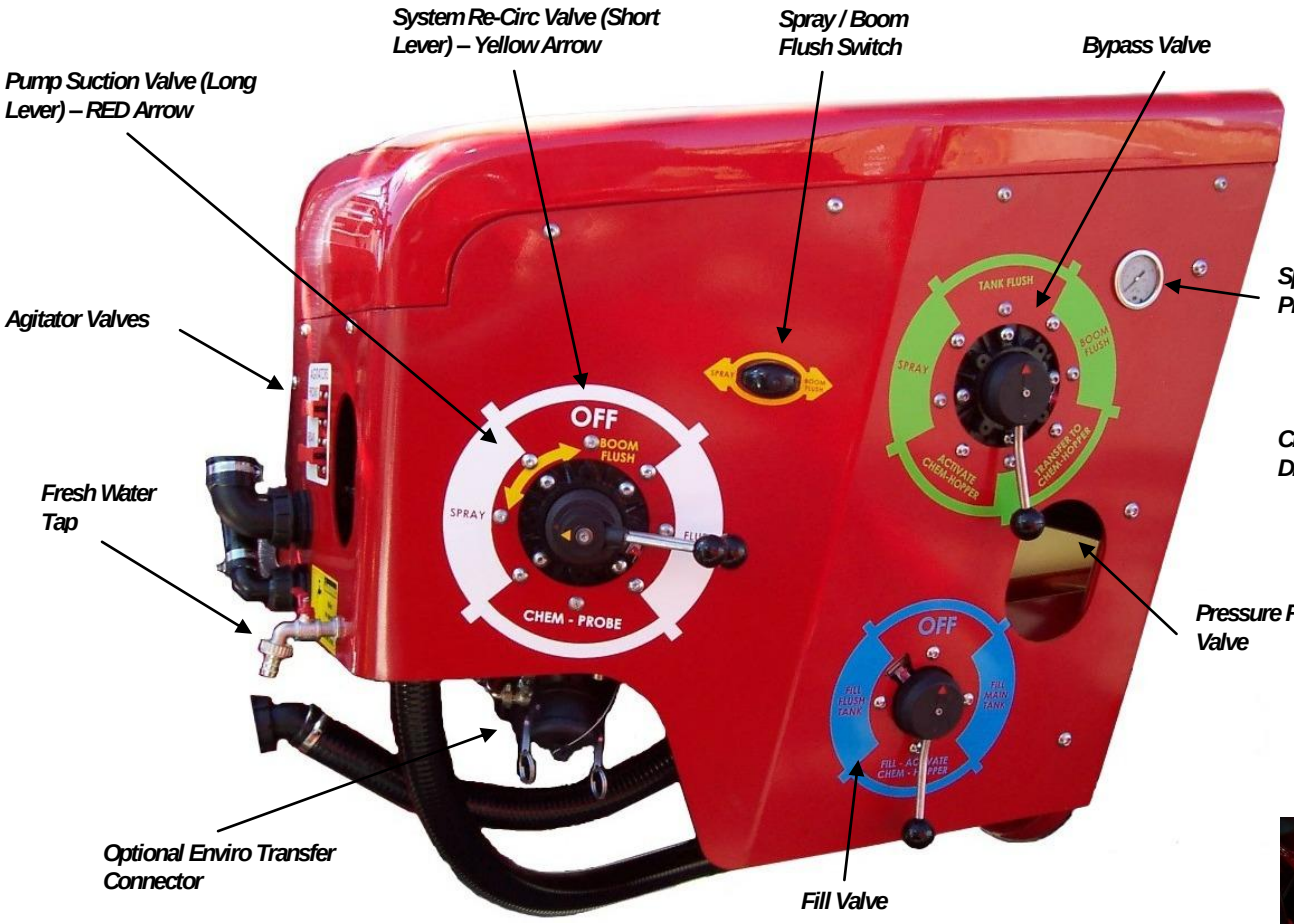
Boom arms MUST be in the folded position prior to parking and un-hooking the sprayer.

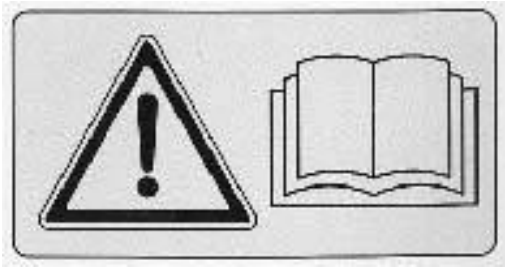
Failure to complete this operation correctly MAY result in INJURY or even DEATH.

NOTE

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

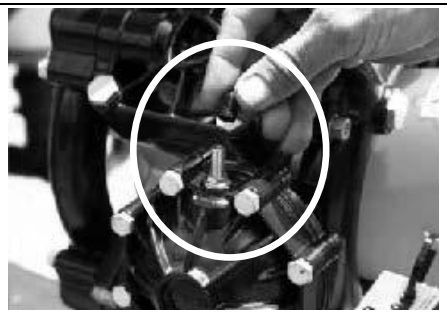
The location of the Pegasus main control panel facilitates easy access of all control points for filling, mixing, spraying and cleaning functions.





Read Operator's Manuals before operating sprayer.

Check pump oil level



Check the pump air chamber psi .

Check the suction filter is clean.

Pre-Operation Check List

1. **<u>Read all Operator's manuals supplied with sprayer thoroughly</u>**, before attempting to use this machine.
2. Read and follow instructions on chemical manufacturer's labels.
3. Always wear applicable protective clothing.
4. Check that all maintenance and setup procedures have been followed.
5. Check all plumbing and fittings to ensure they are tight, not damaged or leaking.
6. Check hydraulic connections are correct and not leaking.
7. Check oil level in diaphragm spray pump.
8. Check air pressure in the diaphragm pump air chamber is 70 – 100 kPa (10 -15 psi). As a guideline this air pressure should be approx 10% of spraying pressure.
9. Check the suction filter is clean. Thoroughly clean the suction filter after initial use.
10. Check the pressure filter(s) are clean. Thoroughly clean the pressure filter(s) out after initial use, and nozzles if necessary.

Check the pressure filter is clean.

NOTE

IMPORTANT: Clean the suction filter out 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 suction filter during first use.

NOTE

IMPORTANT: Clean the pressure filter out 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.

BA7000 psi adjust keys

Sprayer Control Panel

Adjust Pressure Relief Valve

Tank Drain Valve in Spray Position

Check the Spray Controller Operation

The Automatic Spray Rate Controller controls all aspects of the spray rate application, within the given set of operating parameters applicable to nozzle selection.

To operate the Spray Rate Controller:

i. Connect Pegasus to the tractor (refer to instructions pages (2.10 – 2.15).

ii. Fill with an appropriate quantity of clean water into the spray tank (refer to instructions pages (3.2 – 3.3).

iii. Set the pump suction valve to “Spray” position (refer to Operator Panel Quick-start Guide).

iv. Set the yellow re-circ valve to “Spray”.

v. Set the Spray/Boom Flush switch to “Spray”.

vi. Set the Bypass Valve to “Spray”.

vii. Follow the instructions in the Spray Rate Controller instruction manual to calibrate and operate the controller.

⚠ WARNING

Do not have pesticides in the spraytank when checking the sprayer.

viii. Ensure the Spray Rate Controller is switched on and in „MANUAL“ mode, with the master switch to the „HOLD“ position.

ix. Engage the applicable hydraulic remote lever to operate the spray pump.

All liquid currently being pumped is passed through the Bypass Valve and back into the tank. The system is not pressurized and the tank agitators are not working.

x. Switch all boom sections on and switch the controller to the „RUN“ position. Water should now be flowing out the nozzles.

xi. Use the “ ^ “ up arrow to increase the system pressure to the maximum (this should take a few seconds)

xii. When the maximum pressure is reached, adjust the manual pressure relief valve setting to the maximum required pressure setting (approx 2 bar above desired spraying pressure). We recommend the maximum working pressure be set at 8 BAR (120 psi).

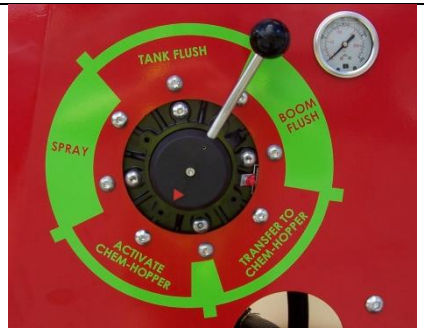
xiii. Use the “ v “ down arrow to reduce the pressure to normal spraying pressure 2 – 4 BAR (30 – 60 psi)

NOTE

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

BA7000 Operator's Manual

Tank Agitator valves in the "OFF" position



Operation Valve to Activate Chem-Hopper

Fill Chem-hopper Valve

xiv. Check the tank agitator valves are open, and visually check that both tank agitators are working.

xv. Turn the controller master switch ON & OFF to confirm that all boom sections are working.

xvi. Turn the fenceline*(if fitted) nozzle ON & OFF to confirm that it is working correctly. NOTE: The relative boom section to which the fenceline nozzle is fitted will also need to be turned ON.

xvii. Whilst water is being pumped through boom and spraying out nozzles, check for any leaks or blockages throughout the sprayer.

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

Confirm all nozzles are operating correctly.

Rectify any problems.

xviii. On completion of checking the spraying operation, place the master switch and boom switches in the OFF position.

xix. Whilst the pump is still running, it is recommended to check the operation of the Chem-hopper (for detailed instruction on chem.-hopper operation refer to page 3.22).

xx. Set the Spray/Boom Flush switch to "Boom Flush".

xxi. Set the Operation Valve to "Activate Chem-Hopper".

xxii. Fill Chem-hopper with water.

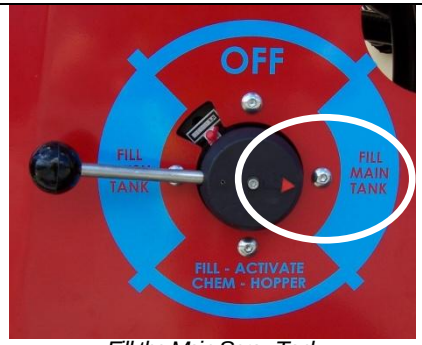
xxiii. Open Chem-hopper drain valve to confirm venturi suction is working.

xxiv. On completion of checking the sprayer, disengage the applicable hydraulic lever to stop the spray pump, and ensure the Spray Rate Controller is switched OFF.

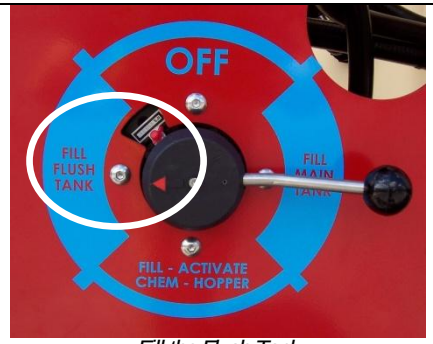
Chem-hopper drain valve

Open the main tank lid for top filling


Ensure Bottom Fill filter is clean



Fill the Main Spray Tank



Fill the Flush Tank

Filling the Pegasus Tanks

The Pegasus 8000 has three water tanks fitted.

1. The Main Spray Tank can be filled either through the tank lid or using the bottom filling system.
2. The Flush Tank is recommended to be filled through the bottom filling system as access to the tank lid may be difficult.
3. The Fresh Water (hand wash) Tank can be filled through the fresh water tank lid.

Use clean, fresh water (preferably rainwater), free of suspended organic matter or clay, as some chemicals are de-activated when they contact these materials.

Always calculate the correct water quantity required, and when filling, allow sufficient water for adding and mixing chemicals. If necessary top up the tank to required quantity after adding chemicals.

Bottom Filling

The bottom-fill facility requires a pressured water source and can be used to fill the main spray tank, flush tank and provide filling water to activate the chem-hopper whilst continuing to fill the main spray tank.

To fill tanks using the bottom fill:

A) Clean the bottom fill filter

B) Connect the filling hose to the bottom fill inlet connector

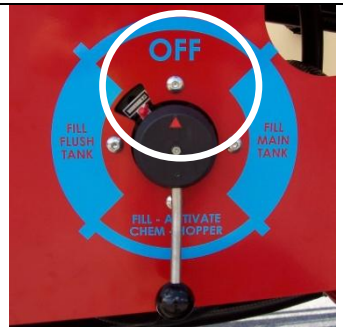
C) Rotate the selector lever of the “FILLING VALVE” so the red arrow is pointing to the “Fill Main Tank” position.

Fill the main spray tank with the required amount of water.

D) Rotate the selector lever of the “FILLING VALVE” so the red arrow is pointing to the “Fill Flush Tank” position.

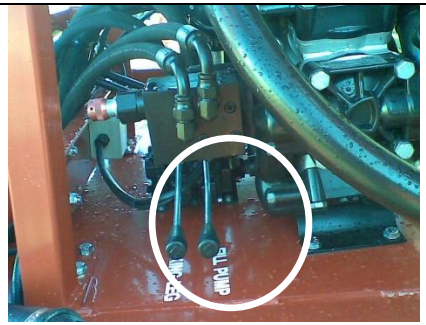
Fill the flush tank with water.

Activate the Chem-Hopper



Turn the Filling Valve OFF

Fill Pump & Fill Flowmeter (optional)



Lever for Fill Pump operation (if fitted)

E) Rotate the selector lever of the "FILLING VALVE" so the red arrow is pointing to the "Fill-Activate Chem-hopper" position.

This position activates the venturi for the chem-hopper and also supplies filling water to the fill, rinse and drum rinse features of the chem-hopper.

Filling water passes through the venturi and into the main tank when this position is selected.

Add the chemical as required to the chem-hopper (refer to page 3.22 For chem.-hopper operation).

F) Rotate the selector lever of the "FILLING VALVE" so the red arrow is pointing to the "Off" position.

This position shuts the filling valve.

G) Disconnect the filling hose and replace the bottom fill inlet cap.

Operating the *Optional* Filling Pump

A) Connect your filling hose from the water source (tank, filling station, dam etc) to the camlock coupling of the pump inlet.

B) Ensure the filling pump is primed with water prior to engaging the hydraulic lever.

C) Engage the applicable tractor hydraulic lever, ensure the required position is selected on the "Filling Valve" and then engage the "Fill Pump" hydraulic lever on the sprayer.

D) Fill tanks as required as per previous instruction.

E) When filling is complete, disengage the "fill Pump" hydraulic lever, disconnect the filling hose and replace the pump inlet camlock cap.

Warning

Do not run the fill pump dry. Damage to pump seal will result.

Optional Orion Filling Flow-meter

Fill the Fresh Water Tank

Operating the Orion Filling Flow-meter

Power is supplied from the sensor power supply of the main spray rate controller, so no additional power is required.

EU=litres/min
US=Gallon/min

Changing Mode

A) If the setting must be changed, hold down both keys until the SEt screen appears

B) Press one of the two keys to change the working mode

C) Confirm choice by holding down both keys until the SAUE screen appears

The Orion Filling Flow-meter should be set in **MODE 1** for easiest operation. This allows the unit to be used as a 'flow-rate' reader as well as a 'total flow' meter.

Changing Unit of measurement

A) Press one of the keys until the un lt screen appears

B) Press one of the two keys to change the working mode

C) Confirm choice by holding down both keys until the SAUE screen appears

Fill the sprayer from the filling pump or your filling station. Instant flow reading can be indicated or total flow reading.

Top Filling the Fresh Water (hand-wash) Tank

The Pegasus includes a 35 litre fresh water tank for personal safety when operating the sprayer in the field.

Always fill the fresh water tank before spraying.

To fill the fresh water tank:

A) Unscrew the tank lid.

B) Fill the tank using only clean, fresh water.

C) Replace & tighten the lid after filling.

WARNING

Always wear protective gloves when cleaning filters containing toxic chemicals.

Clean the bottom-fill filter regularly

Clean the suction filter regularly

Lever for Pump Suction Valve

Cleaning Filters

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

The Pegasus is fitted with five filtration points as standard:

1. Main Tank Basket Filter (18mesh)
2. Filling Filter (32mesh)
3. Suction Filter (50mesh)
4. Pressure Filter (80mesh)
5. Nozzle Filters (50mesh)

There are also optional boom section in-line filters available.

Always ensure the basket filter is in place when filling the main tank through the lid.

All filters should be cleaned regularly or after each spraying period

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

Bottom-Fill Filter

The bottom fill filter should be cleaned before each filling of the sprayer.

To clean the bottom-fill filter:

1. Completely stop all sprayer operations.
2. Rotate the selector lever of the 'Filling Valve' so the red arrow is pointing to the "OFF" position.
3. Unscrew the filter bowl retaining ring, and remove the filter screen.
4. Thoroughly clean the screen and bowl before re-assembling the filter.

Suction Filter

The suction filter should be cleaned regularly or after each spray tank has been emptied.

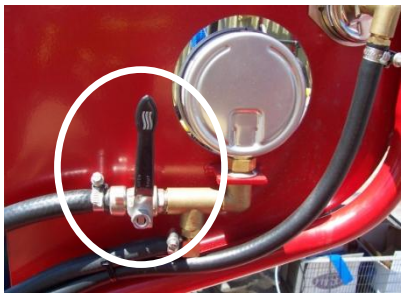
To clean the suction filter:

1. Completely stop all sprayer operations.
2. Rotate the selector lever of the "Pump Suction Valve' so the red arrow is pointing to the "OFF" position.
3. Open the drain valve on the filter housing to break the vacuum and drain filter.
4. Unscrew the filter bowl retaining ring, and remove filter screen.
5. Thoroughly clean the screen and bowl before re-assembling the filter.
6. Close the filter drain valve, and return the "Pump Suction Valve" to the required position.

NOTE

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

Clean pressure filter regularly



Remove pressure from spray system with Gauge Drain Valve

Clean nozzle filters regularly

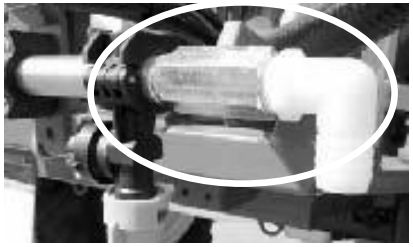
Clean optional boom section filters (if fitted)

Pressure Filters

The pressure line filter should be cleaned regularly, or after each spray tank has been emptied.

To clean the pressure filter:

1. Completely stop all sprayer operations and ensure the spray rate controller is in the “hold” position.
2. Ensure there is no pressure in the pressure line (open drain valve on the main pressure gauge to remove pressure).
3. Unscrew filter bowl retaining ring and remove filter screen.
4. Inspect the screen for damage.
5. Thoroughly clean the screen and bowl before re-assembling the filter.



Open boom line drain taps to remove

NOTE

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

NOTE

In some circumstances you may find the nozzle filters are best not used.

If your nozzle filters continuously block, check that your main pressure filter is not torn or that the product you are using is not the cause.

Nozzle Filters

Nozzle filters should be cleaned regularly and when nozzle spray pattern is affected by blockage.

To clean the nozzle filters:

1. Completely stop all sprayer operations and ensure the spray rate controller is in the “hold” position.
2. Ensure all pressure is removed from spray lines by opening the boom line drain valves.
3. Remove nozzle cap with nozzle and nozzle filter.
4. Thoroughly clean nozzle filter and nozzle if required before re-fitting the nozzle filter, nozzle and cap.

Boom Section Filters (if fitted)

Each boom section can be fitted with an optional in-line boom filter, which should be cleaned regularly or after each spray tank has been emptied.

To clean the boom section filters:

1. Completely stop all sprayer operations.
2. Ensure all pressure is removed from the spray lines by opening the boom line drain valves.
3. Unscrew filter bowl retaining ring and remove filter screen.
4. Inspect the screen for damage.
5. Thoroughly clean the screen and bowl before re-assembling the filter.

Front and Rear Tank agitators fitted standard

Sparge tube fitted in main tank

Spray mode with re-circ lever (yellow arrow) to Spray diverts flow to the Sparge Tube

Spray mode lever to Boom Flush isolates sparge tube and diverts flow to the pump suction

Tank Agitation

When chemical is added to the spray tank, the pump and agitators must be operating at all times to ensure chemical does not settle.

The Pegasus is fitted with a front and rear venturi type agitator, along with a re-circulating 'sparge' tube for additional tank bypass agitation.

If agitation causes too much foaming in the tank, try closing off one of the venturi agitator's to reduce foaming.

Sparge Tube Agitation

The sparge tube distributes bypass flow from the sprayer servo valve along the bottom of the main spray tank.

The bypass flow from the servo can also be returned through the pump suction filter, if the flow is not wanted back to the main tank during some sprayer operations (see Boom Flush mode page 3.10).

Re-circulating Flow (Yellow Arrow Lever)

The return flow from the servo valve can be directed either through the sparge tube for additional agitation, or, 're-circulated' back through the pump suction.

To operate the 're-circ' valve:

1. Rotate the selector lever of the "PUMP SUCTION VALVE" so the yellow arrow points to the "Spray" position.

   This diverts all bypass flow from the servo valve through the sparge tube.

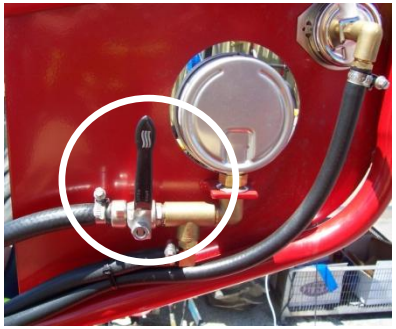
2. Rotate the selector lever of the "Pump Suction Valve' so the yellow arrow is pointing to the "Boom Flush" position.

   This diverts all bypass flow from the servo valve to the spray pump suction, thus isolating the tank from any return flow through the sparge tube.

Open the tank drain valve to drain the main spray tank.

Pump suction valve (red arrow) to 'Flush' and Re-circ valve (yellow arrow) to 'Spray'

'Operation Valve' to 'Tank Flush' position



'SPRAY' gauge line flush tap

Flushing the Pegasus

The Pegasus 8000 is equipped with a flush tank for cleaning the sprayer when changing chemicals, and at the end of the spraying day. For the separate "Boom and System Flush" only refer to page 3.21.

1. Ensure the site for flushing and cleaning the Pegasus meets with environment and statutory regulations.
2. Open the tank Drain Valve to drain any remaining spray mixture from the tank.
3. Fill the Flush tank with water.
4. Rotate the selection lever of the 'Pump Suction Valve' so the "Red" arrow is pointing to the 'FLUSH' position.
5. Rotate the 'Re-circ Valve' so the "Yellow" arrow is pointing to the 'SPRAY' position. (This diverts bypass flow to the sparge tube).
6. Rotate the 'Operation Valve' to the 'TANK FLUSH" position.
7. Ensure the 'SPRAY/BOOM FLUSH' switch is in the 'BOOM FLUSH' position.
8. Start the tractor and place sprayer controls in start up position according to Controller operating instruction.
9. Unfold the boom and activate all sections – at this point there will be no discharge from nozzles as further operator panel operations required.
10. Engage product pump hydraulic control to start product pump.

NOTE

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

All pumped liquid is now being discharged into the tank through the tank rinse nozzles and agitators (with 'Agitator Lever Valves' in the on position).

11. Rotate the 'Operation Valve' lever to the 'SPRAY' position, which will flush through the 'sparge tube'.
12. Rotate the selection lever of the 'Re-circ Valve' so the "Yellow" arrow is pointing to the 'BOOM FLUSH' position. (This will return bypass flow through the pump suction).
13. Rotate the 'Operation Valve' lever to the 'ACTIVATE CHEM-HOPPER' position, this will enable the chem-hopper to be flushed (refer to chem.-hopper operation on page 3.16).
14. Rotate the 'Operation Valve' lever to the 'BOOM FLUSH' position, which will direct flow through the spray tubes.
15. Whilst flushing spray tubes and nozzles, open drain valve at rear of 'SPRAY' pressure gauge to flush the gauge line.
16. Manually open each boom spray tube flush tap individually to flush boom spray tubes.
17. On completion of flushing, shut down all controls and disengage spray pump hydraulic control.
18. Remove and clean the suction filter and screen, then reassemble.
19. Remove and clean the pressure filter and screen, then reassemble.
20. Remove and clean the boom section filters and screens, then reassemble.
21. Adjust valves/switch back to 'SPRAY' mode and close drain valves.
22. Wash down the outside of the sprayer and boom.

Nufarm Tank and Equipment Cleaner.

Agitators in the 'ON' position

Clean suction filter

Clean main pressure filter

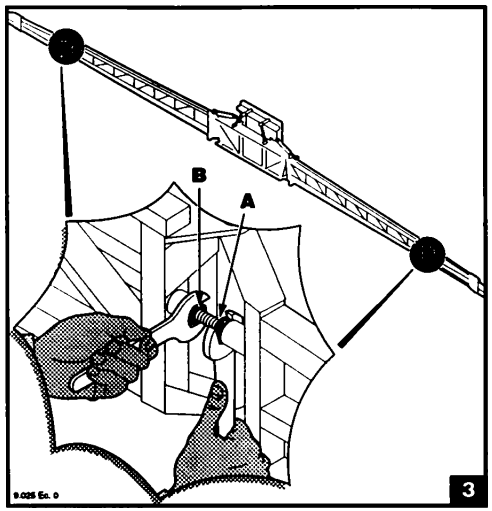
Using Tank and Equipment Cleaners

If a cleaning agent is required (refer to chemical label)), first completely flush the Pegasus with fresh water as outlined in steps 1 – 21 on page 3.8, then:

1. Fill the spray tank with fresh water to the desired level.
2. Add cleaning agent into the spray tank (use according to instructions on label).
3. Confirm the sprayer 'Operator Panel' is set up to the 'SPRAY' position (refer 'Quick Start Guide).
4. Check the Agitator valves are open.
5. Complete steps 5 – 19 as per page 3.8.
6. If you require the cleaning agent to 'soak' or stand' for a period, completely shut down the sprayer for this period.
7. Repeat steps 9 – 15 after soaking period is completed.
8. On completion of flushing, shut down all controls and disengage spray pump hydraulic control.
9. Open the spray tank 'Drain' valve.
10. After the tank is drained, completely flush the Pegasus as per steps 1 – 21 on page 3.8.

NOTE

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



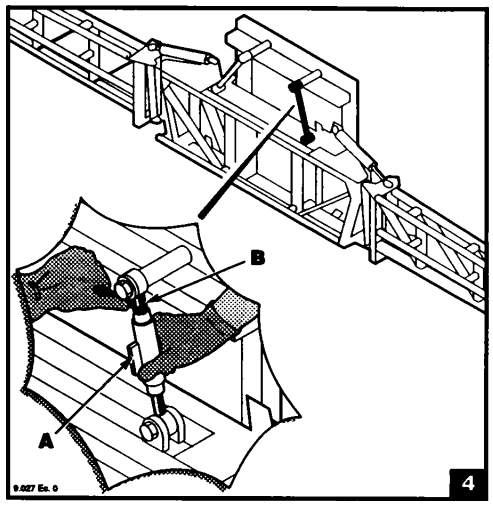
2 Wing Extension Alignment

After inner wing alignment is completed, align the wing extensions by:

1 Loosening the lock nuts B, shown in figure 3 above.

2 Tighten or loosen adjusting screws (A) until the wing extensions are aligned with the inner wings.

3 Tighten lock nuts (B), after alignment is finalised.



3 Balancing Device Alignment

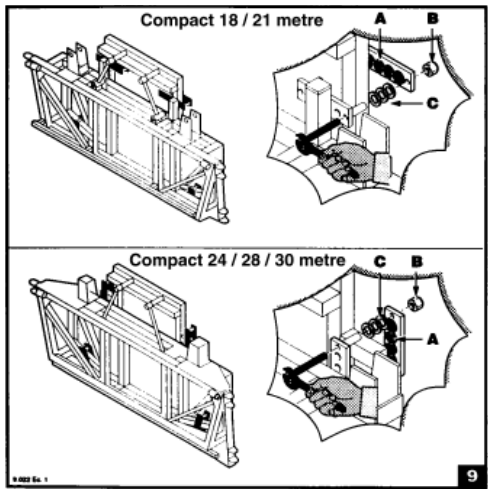
The boom is fitted with an adjustable connecting rod which allows the boom to tilt 0° ± 3° on the horizontal axis.

Adjust the boom to the require horizontal plane by:

1 Loosening the lock nuts (B,) shown in figure 4 above.

2 Turn the turnbuckle (A) as required.

3 Tighten the lock nut (B).



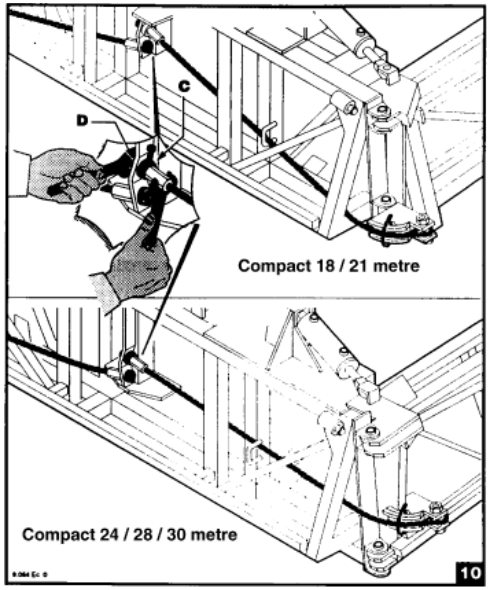
4 Backlash Between Sliding

The balancing device oscillation must be adjusted so that the surfaces slide freely and without backlash.

To eliminate backlash:

1 Tighten nuts (B), shown in figure 9 above.

2 If necessary, depending on wear of sliding pads (A), remove spring sections (C) as needed to take up the wear and remove backlash.



5 Locking the Balancing Device Adjustment

The ropes of the wing balancing device must be tight.

To adjust the balancing device:

1 Fold the wings to transport positon

2 Tighten the ropes by adjusting the nuts (D), shown in figure 10 above.

3 Move the lock (C) closer and lock it with its screw.

Boom Adjustment - 36m

Take the pressure off the boom by nudging the boom forward.

Boom Adjustment - 36 metre

To adjust the boom alignments on your 36 metre boom on the Pegasus, follow the instructions.

These instructions are for adjustments you can do as the spring tensions change over time.

Not all steps may be necessary, but it is a good idea to check them as you make adjustments as required.

To adjust the boom:

Adjust the nut, until the desired level is found.

Step 1: Horizontal Leveling

Take the pressure off the boom *(as shown above left)* using a forklift or other lifting mechanism. Make sure this is done on ground which is as level as possible.

a) First, adjust the main Boom arm Rod or Hydraulic ram *(shown above)* to set the boom to level.

For a G-Var wing lift boom, this is done by turning the large self locking nut with a large spanner on the spring end as shown until desired level is met.

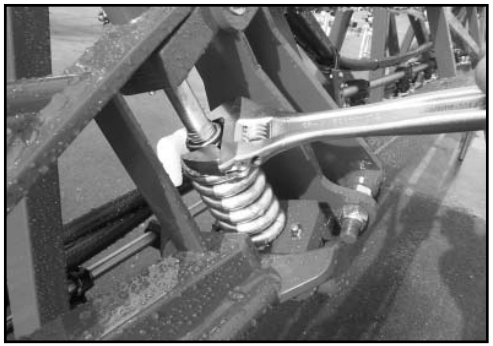
Adjust the sleeve until the boom is at the desired level, then re-lock the lock nut to secure in place.

You will need to have the hydraulic rams at maximum length to ensure an accurate setting.

For standard booms adjust the nut in the same place *(as shown above left)*, until the desired level is found.

b) Secondly, relieve the weight from the boom. This adjustment is done using a turnbuckle. Unlock the lock nut so it is free from the sleeve.

Using a large spanner, adjust the sleeve until the boom is at the desired level, then re-lock the lock nut to secure in place *(as shown above).*

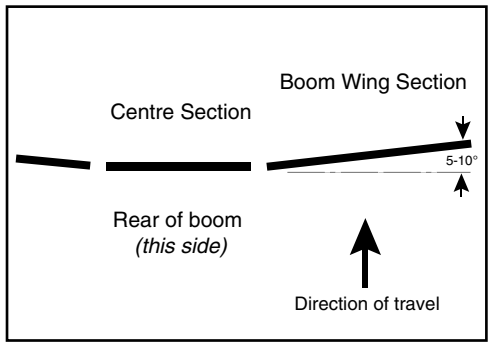


Finally, adjust the breakaway arm to the desired breakawaypressure.

c) The final horizontal adjustment is the breakaway arm. Adjust this to the desired breakaway pressure.

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

NOTE
Leave hydraulic pressure on extension side of ram to assist preventing rod from turning during adjustment.



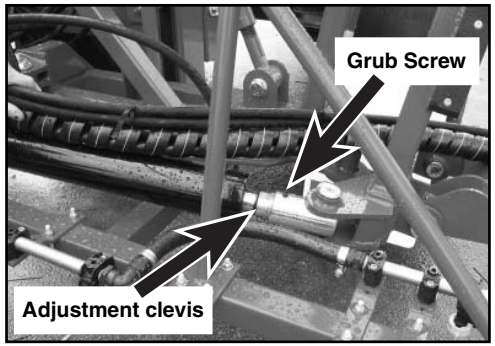
Ensure the boom wing is slightly forward in relation to the centre section (approx 5-10 degrees).

Step 2: Yaw adjustment

The second step towards accurately adjusting your boom is to set where the boom sits when fully opened into the spraying position.

This is the Yaw adjustment which means it is adjusted on a vertical axis or pivot point, setting the boom in a forward or backward direction.

The ideal position for each wing is slightly forward (approx 5-10 degrees) of the centre section *(as shown in the diagram above)*.



Remove the grub screws & adjust the clevis, then, return the grub screws to lock the setting in place.

a) Adjust the clevis on the rod end of the inner fold ram at the centre section to bring the boom forward into desired position.

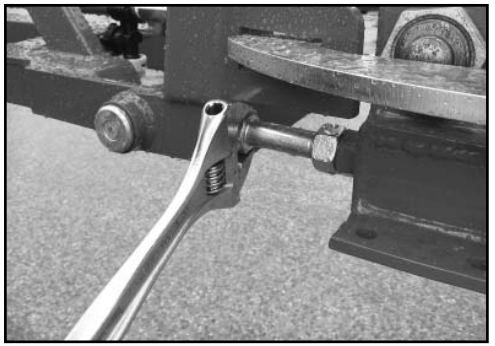
Firstly, you will need to relieve the pressure on the rams by loosening the ram fittings on one cylinder and releasing some oil.

Remove the grub screws and adjust the clevis to set the boom Yaw position.

Return the grub screws to lock the setting in place *(shown above)*.

⚠ CAUTION

When releasing oil from and cylinders, be sure to cover the fittings with a cloth to prevent oil from spraying out, as it is hazardous.



Set the bolt stopper to stop the boom at the position required.

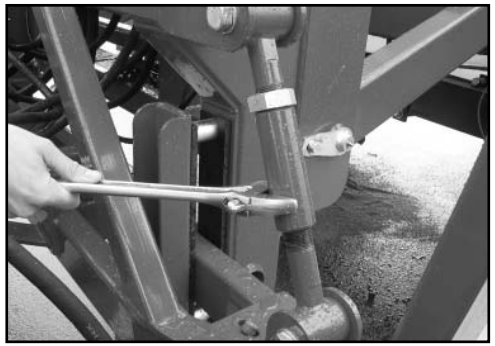
b) The next adjustment in the outer fold pivots is just a matter of winding out and locking the bolt in place as shown.

Set the bolt stopper to stop the boom at the position required *(shown above).*

Lock the nuts in place when set correctly.

c) Set the breakaway position by tightening and loosening the matching bolts on either side of the boom.

Lock the nuts in place when set correctly *(shown above)*.



Adjust the turnbuckle sleeve until the centre section is level.

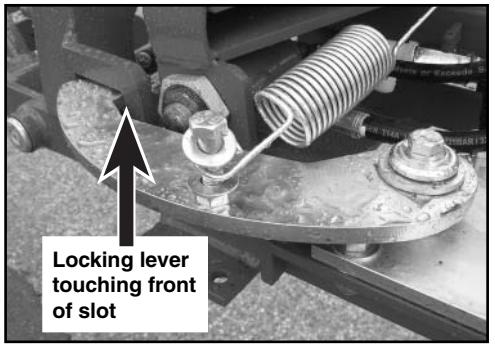
Step 3: Boom tilt adjustment

The next setting is the tilt adjustment which dictates the level position of the booms and centre section as a whole. This is very important to get right so that the centre section is level before spraying.

To adjust undo the lock nut on the turnbuckle.

Adjust the turnbuckle sleeve *(as shown above)* until the centre section is level.

Lock the nut back in place to secure the setting.

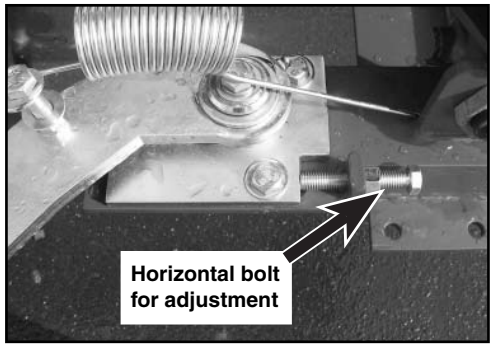


When locked the hook part of the locking lever should be in contact with the front edge of the slot.

Step 4: Outer arm locking plate

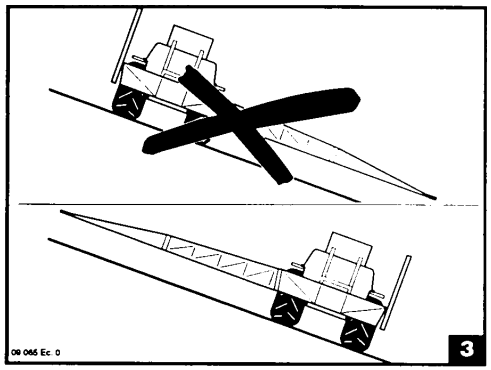
The final setting is the outer arm locking plate. This is to keep the boom locked in place while spraying.

When locked the hook part of the locking lever should be in contact with the front edge of the slot *(as shown above)* to ensure no movement during spraying.



Loosen the lock nuts and then adjust the horizontal bolt to position the plate in the correct setting.

To adjust this, loosen the lock nuts and then adjust the horizontal bolt *(shown above)* to position the plate in the correct setting.



Boom in raised position.

Boom in lowered position.

Unfolding & folding the Spray Boom

Understand the safety precautions below before operating the folding mechanism of the spray boom.

DANGER - WARNING:

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

CAUTION:

If working on steep terrain, please note the following:

- Lock the balancing device (if the unit is provided with hydraulic locking).
- For vehicle stability, always unfold the up hill side boom before unfolding down hill side boom, see figure 3 above .
- For vehicle stability, always fold the down hill side boom before folding up hill side boom.
- Never operate with the down hill side boom lowered and up hill side boom folded.

To operate the boom:

1 Use the tractor remote controls to fold and unfold the spray boom.

2 Use the tractor remote controls to raise and lower the spray boom height as required.

WARNING

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

CAUTION

If working on steep terrain, please note the following:

- ***Lock the balancing device (if the unit is provided with hydraulic locking).***
- ***For vehicle stability, always unfold the up hill side boom before unfolding down hill side boom, see figure 3 above .***

CAUTION

If working on steep terrain, please note the following:

- ***For vehicle stability, always fold the down hill side boom before folding up hill side boom.***
- ***Never operate with the down hill side boom lowered and up hill side boom folded.***

Accurately measure the amount of chemical

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 required using the following formula:

   Chemicals required (litres) = Tank Volume (L) x Recommended Chemical Rate (L/Ha) ÷ Spray Application Rate (L/Ha)

   eg. [4000 x 3] ÷ 50
   = 240 litres

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

   Tank Volume Required (litres) = Area (Ha) x Spray Application Rate (L/Ha)

   eg. 300 x 50
   = 15,000 litres

3. **For area covered by given volume of mixture,** calculate the area using the following formula:

   Area Covered (Ha) = Tank Volume (litres) ÷ Spray Application Rate (L/Ha)

   eg. 4,000 ÷ 50
   = 80 hectares

NOTE

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

Unlock the Chem-hopper with latch handle

Lower chem-hopper to filling position

'Fill Valve" to 'FILL - ACTIVATE CHEM-HOPPER'

Adjust the 'Hopper Fill' valve as required

Adding Chemical To Spray Tank

Chemical can be added to the spray tank using the chem-hopper, and/or if fitted, the optional Chemical Probe using either the Filling System or the Sprayer Product Pump.

1. Use Fill System and Chem-hopper

To add chemical to the spray tank using the filling system to operate the chem-hopper as follows:

a) Connect filling hose to the fill system or to the optional fill pump.
b) Rotate the 'Fill Valve' lever to the "FILL – ACTIVATE CHEM-HOPPER' position.
c) Unlock the chem-hopper drown down leg by pulling the latch lever. Hold onto the handle and pull chem-hopper out and down to the filling position.
d) Activate the filling pump and commence filling main spray tank. The chem-hopper now has water available from the filling pump.
e) Open chem-hopper lid and add chemical powder/liquid to the hopper.
f) If required open the 'Hopper Fill' valve as necessary to provide water for mixing chemical in the chem-hopper.

Open chem-hopper transfer valve

g) Once desired amount of chemical powder/liquid is added to the chem-hopper, open the transfer valve at the bottom of the chem-hopper. Chemical is now transferred directly into the main tank via the chem-hopper venturi system.
h) To rinse the chem-hopper, close the 'Hopper Fill' valve. Close the chem-hopper lid and then activate the 'Hopper Rinse' valve.
i) After rinsing is complete, close the 'Hopper Rinse' valve and then open chem-hopper lid.
j) Once chem-hopper is empty, close the chem-hopper transfer valve and the chem-hopper lid.

NOTE

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

k) Lift the chem-hopper back into the transport position ensuring the latch locks the chem-hopper in the upper position.
l) Rotate the 'Fill Valve' lever to the 'FILL MAIN TANK' position and continue filling the spray tank to the desired level.

Activate "Hopper Rinse" valve to flush hopper

Pump suction valve (red arrow) to 'Spray' and Re-circ valve (yellow arrow) to 'Spray'

WARNING

The water used to operate the chem-hopper with the spray pump may contain chemicals. Ensure proper safety precautions are taken to avoid chemical contact

'Operation Valve' to 'ACTIVATE CHEM-HOPPER' position

Move switch to 'BOOM FLUSH' position

Adding Chemical To Spray Tank cont,.

2. Use Product/Spray Pump and Chem-hopper

To add chemical to the spray tank using the product pump spray system to operate the chem-hopper as follows:

a) Make sure there is sufficient water added to the main spray tank.
b) Rotate the 'Suction Valve' lever so the red arrow is pointing to the "SPRAY' position.
c) Rotate the 'Re-circ Valve' so the yellow arrow is pointing to the 'SPRAY' position
d) Rotate the 'Operation Valve' lever to the 'SPRAY' position.
e) Ensure the switch is in the 'BOOM FLUSH' position.
f) Start the tractor and engage product pump hydraulic control to start product pump.
g) Unlock the chem-hopper drop down leg by pulling the latch lever. Hold onto the handle and pull chem-hopper out and down to the filling position.
h) Rotate the 'Operation Valve' lever to the 'ACTIVATE CHEM-HOPPER' position.
i) Repeat steps "e – k" from previous page (3.16).

NOTE

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

j) Rotate the "Operation Valve' to 'SPRAY' position.
k) Return switch to the 'SPRAY' position.

Connect Probe and Probe Rinse

Open Probe valve to transfer mixture to spray tank

Close probe valve

Adding Chemical To Spray Tank cont,.

3. Use Optional Chemical Probe

Chemical can be added to the main tank using the optional Chemical Probe by connecting the Probe and Probe rinse connectors to the connectors on the hopper and then using either **1) Filling Pump Mode** by following steps a – d on page 3.16 or **2) Product Pump Mode** following steps a – h on page 3.17 as follows:

i. Connect the Probe and Probe rinse connectors to the connectors on the hopper.
ii. Repeat steps depending on mode of operation as per above
iii. Place the probe in the chemical container and open the probe valve to transfer chemical into the spray tank.
iv. Use the Probe Rinse gun to rinse the container while the Probe valve is open.

NOTE

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

v. Close the Probe valve when the chemical transfer is completed.
vi. Lift the chem-hopper back into transport position ensuring the latch locks the chem-hopper in the upper position
vii. Follow steps for **1) Filling Pump Mode** by following steps 'l)' on page 3.16 or **2) Product Pump Mode** following steps 'j) – k)' on page 3.17 to return to spraying position.

⚠ WARNING

The operator must not leave the Enviro-transfer kit unattended while filling. Over-filling and chemical spillage could result if the unit is unattended during the transfer process.

The system is only suitable for liquid transfer.

Connect Enviro hose to CHEM-PROBE

Unclip Micromatic coupler from docking point

Clip the Micromatic coupler to the Envirodrum

Adding Chemical To Spray Tank cont,.

4. Use Optional Enviro-Transfer Coupler

The Enviro-transfer kit is a volumetric filling system designed to transfer chemicals directly from Envirodrums into the Chem-hopper on the Pegasus using the sprayer product pump.

Pump speed required to operate the Enviro transfer option is approx 350rpm.

Pump speed can be controlled following instructions on page 2.11.

Remember to return the pump to normal operating rpm after chemical transfer is complete.

Ensure the Enviro coupler hose is connected to the camlock of the Chem-Probe connection on the Operator Panel

1) Follow steps “a) – f)” on page 3.17

2) Unclip the Micromatic coupler from the docking (rinse) fitting on the sprayer and clip it onto the envirodrum containing the chemical you intend to use.

⚠ CAUTION

Do not operate the pump at full speed when filling with the Enviro-transfer, otherwise damage to plumbing may result.

3) Simultaneously operate the Pump Suction Valve lever (red arrow) and the Operation Valve lever as follows:
   a. Rotate Suction Valve to ‘CHEM-PROBE’ position
   b. Rotate Operation Valve to ‘TRANSFER TO CHEM-HOPPER’ position.

Chemical will **immediately** begin to be transferred into the Chem-hopper.

4) Once the desired volume of chemical is transferred into the chem-hopper, simultaneously operate the Pump Suction Valve lever (red arrow) and the Operation Valve lever as follows:
   a. Rotate Suction Valve to ‘SPRAY’ position
   b. Rotate Operation Valve to ‘ACTIVATE CHEM-HOPPER’ position.

Chemical can now be transferred from the chem-hopper into the main spray tank.

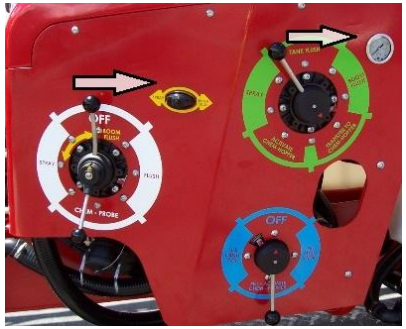
5) Follow steps “g) – i)” on page 3.16 to transfer chemical from chem-hopper to spray tank.

NOTE

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

Unclip Micromatic coupler from Envirodrum

Connect Micromatic coupler to Docking point for rinsing



Simultaneously rotate Suction & Operation Valve

⚠ WARNING

The operator must not leave the Enviro-transfer kit unattended while filling. Over-filling and chemical spillage could result if the unit is unattended during the transfer process.

The system is only suitable for liquid transfer.

4. Use Optional Enviro-Transfer Coupler cont.,

Chemical can now be transferred from the chem-hopper into the main spray tank.

6) Unclip the Micromatic coupler from the Envirodrum and clip it back into the docking fitting, ensuring it is fully located.

The docking fitting has a flushing hose plumbed direct to the flushing fresh water tank.

⚠ CAUTION

Always flush the Micromatic fittings & hose with fresh water after each use to avoid any future contamination.

7) By rotating the two valve levers simultaneously back to the chemical transfer position [refer step 3) on page 3.19] for approximately 30 – 60 seconds, you can flush the Micromatic couplers and hoses with fresh water.

This is imperative to avoid any future contamination.

8) After rinsing is complete rotate to valve levers back as per step 4) on page 3.19.

9) Once chemical transfer is complete:
   a. Rotate Operation Valve to SPRAY position
   b. Switch back to SPRAY position.
   c. Adjust product pump back to normal operating rpm
   d. Lift the chem-hopper back into the transport position ensuring the latch locks the chem-hopper in the upper position.

NOTE

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

NOTE

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

Suction valve to FLUSH, Re-circ to BOOM FLUSH

Switch to BOOM FLUSH

Operation Valve to BOOM FLUSH

Flush Boom & Spraying system

The Pegasus is equipped with a feature that enables the spraying lines and spraying system to be flushed with fresh water whilst not returning any additional flush water to the main spray tank.

Leaving product standing in the main spray tank may cause chemical settling issues and is not recommended though is sometimes necessary if weather or machinery problems means spraying needs to be interrupted without emptying the spray tank.

If spraying is interrupted and chemical mix is to be left in the main tank, it is recommended to flush chemical from the spraying system and boom lines to avoid premature wear or failure of components and seals in this system.

Flush the Spray Lines and System

1. Ensure the Flush Tank is full of clean water (refer page 3.2)
2. Rotate the Suction Valve lever so the red arrow is pointing to the ‘FLUSH’ position.
3. Rotate the Re-circ Valve so the yellow arrow is pointing to the ‘BOOM FLUSH’ position.
4. Switch to ‘BOOM FLUSH’ position.
5. Rotate the Operation Valve to the ‘BOOM FLUSH’ position.
6. Ensure Agitators levers are in the OFF position
7. Start the tractor and place sprayer controls in start up position according to Controller operating instruction.
8. Turn all boom section switches on and place run/hold to RUN, and controller to MANUAL mode to ensure all boom section valves are open.
9. Unfold the boom.
10. Engage product pump hydraulic control to start product pump.

NOTE

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

The pump will now be delivering water from the Flush tank out through the spray lines only.
All bypass flow is recirculated back through the suction side of the pump.

11. On completion of flushing, shut down all controls and disengage spray pump hydraulic control.
12. Clean all filters.
13. Rotate the Suction Valve lever so the red arrow is pointing to the OFF position. Leave suction valve in OFF position until spraying is to resume.
14. Adjust other valves and switches back to ‘SPRAY’ mode.

Air Reservoir and Compressor

Adjust to ride height with main tank 50% full

Loosen clamp on vertical rod to adjust

Air-ride Suspension

The Pegasus 8000 is fully equipped with Air-ride suspension, with air bags fitted to the axle and drawbar.

The Air ride system comprises a compressor, air reservoir, safety and regulating valves and switch, airbags and ride height levelling valves.

When filling the sprayer with water the air ride system automatically increases the pressure in the air bags to carry the extra load.

Conversely as the spray tank is emptied, the air ride system automatically decreases the pressure in the air bags adjusting to the lighter load.

Airbag Ride Height

The ride height of the axle airbags is factory preset to approximately 320mm from the top of the of the airbag to the bottom of the mounting plate on the axle.

Ride height under load should be between 300 – 320mm.

This will need to be set prior to operation as air is exhausted from air bags prior to transporting.

Air Ride Valve Operation

The air ride valves operate by increasing or decreasing air pressure in the airbags to compensate for load.

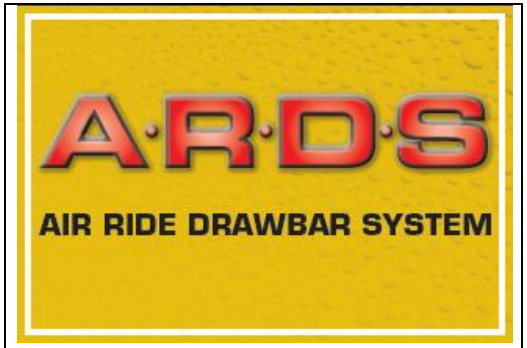
Airbag Ride Height Adjustment

To raise (increase pressure in) an airbag:

1. Slacken the clamp on the rubber bush on the vertical valve rode, and
2. Raise the end of the horizontal rod slightly (approx 20mm). Air will be heard entering the bag through the valve.
3. When the ride height of both bags is even and at desired position, adjust the rod through the rubber bush to horizontal and tighten the clamp.

To lower (decrease pressure in) an airbag:

1. Slacken the clamp on the rubber bush on the vertical valve rode, and
2. Lower the end of the horizontal rod slightly (approx 20mm). Air will be heard exhausting the bag through the valve.
3. When the ride height of both bags is even and at desired position, adjust the rod through the rubber bush to horizontal and tighten the clamp.



Air ride draw bar provides unparalleled ride

Draw bar air bag fitted at rear of drawbar

Air pressure regulator for drawbar air bag

ARDS Drawbar Suspension

The Drawbar is equipped with an airbag along with shock absorber and rubber bump stop to provide unparalleled ride for the Pegasus 8000.

As with the axle airbag suspension the drawbar airbag is fitted with a ride height leveling valve to maintain the set ride height during operation of the sprayer.

Airbag Ride Height

The ride height of the drawbar airbag is factory preset to provide approximately 30mm of clearance between the top of drawbar and the rubber bump stop located above top of drawbar.

This should be adjusted prior to operation and checked periodically..

Air Ride Valve Operation

The air ride valve is supplied with regulated air pressure, which the regulator needs to be preset at approx 40psi prior to adjusting ride height of drawbar airbag.

Adjust the ride height as per ride height adjustment on page 3.22.

Air Ride System

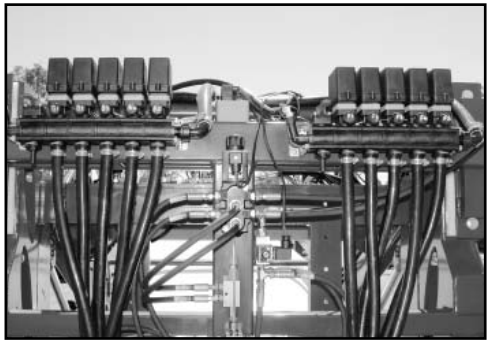
The Air Ride system is supplied air from a heavy duty 12 volt relay powered air compressor.

A 120psi pressure switch is fitted to prevent the system from over pressurizing by cutting power to the compressor, along with a safety valve fitted to the reservoir.

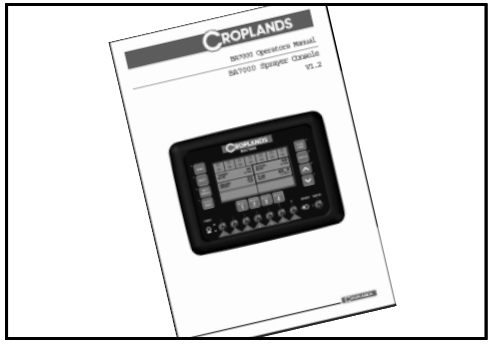
A drain valve is fitted to both the air reservoir and the front airbag and must be closed prior to operation of the air ride system.

The relay is powered direct from a 12 volt battery and is switched by activating the spray rate controller.

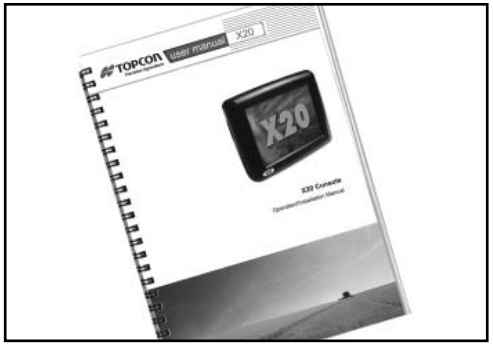
Dual lines on the boom.



Dual line valves at the rear of the sprayer.



The BA7000 Manual.



X20 Manual.

Dual Lines

If you have chosen dual lines to be fitted to your sprayer, you will be familiar with the use of this option on your Pegasus sprayer. In general terms, there are usually two reasons to have dual lines fitted:

1 To increase the boom output using the same speed setting by introducing a second boom line - this negates the need to change nozzles to perform this task, and

2 To increase the speed range available for your sprayer by having the second boom line cut in/out at a given speed.

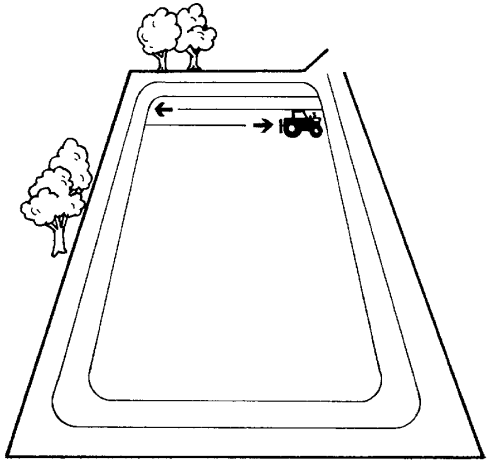
For the operation of dual lines, you will need the refer to the BA7000/X20 Controller booklet supplied with your Pegasus Sprayer for full calibration and operational information. Your BA7000/X20 controller will have been factory set to match the nozzles supplied and fitted to your Pegasus.

Operating Methodology for Broadacre Spraying

It is always preferable to spray travelling across the wind direction.

This minimises any drift effect caused by the wind especially with flat fan nozzles because the wind only hits the narrow end of the pattern rather than the full face of the fan spray.

It also maximises the effect of the wind forcing droplets downwards into contact with the target.



Travelling with the wind increases the tendency of spray droplets to float away from the target, and travelling against the wind effectively multiplies the force of the wind (depending on speeds) increasing drift and reducing target contact.

Proceed to Spray

Once the chemical mixture is in the tank, proceed to spray:

1 Adjust the pressure to the correct operating pressure by adjusting pressure (up or down) according to the instructions of the Controller.

2 Turn spray booms ON and OFF as required to spray according to the instructions of the controller fitted.

Refer to pages 2.19 - 2.20 for spray controller operating instructions.

Operating Pointers

While spraying, continually observe that:

1 Engine and Pump speed are correct.

2 Correct operating pressure is being maintained.

3 Ground speed is correct and within the operating range of the nozzles and application rates selected.

4 Pegasus spray heads are operating correctly and aimed toward the targeted foliage.

⚠ CAUTION

Running a diaphragm pump faster than specified will not improve performance, but will damage and wear out moving parts.

Warranty will be made void by speeds in excess of those indicated on the pump name plate.

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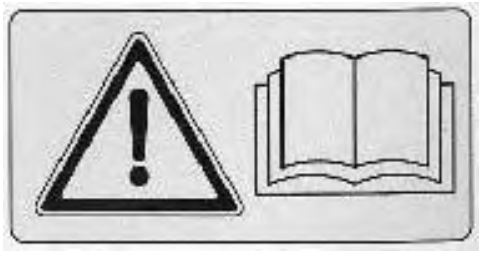
Proper calibration considers all spraying variables

BA7000 Automatic Rate Controller



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 variable 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.

The automatic spray rate controller measures and controls 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 chemical 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 and 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 Rate Controller

The fully automatic spray rate controller maintains the application rate (set by the operator) when operated in AUTO mode.

The controller monitors speed of travel (speed sensor) and flow rate (flow meter) and automatically adjusts flow rate (via a servo valve) to maintain correct application rate irrespective of speed variations within the limits of the nozzles used.

Important:

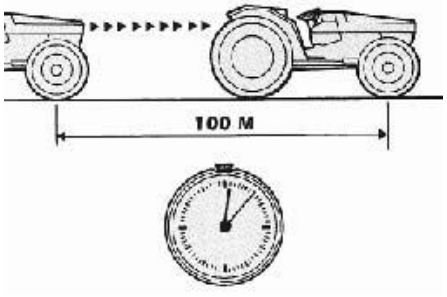
1. It should be remembered that the spray controller does not eliminate the necessity to measure and check the accuracy of nozzle spray patterns and outputs. These must be checked regularly to ensure correct and uniform application rates because nozzles will wear with use.

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

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

NOTE

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



Determine the actual speed of travel

Air-mix Nozzles fitted standard

Calibration Procedure

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 leakage and functioning properly.

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

Install, calibrate and operate the spray rate controller according to the spray controller Installation/Operation manual supplied separately.

Step 2:
Determining the Actual Speed of Travel

Your Pegasus has been factory set with a speed calibration number. This should be fine-tuned prior to commencement of spraying and checked by your dealer. This is done by travelling 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.

Step 3:
Measure Swath Width

The spray rate controller requires the boom width to be entered for each of the boom sections fitted to your sprayer.

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 5 nozzles = 2.5m

0.5m x 6 nozzles = 3.0m

0.5m x 7 nozzles = 3.5m

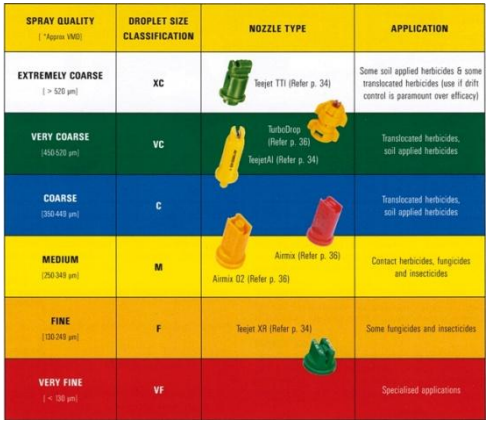
Step 4:
Select Nozzle Type & Size

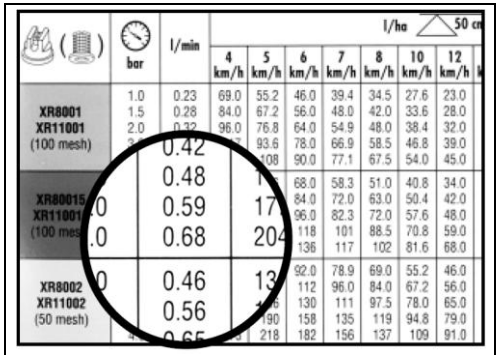
Select nozzle type and size according to:

- Chemical recommendations
- Application rate required
- Swath width
- Chosen speed of travel. (Use actual speed of travel for application)

Two methods of selecting nozzle output are:

1. Use the charts on pages 4.8 to 4.9 OR the manufacturer's nozzle chart
2. Calculate required nozzle flow rate.





L/min column on nozzle chart – courtesy Teejet

Ensure nozzle filter size suits nozzle

Step 4 continued;

1. **Use this manual's chart Or Nozzle Manufacturer's Chart.**

Using the charts on pages 4.8 to 4.9 OR the nozzle manufacturer's chart, reference:

- Application rate (eg 50 l/ha)
- Speed of travel (eg16 km/h)
- Spray Quality (eg coarse droplet)
- Pressure setting (eg 2.5 bar), find the nearest nozzle to suit your requirements.

Also confirm the speed variation available for the selected nozzle for applying the same rate.

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

2. **Calculate Required Nozzle Flow Rate**

If you know the following:

- The required application rate.
- Actual speed of application.
- Swath width.
- Total number of nozzles on the boom.

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

Nozzle Flow Rate =
Speed (km/h) x Swath Width (m) x Application Rate (l/ha) ÷ 600 ÷ Number of Nozzles
eg, [(16 x 30 x 50) ÷ 600] ÷ 61
= 0.65 l/min per each nozzle

Now using the nozzle chart look down the nozzle capacity column (l/min) and select a nozzle to suit the required output and pressure.

Step 5:
Fit the Selected Nozzles to the Boom

Fit the selected nozzles to the boom as per manufacturer's specifications.

If nozzle strainers are fitted ensure they are sized according to nozzle specification.

NOTE

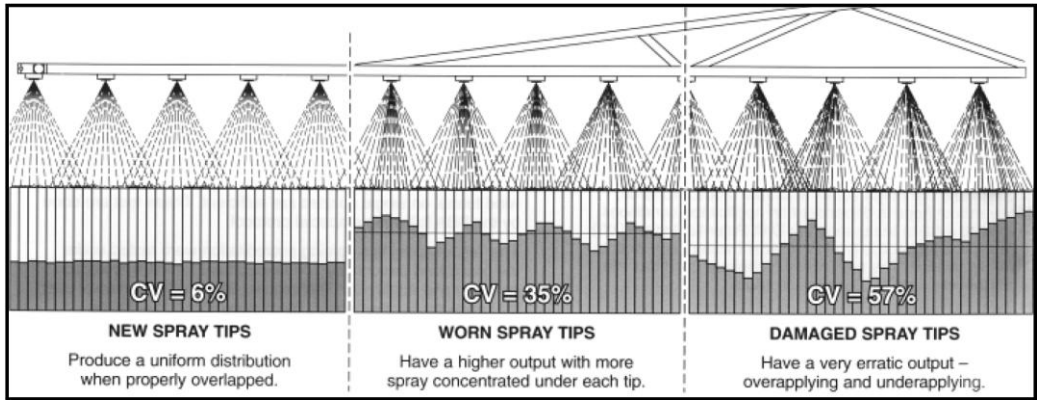
All nozzles have a pressure and flow rate range to acheive the best results.
Ensure you have selected the nozzle which best suits your application to avoid any problems.

⚠ WARNING

Do not use mixed pesticides for testing. Use only clean water.

Use of pesticides when testing is hazardous to your health.

Test the actual output of the nozzles



Spot-on Electronic Nozzle Calibrator

Step 6 (Recommended): Check Nozzle Accuracy and Determine Nozzle Output.

Test the actual output of the nozzles using the following procedure:

1. Ensure there is adequate water in the spray tank.

   IMPORTANT: Do not use mixed pesticides for testing.

2. Start the sprayer and set the spray controller master switch into MANUAL position, activate boom sections and adjust operating pressure so specified output from nozzle can be measured.

3. Collect and measure the volume of spray from one nozzle and compare it to the recommended output.

   IMPORTANT: If the boom is not fitted with new nozzles, fit one new nozzle and use it to set the flow and pressure setting.

   This sets the standard flow rate, pressure setting and spray pattern with which to test the performance of other nozzles.

⚠ CAUTION

Do not use a worn nozzles to set the pressure setting and nozzle rates, otherwise inaccurate calibration will occur.

4. Collect and measure the volume of spray from each nozzle for one minute in a calibrated container.

   Specially designed nozzle testing equipment such as nozzle flow testers, can be used to simplify nozzle calibration.

5. Visually check nozzle spray patterns and spray angle for accuracy and, if necessary, replace any faulty nozzles.

6. Discard and replace any nozzle that deviates more than 10$ from the specified output (eg with a 0.65 l/min specification – discard any nozzles 0.58 l/min and under or 0.71 l/min and over.

7. Check replacement nozzles by collecting and measuring output from each nozzle.

8. Record the output of each nozzle on the boom. Add the outputs together to get the total flow required for the boom.

9. This amount should correlate to the flow reading on the Spray Rate Controller.

   Total spray output = l/min per nozzle x number of nozzles

   eg, 0.65 l/min x 61 nozzles
   = 39.65 l/min total flow

Calculator required for accurate calibration

Step 7:
Calculate Application Rate

When operating the Spray Rate controller, the controller automatically calculates and shows the rate of application using the following formula:

Application Rate (l/ha) =
Spray Output (l/min) x 600 ÷ Speed (km/h) x Swath Width (m)

eg, [39.65 x 600] ÷ [16 x 30.5]
= 48.75 l/ha

NOTE

Full instructions of controller operation are contained in your seperate Controller Manual.

Step 8:
If Tested Application Rate is not Satisfactory

In Auto mode – if application rate is not being achieved:

i. Operating pressure will climb if nozzles are too small or blocked or if wrong nozzle strainers are fitted.
ii. Too high operating speed will also contribute to excessive pressure.
iii. Likewise if the pressure filter is blocked (even partially), you may experience too high pressure.
iv. Operating pressure will fall if nozzles are too large or speed is too slow.

Make adjustments as necessary to suit the operating requirements.

Step 9:
Add the Correct Amount of Chemical to the Tank.

1. **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

2. **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

3. **For land area covered** use the following formula:

   Area Covered (Ha) = Tank Volume (litres) ÷ Spray Application Rate (l/ha)
   eg, 2000 ÷ 50 = 40 hectares

4. **For tank volume required** use the following formula:

   Tank Volume Required (litres) = Area (Ha) x Spray Application Rate (l/ha)
   eg, 20 x 50 = 1000 litres

NOTE

Mix only the amount required. Avoid wastage and the problem of needless chemical disposal.

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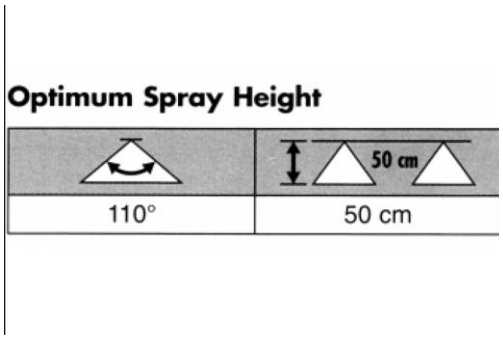

Boom Height – courtesy Teejet

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 worksheets to obtain the number of work sheets required.

Air-Mix & Turbodrop® Nozzle Chart Sprayer Calibration

			Application Rate (l/ha with km/h @ 50cm nozzle spacing)														
Nozzle Type	Pressure Bar	Flow Rate l/min	4	6	8	10	12	14	16	18	20	22	24	26	28	30	35
110-015	1	0.231	46.2	46.2	34.7	27.7	23.1	19.8	17.3	15.4	13.9	12.6	11.6	10.7	9.9	9.24	7.92
	1.5	0.283	84.9	56.6	42.5	34	28.3	24.3	21.2	18.9	17	15.4	14.2	13.1	12.1	11.3	9.7
	2	0.327	98.1	65.4	49.1	39.2	32.7	28	24.5	21.8	19.6	17.8	16.4	15.1	14	13.1	11.2
	3	0.4	120	80	60	48	40	34.3	30	26.7	24	21.8	20	18.5	17.1	16	13.7
	4	0.462	139	92.4	69.3	55.4	46.2	39.6	34.7	30.8	27.7	25.2	23.1	21.3	19.8	18.5	15.8
	5	0.517	155	103	77.6	62	51.7	44.3	38.8	34.5	31	28.2	25.9	23.9	22.2	20.7	17.7
	6	0.566	170	113	84.9	67.9	56.6	48.5	42.5	37.7	34	30.9	28.3	26.1	24.3	22.6	19.4
110-015	1	0.346	69.2	69.2	51.9	41.5	34.6	29.7	26	23.1	20.8	18.9	17.3	16	14.8	13.8	11.9
	1.5	0.424	127	84.8	63.6	50.9	42.4	36.3	31.8	28.3	25.4	23.1	21.2	19.6	18.2	17	14.5
	2	0.49	147	98	73.5	58.8	49	42	36.8	32.7	29.4	26.7	24.5	22.6	21	19.6	16.8
	3	0.6	180	120	90	72	60	51.4	45	40	36	32.7	30	27.7	25.7	24	20.6
	4	0.693	208	139	104	83.2	69.3	59.4	52	46.2	41.6	37.8	34.7	32	29.7	27.7	23.8
	5	0.775	233	155	116	93	77.5	66.4	58.1	51.7	46.5	42.3	38.8	35.8	33.2	31	26.6
	6	0.849	255	170	127	102	84.9	72.8	63.7	56.6	50.9	46.3	42.5	39.2	36.4	34	29.1
110-02	1	0.462	92.4	92.4	69.3	55.4	46.2	39.6	34.7	30.8	27.7	25.2	23.1	21.3	19.8	18.5	15.8
	1.5	0.566	170	113	84.9	67.9	56.6	48.5	42.5	37.7	34	30.9	28.3	26.1	24.3	22.6	19.4
	2	0.653	196	131	98	78.4	65.3	56	49	43.5	39.2	35.6	32.7	30.1	28	26.1	22.4
	3	0.8	240	160	120	96	80	68.6	60	53.3	48	43.6	40	36.9	34.3	32	27.4
	4	0.924	277	185	139	111	92.4	79.2	69.3	61.6	55.4	50.4	46.2	42.6	39.6	37	31.7
	5	1.033	310	207	155	124	103	88.5	77.5	68.9	62	56.3	51.7	47.7	44.3	41.3	35.4
	6	1.131	339	226	170	136	113	96.9	84.8	75.4	67.9	61.7	56.6	52.2	48.5	45.2	38.8
110-025	1	0.577	115	115	86.6	69.2	57.7	49.5	43.3	38.5	34.6	31.5	28.9	26.6	24.7	23.1	19.8
	1.5	0.707	212	141	106	84.8	70.7	60.6	53	47.1	42.4	38.6	35.4	32.6	30.3	28.3	24.2
	2	0.816	245	163	122	97.9	81.6	69.9	61.2	54.4	49	44.5	40.8	37.7	35	32.6	28
	3	1	300	200	150	120	100	85.7	75	66.7	60	54.5	50	46.2	42.9	40	34.3
	4	1.154	346	231	173	138	115	98.9	86.6	76.9	69.2	62.9	57.7	53.3	49.5	46.2	39.6
	5	1.291	387	258	194	155	129	111	96.8	86.1	77.5	70.4	64.6	59.6	55.3	51.6	44.3
	6	1.414	424	283	212	170	141	121	106	94.3	84.8	77.1	70.7	65.3	60.6	56.6	48.5

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Air-Mix & Turbodrop® Nozzle Chart

			Application Rate (l/ha with km/h @ 50cm nozzle spacing)														
Nozzle Type	Pressure Bar	Flow Rate l/min	4	6	8	10	12	14	16	18	20	22	24	26	28	30	35
110-03	1	0.693	139	139	104	83.2	69.3	59.4	52	46.2	41.6	37.8	34.7	32	29.7	27.7	23.8
	1.5	0.849	255	170	127	102	84.9	72.8	63.7	56.6	50.9	46.3	42.5	39.2	36.4	34	29.1
	2	0.98	294	196	147	118	98	84	73.5	65.3	58.8	53.5	49	45.2	42	39.2	33.6
	3	1.2	360	240	180	144	120	103	90	80	72	65.5	60	55.4	51.4	48	41.1
	4	1.386	416	277	208	166	139	119	104	92.4	83.2	75.6	69.3	64	59.4	55.4	47.5
	5	1.549	465	310	232	186	155	133	116	103	92.9	84.5	77.5	71.5	66.4	62	53.1
	6	1.697	509	339	255	204	170	145	127	113	102	92.6	84.9	78.3	72.7	67.9	58.2
110-04	1	0.924	185	185	139	111	92.4	79.2	69.3	61.6	55.4	50.4	46.2	42.6	39.6	37	31.7
	1.5	1.113	334	223	167	134	111	95.4	83.5	74.2	66.8	60.7	55.7	51.4	47.7	44.5	38.2
	2	1.306	392	261	196	157	131	112	98	87.1	78.4	71.2	65.3	60.3	56	52.2	44.8
	3	1.6	480	320	240	192	160	137	120	107	96	87.3	80	73.8	68.6	64	54.9
	4	1.848	554	370	277	222	185	158	139	123	111	101	92.4	85.3	79.2	73.9	63.4
	5	2.066	620	413	310	248	207	177	155	138	124	113	103	95.4	88.5	82.6	70.8
	6	2.263	679	453	339	272	226	194	170	151	136	123	113	104	97	90.5	77.6
110-05	1	1.155	231	231	173	139	116	99	86.6	77	69.3	63	57.8	53.3	49.5	46.2	39.6
	1.5	1.414	424	283	212	170	141	121	106	94.3	84.8	77.1	70.7	65.3	60.6	56.6	48.5
	2	1.633	490	327	245	196	163	140	122	109	98	89.1	81.7	75.4	70	65.3	56
	3	2	600	400	300	240	200	171	150	133	120	109	100	92.3	85.7	80	68.6
	4	2.309	693	462	346	277	231	198	173	154	139	126	115	107	99	92.4	79.2
	5	2.582	775	516	387	310	258	221	194	172	155	141	129	119	111	103	88.5
	6	2.828	848	566	424	339	283	242	212	189	170	154	141	131	121	113	97
110-06	1	1.386	277	277	208	166	139	119	104	92.4	83.2	75.6	69.3	64	59.4	55.4	47.5
	1.5	1.697	509	339	255	204	170	145	127	113	102	92.6	84.9	78.3	72.7	67.9	58.2
	2	1.96	588	392	294	235	196	168	147	131	118	107	98	90.5	84	78.4	67.2
	3	2.4	720	480	360	288	240	206	180	160	144	131	120	111	103	96	82.3
	4	2.771	831	554	416	333	277	238	208	185	166	151	139	128	119	111	95
	5	3.098	929	620	465	372	310	266	232	207	186	169	155	143	133	124	106
	6	3.394	1018	679	509	407	339	291	255	226	204	185	170	157	145	136	116

Step 1

Check the Sprayer is in Good Working Order

Step 2

Determine Actual Speed of Travel

Follow Instructions on page 60 (Pegasus 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	

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Step 1

Check the Sprayer is in Good Working Order

Step 2

Determine Actual Speed of Travel

Follow Instructions on page 60 (Pegasus 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 60 (Pegasus 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	

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Step 1

Check the Sprayer is in Good Working Order

Step 2

Determine Actual Speed of Travel

Follow Instructions on page 60 (Pegasus 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	

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Greasing & Service Procedures

1. Clean suction line filter with each tank load.
2. Clean filling strainer after each tank fill if necessary.
3. Clean pressure line filter.
4. Clean boom section filters.
5. Check tyre pressure (320kPa – 46psi)
6. Check wheel nuts tight (510Nm)
7. Clean WOLF paddle wheel flowmeter
8) Grease all boom joints
9) Grease parallelogram lift pivot pins
10) Grease ARDS drawbar pivot point, swivel tow eye and jacking leg
11) Check diaphragm pump oil level
12) Inspect sprayer hydraulic hoses for signs of wear or abrasion
13) Open air reservoir drain valve to remove condensation

Every 250 hours OR Every Season – whichever is sooner

1) Re-pack wheel bearings with grease.
2) Change air filter for Air –ride system compressor
3) Grease all tank lids with rubber grease
4) Check all electrical connectors for corrosion – apply dielectric grease to connector seals
5) Inspect sprayer hoses for signs of wear or abrasion
6) Inspect Air-ride axle and adjust if necessary
8. Change diaphragm pump oil
9. Inspect diaphragm pump air chamber, diaphragms and valves for wear.

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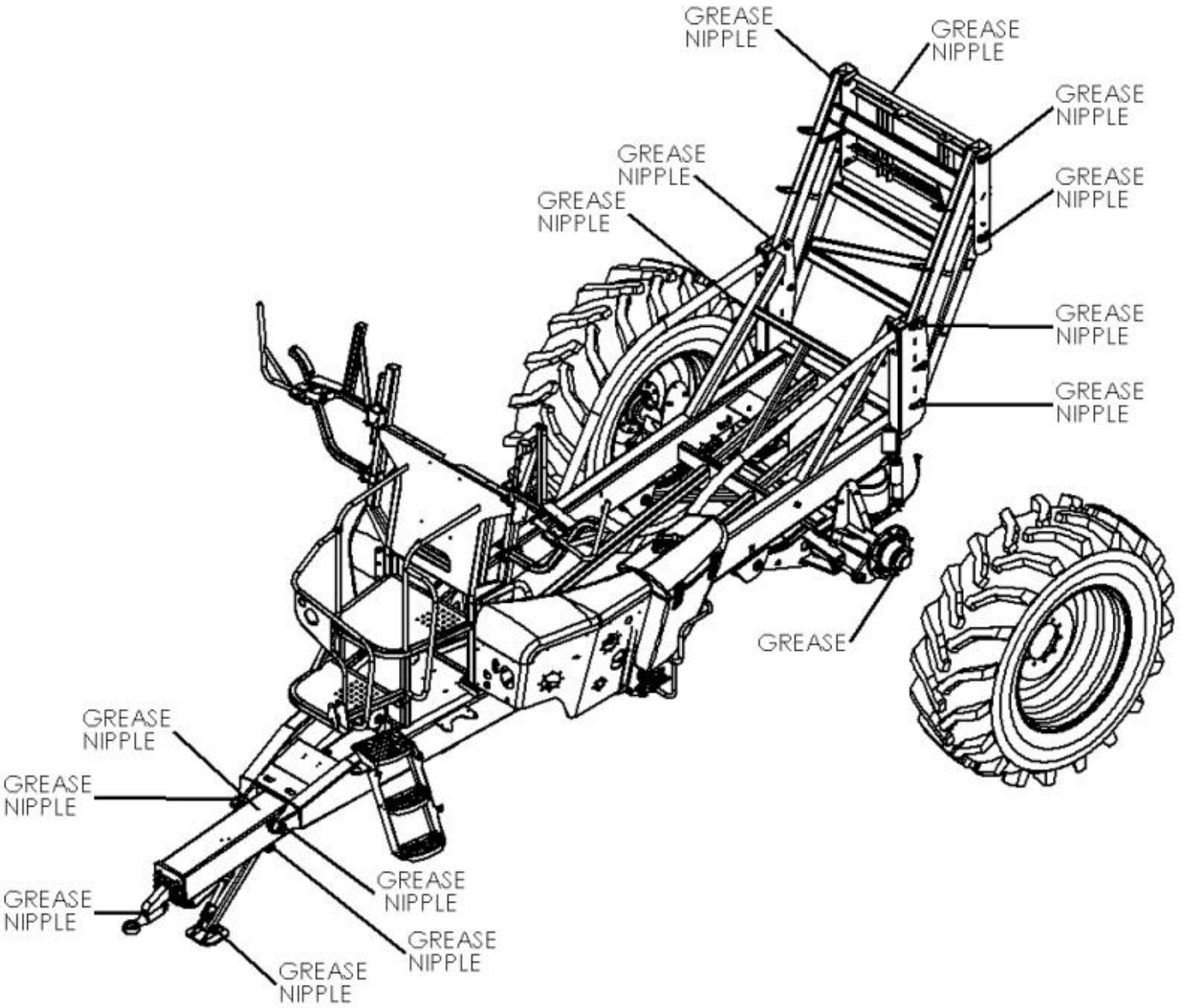
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Diaphragm Pump Maintenance

Annovi & Reverberi (A&R) pumps are of the piston-diaphragm type. All parts in contact with the spray liquid, which are subject to corrosion, are protected, making them ideal for spraying (herbicides, insecticides, fungicides, fertilisers, etc.), disinfection and washing.

Daily Before Starting the Pump

1 Check that oil is visible in sight glass (half way up) and top up if necessary with good clean motor oil 20W/30 or 20W/40.

2 Clean all sprayer filters. Blocked or semi blocked filters place extra stress on diaphragms.

3 Start with zero pressure and the pump will self prime immediately and clear air locks in suction line.

Daily after Use

1 Flush pump with clean water.

2 Drain filters and clean. A high percentage of pump failures are due to blocked filters.

⚠ CAUTION

Running a diaphragm pump faster than specified will not improve performance, but will damage and wear out moving parts.

Warranty will be made void by speeds in excess of those indicated on the pump name plate.

Every 50 Hours

Check surge chamber pressure and adjust as follows:

- Air pressure 70-100kPa (10- 15psi) [Should be 10-20% of operating pressure].

Vibration of the delivery hose usually indicates that the air pressure in the surge chamber is incorrect.

The main cause of surge chamber diaphragm fracture is low pressure in this chamber.

Surge chamber pressure can be checked with an ordinary tyre gauge.

The above pressure range is a guide to the correct pressure.

However, if difficulties recur, adjust the pressure until an even flow is obtained from the pump (no pulsing of liquid at operating RPM). The pressure is best increased with a bicycle pump.

Every 250 hours or Every Season - Whichever Comes Sooner

1 Change oil and refill with 20W/30 oil.

Attention should be made to remove trapped air behind the diaphragms by rocking from side to side as instructed.

It is also good practise to run the pump for 10 minutes without pressure, and then, top up with oil before working the pump.

2 When changing the pump oil, check diaphragms and replace them if they are showing signs of wear.

This is normally a pre-season maintenance procedure which can be done easily as no special tools are required.

You can avoid unnecessary down time in spraying seasons by carrying out the proper maintenance.

3 Also check inlet and outlet valves and replace if worn. Worn valves not only reduce the output of the pump, but may reduce the life of the diaphragms.

Excessive Diaphragm Failure

If you have excessive diaphragm failure check the following points. These will cause failure of diaphragms due to added stress or chemical attack.

1 **Most Important** - Pump not being flushed out daily with clean water after use.

2 Oil level too low allowing air between piston and diaphragm.

3 Air leaks in suction line.

4 Restricted suction line.

5 Restriction through suction filter.

6 Not cleaning suction filter regularly.

7 Worn suction and discharge valves.

8 Bypass line too small to carry full capacity of pump.

9 In cold climates - frozen suction/ discharge lines or water remaining in the pump after flushing.

10 Incorrect air setting or no air in air chamber.

11 Agitator excessively restricting bypass from pump.

12 Diaphragm material construction incorrect for chemical or solution being pumped.

13 Chemicals containing toluene or other aggressive solvents may require viton diaphragms - particularly if the pump is not properly flushed after use.

Pre-Season Servicing

For thorough pre-season servicing - check all aspects of the Pegasus and its operating components as outlined in the pre-delivery check list on page 1.7.

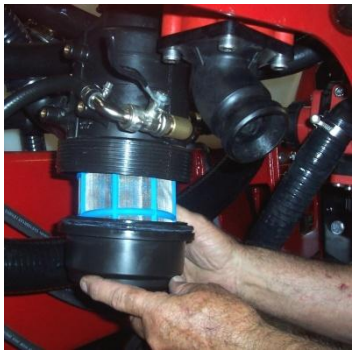
Pump Storage and Corrosion Protection

1 **Warm Climates**
If you operate in a warm climate with no chance of frost in the winter, you will not have any problems with frost damage.

If you are storing your sprayer between seasons, ensure your pump has been thoroughly flushed with clean water. A good idea is to run a mixture of 1% solution of summer mineral spraying oil through the pump and plumbing system. Summer spraying oil is water-soluble oil such as DC-Tron. This will coat and protect all internal pump parts. Ensure this mixture is flushed out before spraying commences in the new season.

2 **Cold Climates**
For prolonged storage, an anti-freeze mixture can be flushed through the pump. Ensure this is thoroughly flushed out prior to the commencement of spraying again.

If the pump is being stored overnight and a risk of freezing is imminent, drain all liquid from the pump and lines, including boom lines.



Drain Filter housing before opening

Clean Bottom-fill filter

Remove and clean pressure filter

Remove and clean boom section filters

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. The filter screens should also be inspected at this time to ensure there are no signs of tears or screen degradation.

Filter seals should be thoroughly washed in warm soap water and lubricated prior to re-assembly of the filter.

Suction Filter

The suction filter should be cleaned regularly, or after each spray tank has been emptied.

Bottom-Fill Filter

The bottom-fill filter should be cleaned regularly, or after each spray tank has been filled.

Pressure Filter

The pressure filters should be cleaned regularly, or after each tank has been emptied.

Boom Section Filters

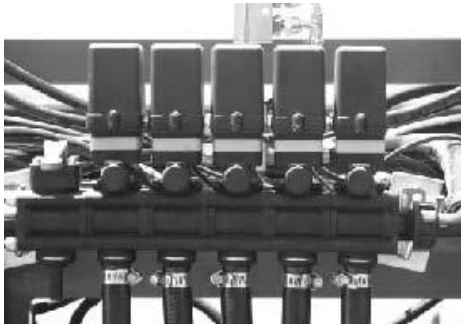
The boom section filters should be cleaned regularly, or after each spray tank has been emptied.

⚠ CAUTION

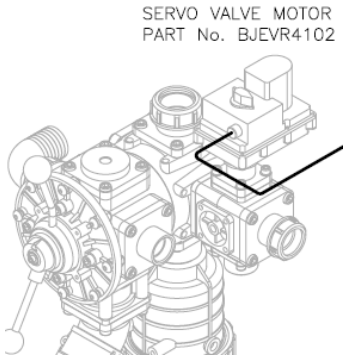
Do not use compressed air when cleaning the air filter as it may damage the air filter element.

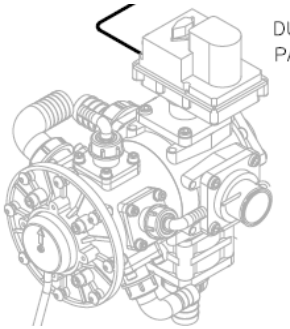
Air Filter

The Air-ride air filter should be cleaned regularly, and at least every 250 hours or annually, whichever is sooner.



5 Section Boom control motor valve





Remove & clean non-drip diaphragms

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 based lubricants to the valves, as this may cause swelling to the rubber seals.
4. Check with chemical manufacturer to ensure chemical compatibility with valve parts.
5. Check the ON/OFF operation of valves periodically, especially if nozzles cannot be seen whilst operating.
6. Visually check electrical connections to ensure they are clean and secure.

Pressure Control Servo Valve Motor

1. Operate spray rate controller pressure adjusting switch and confirm servo valve motor rotates in both directions (increase and decrease).
2. Ensure replacement motor is the correct speed of operation (6 sec)

Dump (bypass) Valve Motor

1. Operate spray rate controller to activate all boom sections with the Operator Panel set up to the "SPRAY" position (NOTE: Spray Pump does not need to be operating).
2. Operate the "SPRAY/BOOM FLUSH" switch on the Operator Panel.
   Dump valve indicator should move to 'Open' position when in "SPRAY" position and 'Closed' position when in "BOOM FLUSH" position
3. Ensure replacement motor is correct speed of operation (1.25 sec).

NOTE

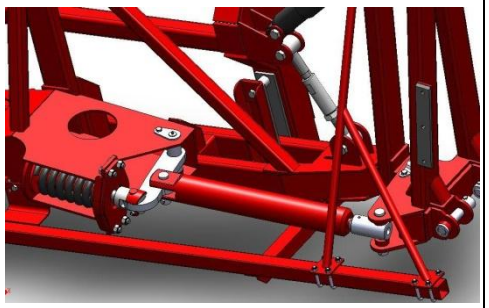
Do not over tighten the diaphragm cap. Over tightening the cap may impede flow through the diaphragm.

Non-Drip Diaphragm Nozzle Bodies

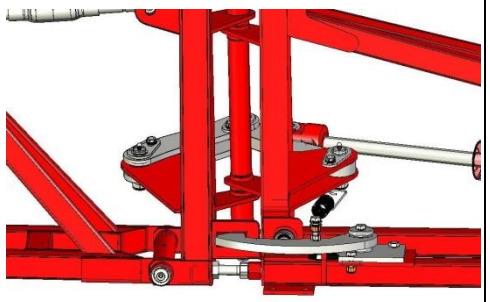
Non-drip diaphragms should be cleaned regularly to prevent dripping from nozzles.

To clean the non-drip diaphragms:

1. Completely stop all sprayer functions.
2. Open boom line drain taps
3. Unscrew and remove the diaphragm cap
4. Remove and clean any sediment off the diaphragm – replace diaphragm if damaged
5. Ensure spring/plunger assembly in cap operates correctly
6. Refit diaphragm into cap
7. Refit the diaphragm cap and carefully tighten
8. Close boom line drain valves and test system to confirm non-drip operation.



Inspect inner fold and yaw spring assembly



Ensure adequate tension is applied by lock out lever and stop bolt

Adjust breakaway spring tension as necessary

Boom Maintenance

Careful and regular boom maintenance will assist in providing a good, long operational life.

Daily Maintenance

Clean the boom at the end of each working day or whenever the sprayer is stopped for periods of time exceeding one hour. Rinse the plumbing lines and let clean (flush) water flow from the nozzles. Clean external surfaces with high pressure wash.

Ensure nozzles and nozzle bodies are correctly fixed and sealed when operating, also confirm non-drip mechanism is working.

Inner Fold Pivot

The inner boom fold is designed to incorporate the 'Yaw' (fore and aft motion) suspension of the 33/36m boom, which means it is constantly moving during operation.

Ensure all pins are secure and hydraulic cylinder adjusting clevis is locked with grub screws.

Outer Fold Pivot

The outer fold is designed to be held securely by hydraulic pressure when in the open position to prevent movement.

Ensure the hinge joint is held securely against stop bolts and lock out lever (if fitted).

NOTE

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

Breakaway Arm

The breakaway arms are double acting (forwards and backwards motion) with a spring load return to centre assembly.

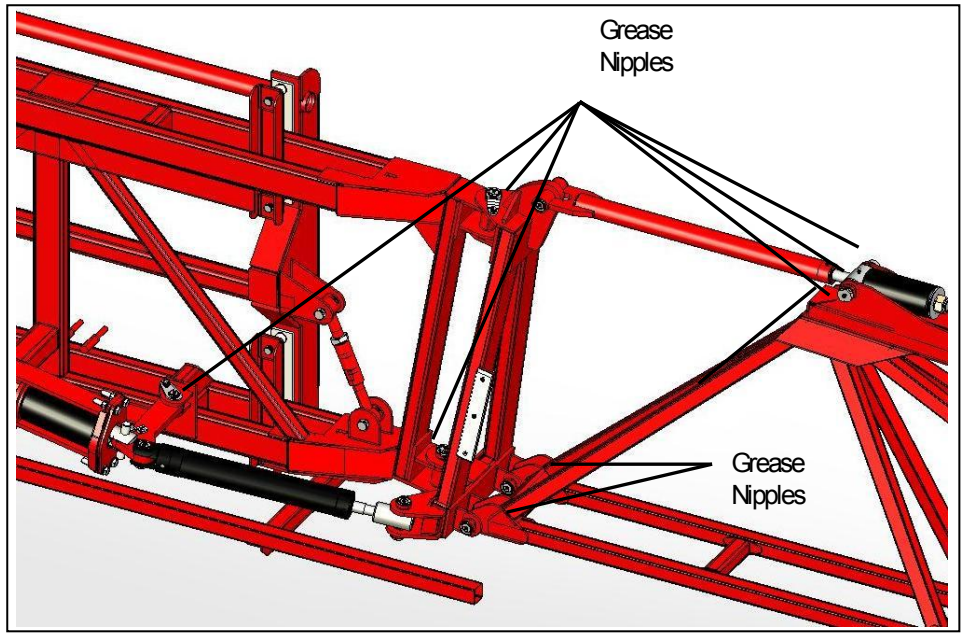
Ensure spring tension is maintained to provide correct operation of the breakaway arm.

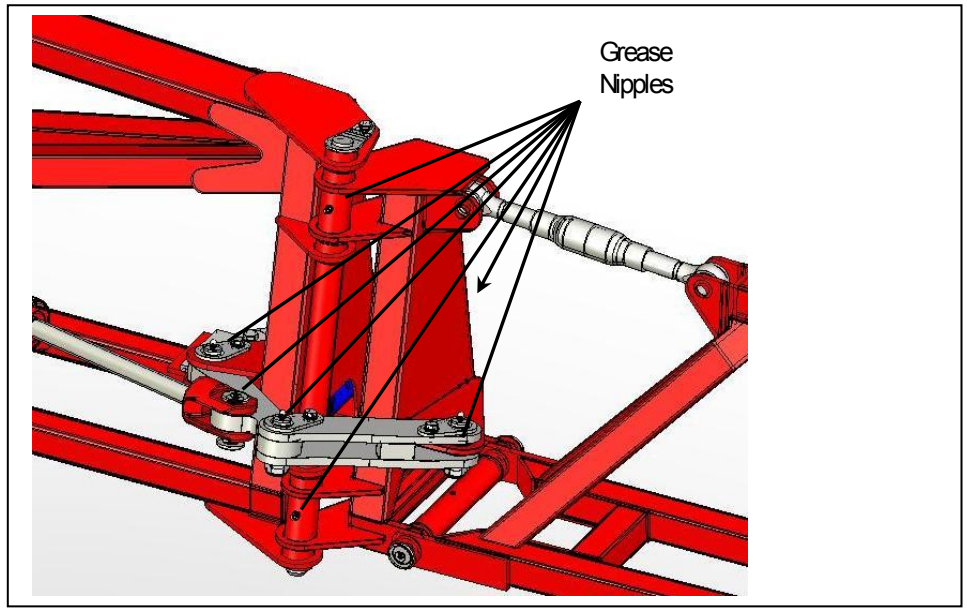
Every 50 Hours Maintenance

1. Ensure all screws, retaining clips and ties are intact and tight.
2. Clean and apply protective coating to damaged painted parts.
3. Check all joints and fold pivots operate properly and are correctly greased.
4. Grease sprayer parallelogram lift pivot points and ARDS drawbar pivots.
5. Grease all boom pivot points.
6. Ensure correct spring tension applied to breakaway arm springs.

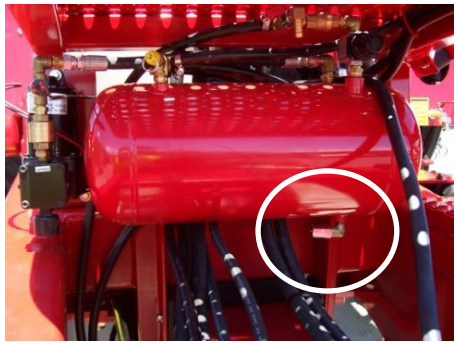
Periodical Maintenance

1. Check all hydraulic hoses and fittings for wear and replace if necessary.
2. Check breakaway spring's tension and cables for wear and replace if necessary.
3. Check 'Yaw' position of boom and reset if required.
4. Before storage thoroughly clean and flush entire sprayer both internally and externally.



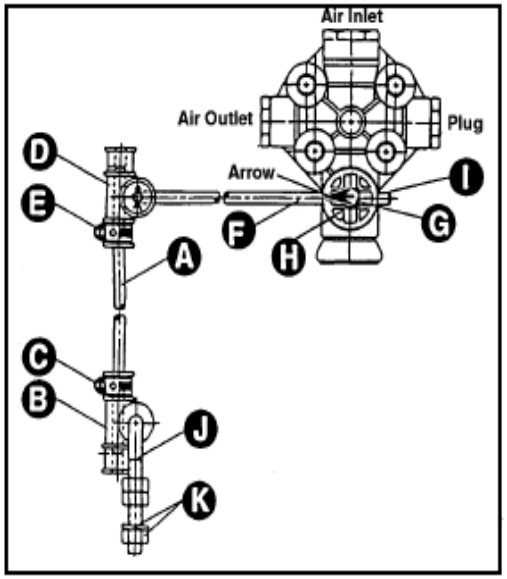


Axle Air-Ride Suspension System



Air reservoir drain valve

Axle air leveling Valve with adjustable linkage



Ride Level Valve assembly illustration

Trailing Arm Front Hinge

The pivot bush of the trailing arm assembly can be replaced when worn.

It is recommended to contact your dealer for assistance when the bushes need to be replaced as this process requires removing the axle trailing arm assembly form the sprayer, and as such should only be completed by suitably trained service technicians.

Air Reservoir Drain Valve

The air reservoir features a drain valve fitted to the bottom of the air reservoir.

The valve should be used regularly to remove any condensation build up from the air system.

To remove moisture from the air reservoir:

1. Disconnect power from the 12volt air compressor.
2. Open drain valve until all moisture is removed from the air reservoir.
3. Close drain valve.
4. Reconnect power supply to the 12volt compressor and run compressor to recharge to air system.

Ride Leveling Adjustable Linkage Assembly

To assemble the adjustable linkage of the air levelling valve:

1. Insert the ¼" straight rod (A) into the rubber dampener link (B) and tighten the clamp (C).
2. Insert the lever arm (F – ¼" rod with 90deg bend) into the valve making sure the centre punch on the cam face is pointing toward the vertical linkage.
3. Tighten the cap screw (G) to 5 ft/lbs.
4. Attach the rubber dampener (D) and clamp (E). Do not tighten until installation and setup is complete.

Note: To select the right or left hand position, hold the valve and rotate lever (F) to the desired position.

The Pegasus air ride suspensions uses variable length lever arms.

Tuning the valve to your suspension is done by increasing or decreasing to obtain optimum performance when the lever arm approaches 45deg maximum up or down from a neutral horizontal position (refer page 2.15).

Diaphragm Pump Problems

PROBLEM	PROBABLE CAUSE	REMEDY
A Pump does not draw or deliver liquid. Pressure gauge fluctuates badly.	1 One or more valves are not seating properly. 2 The pump is sucking in air through suction line. 3 Air has not been entirely evacuated from the pump. 4 Blocked suction filter. 5 Damaged or worn suction valves.	1 Clean valve seating. 2 Examine the suction hose and ensure it is firmly secured. 3 Rotate the pump with outlet hose and taps open. 4 Clean suction filter. 5 Replace suction valves.
B Liquid flow is irregular (Also check items under A)	1 The air in the air chamber of the pump is incorrectly set. 2 Diaphragm split. 3 Damaged or worn valves. 4 Foreign matter holding valves open.	1 Check pressure in air chamber of pump. Set at 210-280Kpa (30-40 psi). 2 Replace diaphragm. 3 Replace valves. 4 Clean valves.
C Pump delivers insufficient pressure	1 Regulating valve: • Sticking open • Not set for pressure. • Damaged or worn seat or spring. 2 Cylinder diaphragm ruptured. 3 Pump valves blocked, worn or damaged. 4 Spray nozzles worn, missing or exceed pump capacity.	1 Fix the regulator: • Unstick the valves. • Set the pressure. • Replace the spring. 2 Replace diaphragms. 3 Unblock valves and or replace. 4 Replace spray nozzles with appropriate size.
D Output drops & pump is noisy.	1 Oil level is too low.	1 Top up with oil to correct level (1/2 way up the sump sight glass).

PROBLEM	PROBABLE CAUSE	REMEDY
E Oil being discharged through delivery line or discoloured oil in sight glass of pump.	1 One or more diaphragms split or ruptured.	1 Immediately drain oil from pump and flush to remove all spray residues from sump. Remove pump heads & fit new diaphragms. Fill to correct level with motor oil 20W/30.
	SUCTION SIDE OF PUMP	
F Suction hose vibration.	1 Air getting into suction.	1 Seal all joints securely with tape or stag. Firm up clamps.
G Pump valves hammering.	1 Suction tap partly turned off. 2 Suction strainer(s) blocked.	1 Turn tap fully on. 2 Clean filters.
H No water flow on suction hose.	1 Obstruction in tank or suction line.	1 Clean foreign material from tank & suction line.
	DISCHARGE SIDE OF PUMP	
I Pressure gauge pointer swings violently.	1 Pressure control valve spindle doesn't move easily.	1 Lubricate with light oil or C.R.C.
J AR control valve leaking from spindle.	1 Split diaphragm or O-rings.	1 Remove 4 body set screws, replace diaphragm and O-rings.
K Pressure gauge showing correct working pressure no pressure at nozzle.	1 Burst discharge line. 2 Blocked discharge filter where fitted. 3 O-ring(s) jamming flow in discharge line. 4 Ants, wasps build nests in discharge line or nozzles.	1 Replace discharge line. 2 Clean discharge filter. 3 Clean discharge line of foreign materials. 4 Clean nozzles of foreign materials with tooth brush

General Sprayer Problems

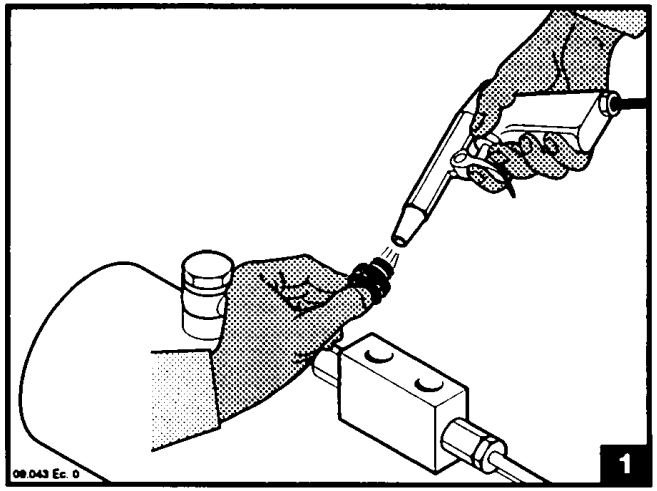
PROBLEM	PROBABLE CAUSE	REMEDY
1 No spray when turned on.	1 Filter on the inlet side of the pump blocked. 2 Faulty pump.	1 Dismantle, clean & re-assemble. 2 Change pump.
2 Sprays for short time only.	1 Air inlet to tank blocked. 2 Filter on suction side of pump blocking or blocked.	1 Clean air vent. 2 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.	1 Dismantle & clean the filter. 2 Check nozzle output, replace worn nozzles. 3 Check with new pressure gauge. 4 Repair or replace the pump.
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.

Hydraulic Pump Drive Problems

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".

Airbag Suspension Problems

PROBLEM	PROBABLE CAUSE	REMEDY
A Air compressor runs constantly.	1 Air leakage in the system.	1 Find the air leak. Test by using full air pressure and applying soapy water. Fix any air leaks. Use Loctite 569 on all air threads.
B Airbags lose pressure (when left standing for less than a week).	1 Air leakage in the system. 2 Uneven valve settings. 3 Leaky/dirty valve.	1 Find the air leak by using soapy water to test. Fix any air leaks. 2 Adjust the valve settings (see page 41). 3 Drain air chamber. Clean/replace the valve.
C Airbags not responsive	1 Worn linkage grommets. 2 Hard, non-pliable grommets. 3 Grommets loose on rods.	1 Replace worn grommets. 2 Replace new pliable grommets. 3 Tighten loose grommets.



Problem:

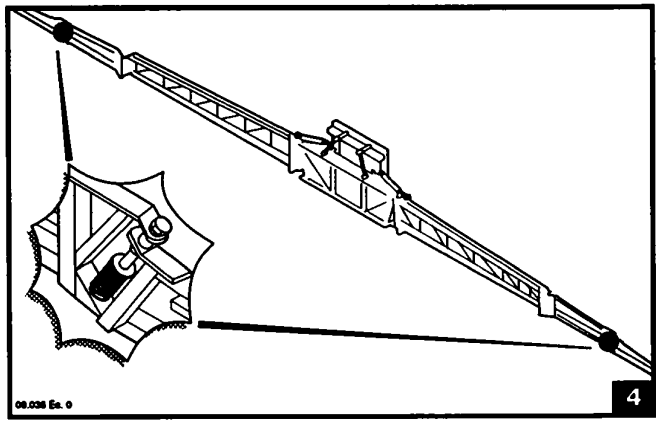
The boom unfolds halfway and then stops.

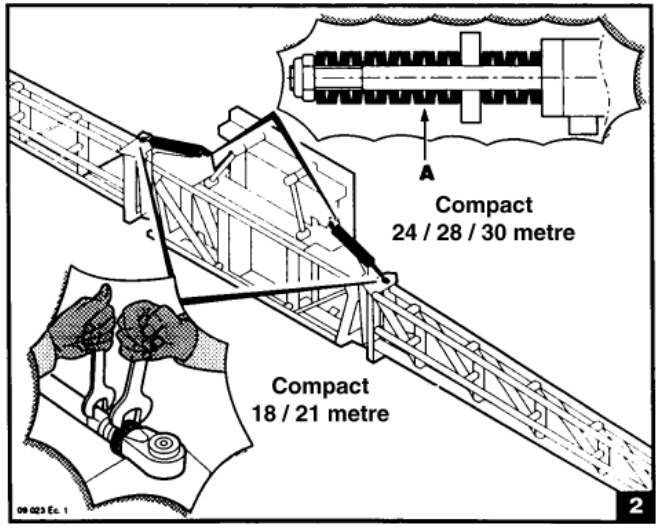
Probable Cause:

Impurity in calibrated joint during assembly of cylinders.

Remedy:

Disassemble joints and clean, shown in figure 1





Problem:

The boom does not align when unfolding.

Probable Cause:

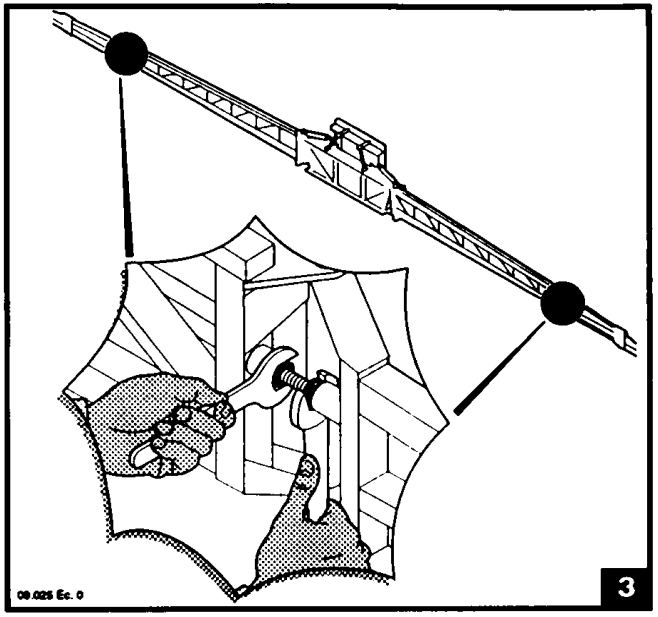
1 Ball joint of the unfolding cylinder not adjusted.

2 Shock absorber springs (A) not adjusted or damaged.

Remedy:

1 Adjust the joint according to the “Wing Alignment” instructions on page 3.12 to 3.16.

2 Check the springs; replace them if damaged see figure 2.



Problem:

The wing extensions do not align when folding.

Probable Cause:

Stop bolt not adjusted.

Remedy:

Adjust the screw to abtain alignment, as shown in figure 3.

Problem:

The ball joint of the wing extension moves during the unfolding and folding operation.

Probable Cause:

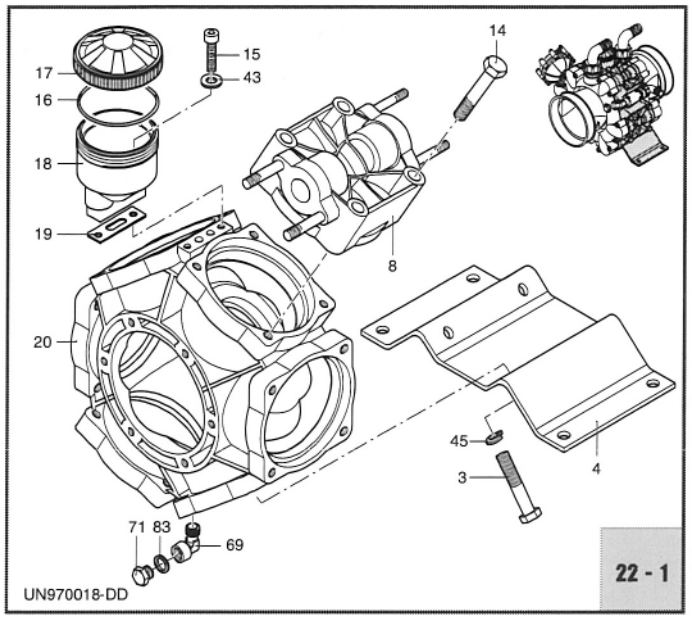
Loose joint.

Remedy:

Compress the spring, as shown in figure 4 (left).

Motor Valve Problems

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.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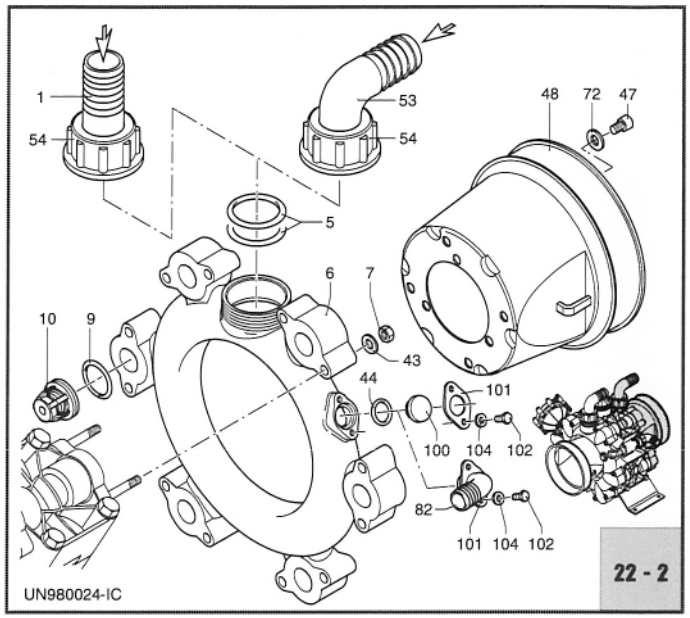
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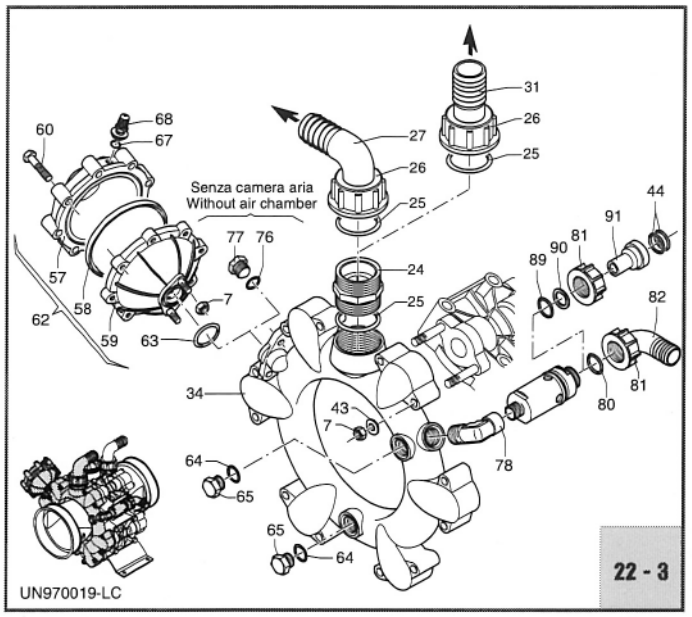
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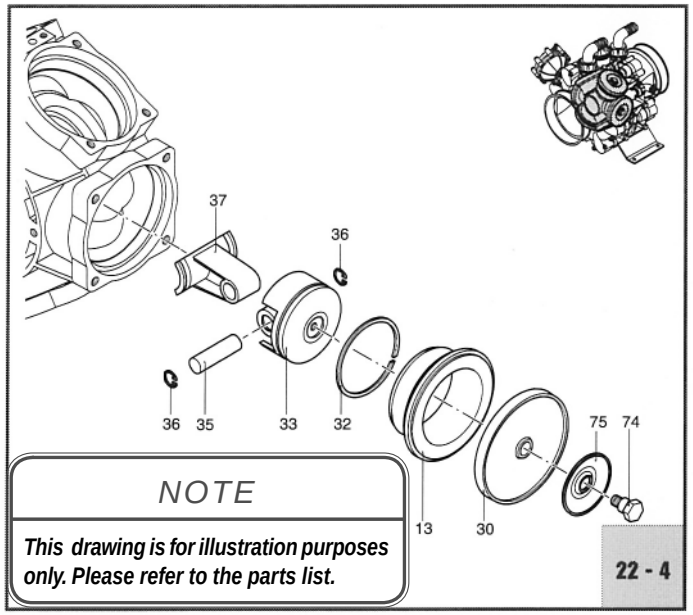
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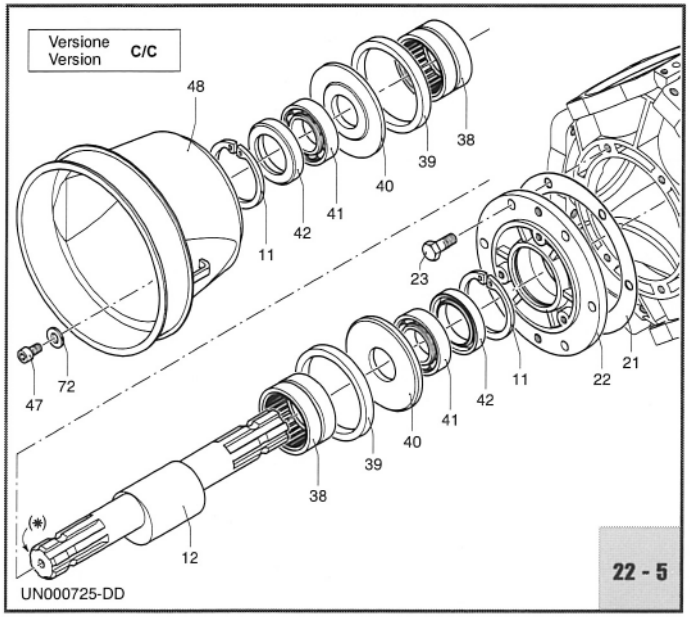
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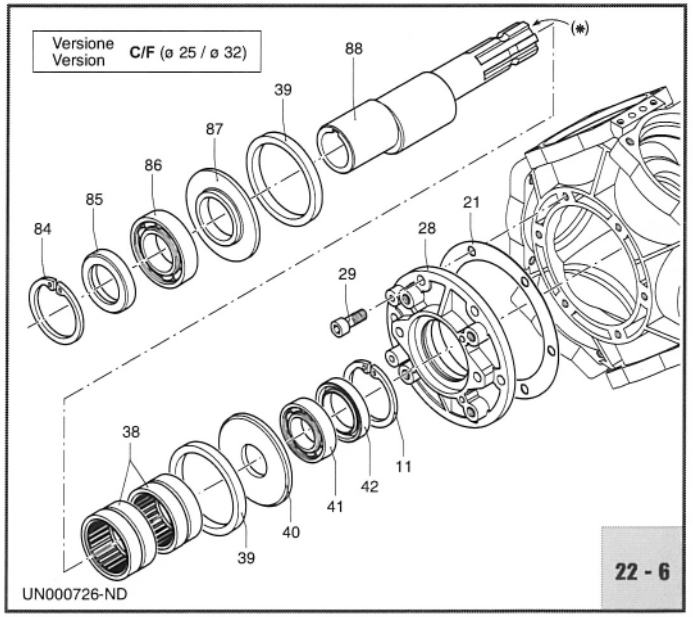
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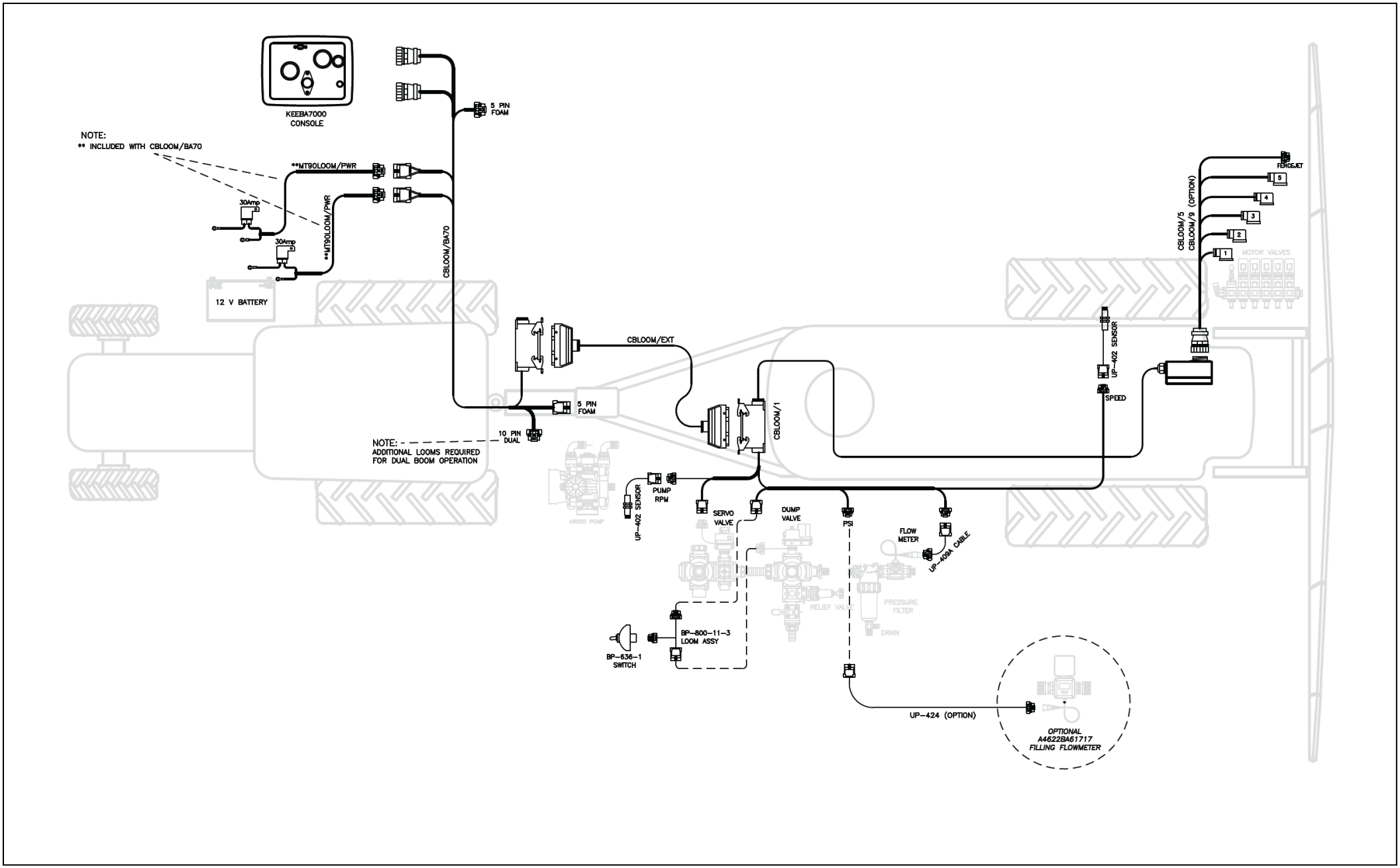
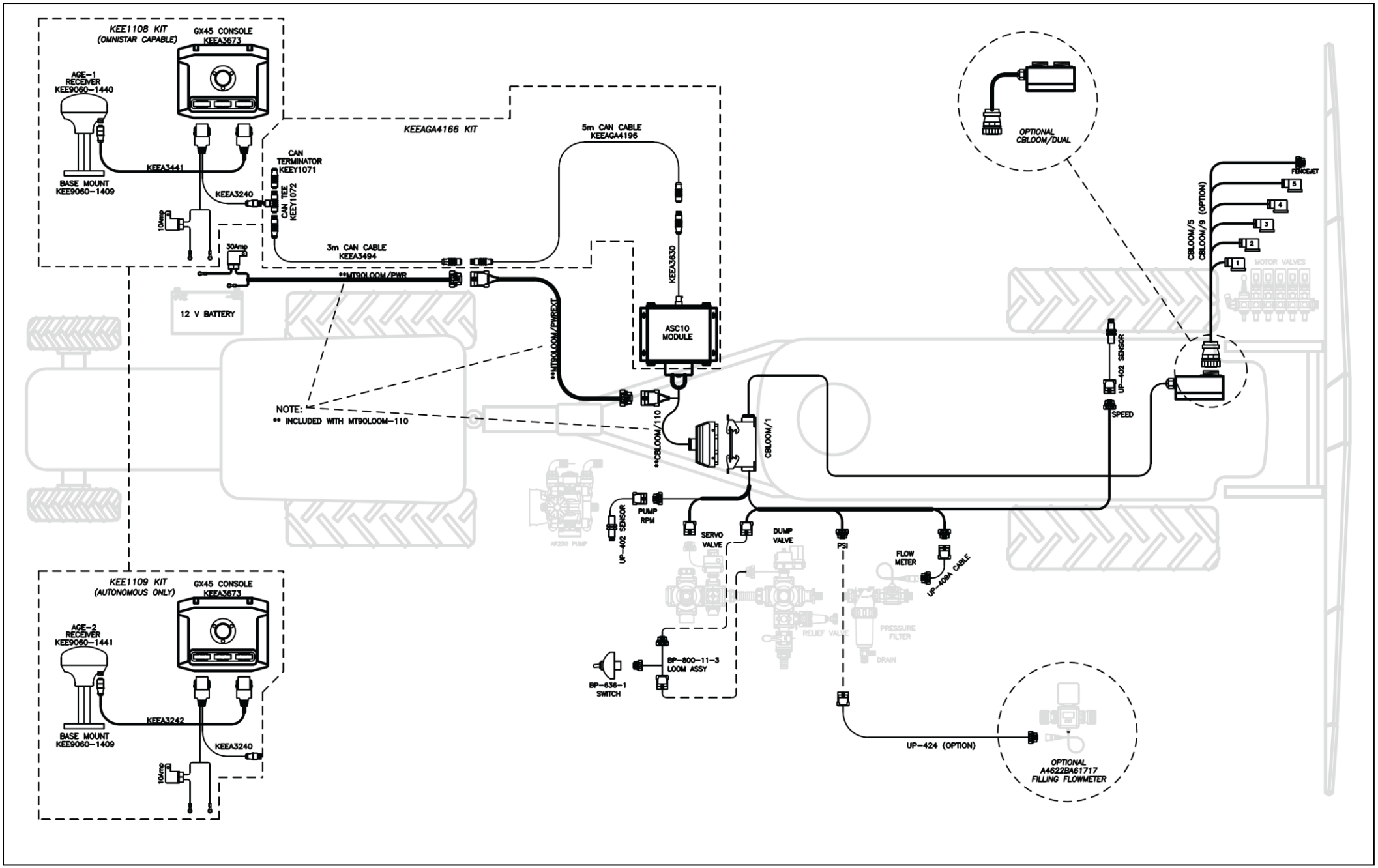
Pos	Part No	Description	Qty
1	*AR750870*	*ø 50 Hose tail*	*1*
	AR750730	*ø 60 Hose tail*	*1*
3	*AR750071*	*M12 x 70 Bolt*	*4*
4	AR750200	Base plate	1
5	AR750740	74 x 3.53 O-Ring	2
6	AR750860	Suction manifold	1
7	*AR380242*	*Nut*	*26*
8	AR750100	Head	6
9	AR680070	O-Ring	12
10	AR759051	Complete valve	12
11	AR200390	Circlip	2
12	AR750170	Crankshaft AR 250 bp (AU)	1
13	*AR750110*	*Sleeve AR 250 bp*	*6*
14	*AR750061*	*M 12x65 Bolt*	*20*
15	AR680350	M8 x 35 Bolt	2
16	AR1040060	O-Ring	1
17	*AR750057*	*Black oil tank cap AR 250 bp*	*1*
18	AR750030	Oil tank	1
19	AR750040	Gasket	1
20	AR750010	Pump body	1
21	AR680250	Gasket	1
22	*AR680020*	*Shaft support*	*1*
23	*AR160672*	*M 10x25 Bolt*	*6*
24	AR540530	1”1/4-1”3/4 G (M) Threaded adapter	1
25	AR250310	O-Ring	2
26	AR540540	1”3/4 G Ring nut	1
27	AR392130	ø 35 Elbow	1
28	*AR2420180*	*Shaft support*	*1*
29	*AR621500*	*M10 x 25 Bolt*	*6*
30	*AR550084*	*Diaphragm - VITON*	*6*
	AR550086	Diaphragm - HPDS (Recommended)	6
31	*AR391930*	*ø 35 Hose tail Optional*	*1*
32	AR500260	Piston ring	6

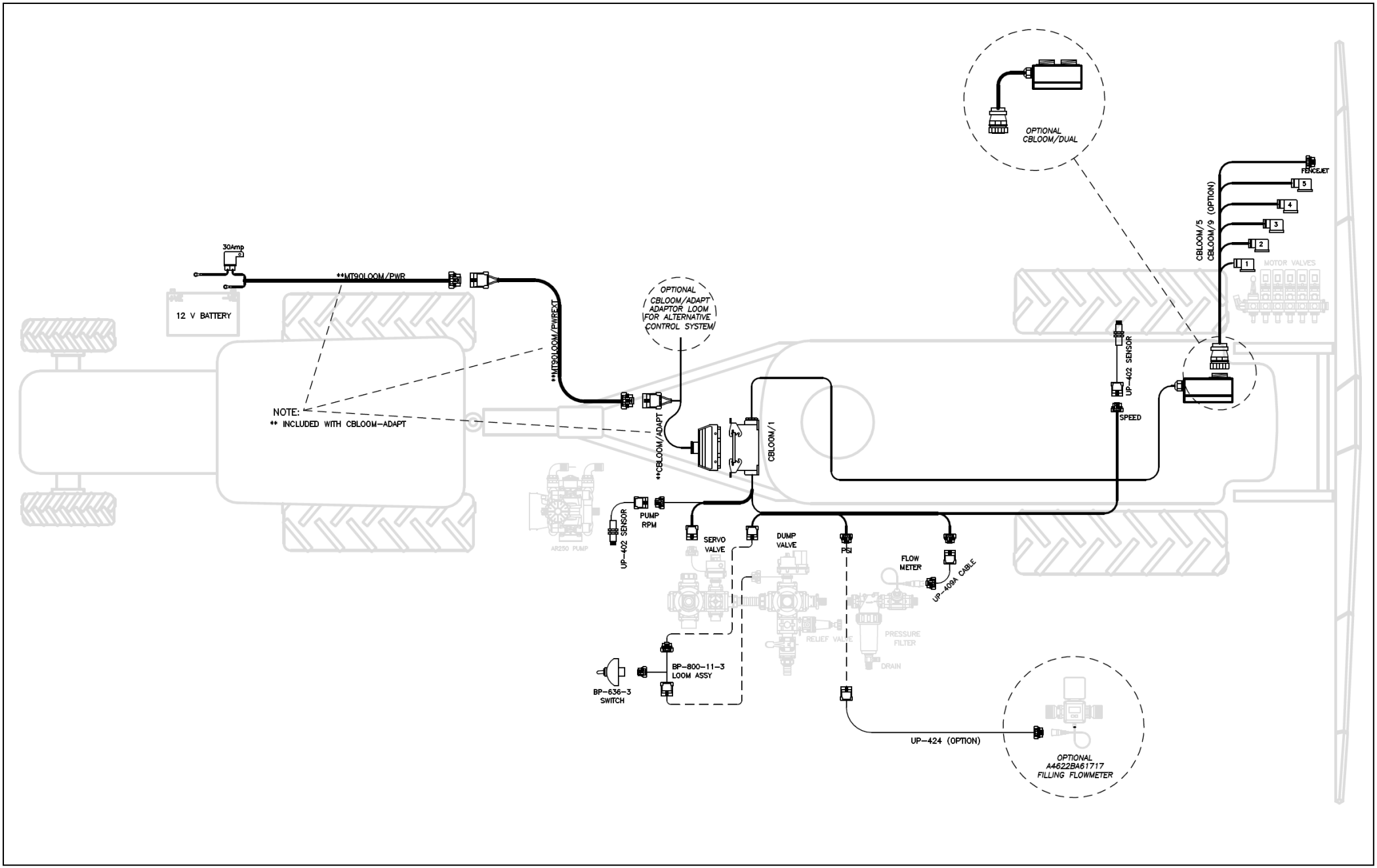
Pos	Part No	Description	Qty
33	AR750122	Piston 80mm	6
34	AR750420	Manifold	1
35	AR160700	Pin	6
36	AR160691	Pin circlip	12
37	*AR750140*	*Connecting rod*	*6*
38	AR750090	Roller bearing	2
39	AR750130	Con rod ring	2
40	*AR540040*	*Spacer washer*	*2*
41	AR230350	Bearing	2
42	AR160740	Seal Ring 35 x 52 x 12mm	2
43	*AR380243*	*Washer*	*26*
44	AR480440	O-Ring	3
45	*AR250143*	*Washer*	*4*
47	*AR850251*	*M8 x 12 Bolt*	*6*
48	AR1500350	Shaft guard	2
53	AR750850	ø 50 Elbow AR 250 bp	1
54	AR750710	2”1/2 G Ring nut	1
57	*AR620232*	*Upper air chamber*	*1*
58	AR550190	Semi air chamber - RUBBER	1
	AR550192	*Semi air chamber - VITON*	*1*
	AR550193	*Semi air chamber - HPDS*	*1*
59	AR680180	Lower air chamber	1
60	*AR621781*	*M8 x 40 Bolt*	*8*
62	AR1552	Complete air chamber	1
63	AR390290	O-Ring	1
64	AR180101	O-Ring	2
65	*AR330173*	*1/2” G Plug*	*2*
67	AR650542	Gasket	1
68	AR180020	Air valve	1

NOTE

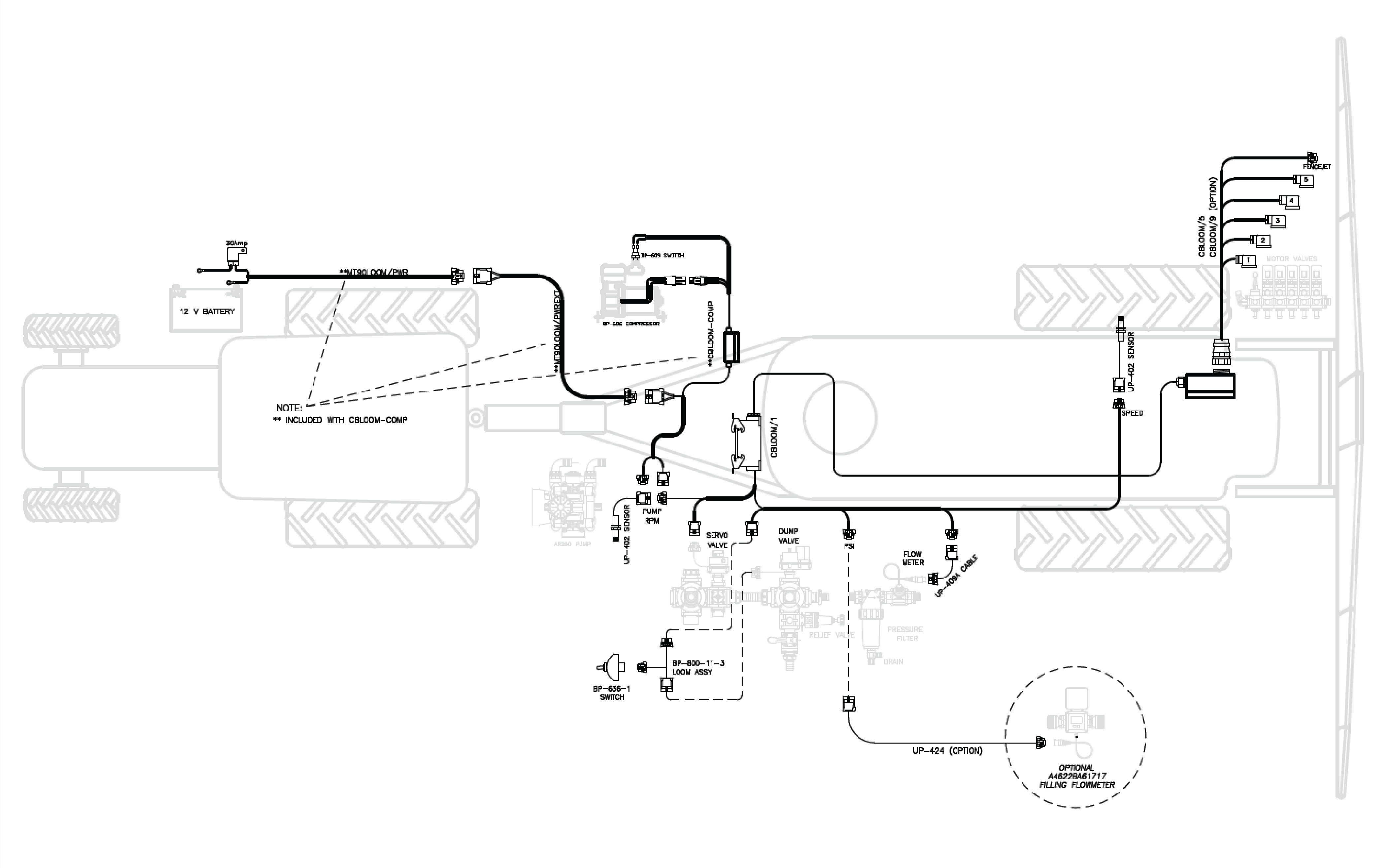
Parts in Italics are non-stocked items and may need to be ordered.


KEEBA7000
CONSOLE
5 PIN
FOAM
NOTE:
** INCLUDED WITH CBLOOM/BA70
**NT90LOOM/PWR
30Amp
30Amp
**NT90LOOM/PWR
CBLOOM/BA70
12 V BATTERY
CBLOOM/EXT
5 PIN
FOAM
10 PIN
DUAL
NOTE:
ADDITIONAL LOOMS REQUIRED
FOR DUAL BOOM OPERATION
CBLOOM/1
PUMP
RPM
UP-402 SENSOR
SERVO
VALVE
DUMP
VALVE
PSI
FLOW
METER
UP-408A CABLE
UP-402 SENSOR
SPEED
CBLOOM/5
CBLOOM/9 (OPTION)
FENCEJET
MOTOR VALVES
BP-800-11-3
LOOM ASSY
BP-636-1
SWITCH
RELIEF VALVE
PRESSURE
FILTER
DRAIN
UP-424 (OPTION)
OPTIONAL
A4622BA61717
FILLING FLOWMETER

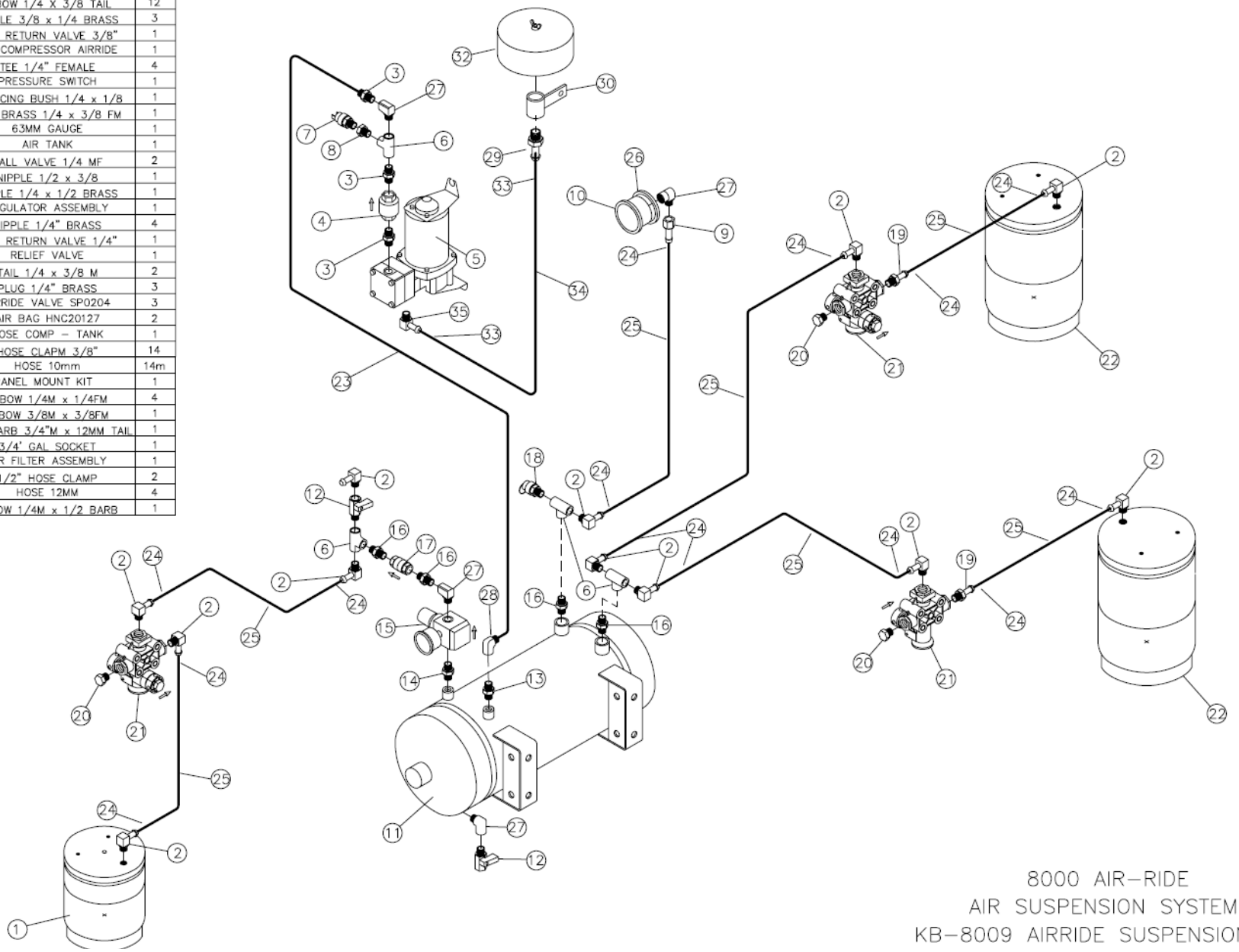

KEE1108 KIT
(OMNISTAR CAPABLE)
GX45 CONSOLE
KEEA3673
AGE-1
RECEIVER
KEE9060-1440
BASE MOUNT
KEE9060-1409
KEEA3441
KEEA3240
10Amp
KEEAGA4166 KIT
CAN
TERMINATOR
KEEY1071
CAN TEE
KEEY1072
5m CAN CABLE
KEEAGA4196
3m CAN CABLE
KEEA3494
30Amp
**MT90LOOM/PWR
12 V BATTERY
KEEA3630
ASC10
MODULE
**MT90LOOM/ASC10
NOTE:
** INCLUDED WITH MT90LOOM-110
**CBLOOM/110
CBLOOM/1
OPTIONAL
CBLOOM/DUAL
CBLOOM/5
CBLOOM/9 (OPTION)
FENCE JET
MOTOR VALVES
UP-402 SENSOR
SPEED
PUMP
RPM
UP-402 SENSOR
SERVO
VALVE
DUMP
VALVE
PSI
FLOW
METER
UP-409A CABLE
PRESSURE
FILTER
DRAIN
BP-800-11-3
LOOM ASSY
BP-636-1
SWITCH
UP-424 (OPTION)
OPTIONAL
A4622BA61717
FILLING FLOWMETER
KEE1109 KIT
(AUTONOMOUS ONLY)
GX45 CONSOLE
KEEA3673
AGE-2
RECEIVER
KEE9060-1441
BASE MOUNT
KEE9060-1409
KEEA3242
KEEA3240
10Amp

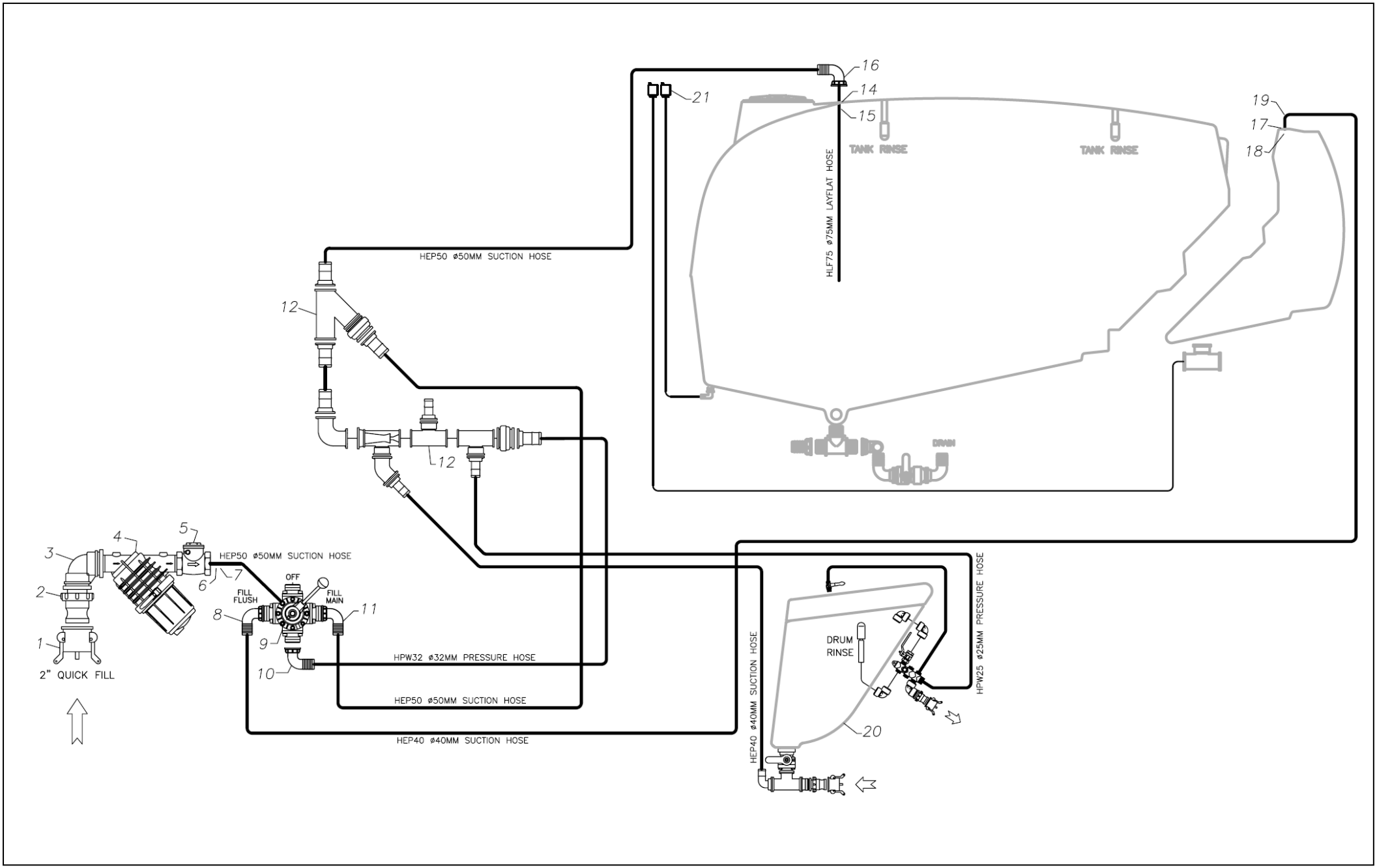

OPTIONAL
CBLOOM/DUAL
FENCEJET
5
4
3
2
1
CBLOOM/5
CBLOOM/9 (OPTION)
MOTOR VALVES
30Amp
**MT90LOOM/PWR
12 V BATTERY
**MT90LOOM/PWR
OPTIONAL
CBLOOM/ADAPT
ADAPTOR LOOM
FOR ALTERNATIVE
CONTROL SYSTEM
NOTE:
** INCLUDED WITH CBLOOM-ADAPT
**CBLOOM/ADAPT
CBLOOM/1
UP-402 SENSOR
SPEED
PUMP
RPM
UP-402 SENSOR
AR250 PUMP
SERVO
VALVE
DUMP
VALVE
PSI
FLOW
METER
UP-409A CABLE
RELIEF VALVE
PRESSURE
FILTER
DRAIN
BP-800-11-3
LOOM ASSY
BP-636-3
SWITCH
UP-424 (OPTION)
OPTIONAL
A4622BA61717
FILLING FLOWMETER

TBA

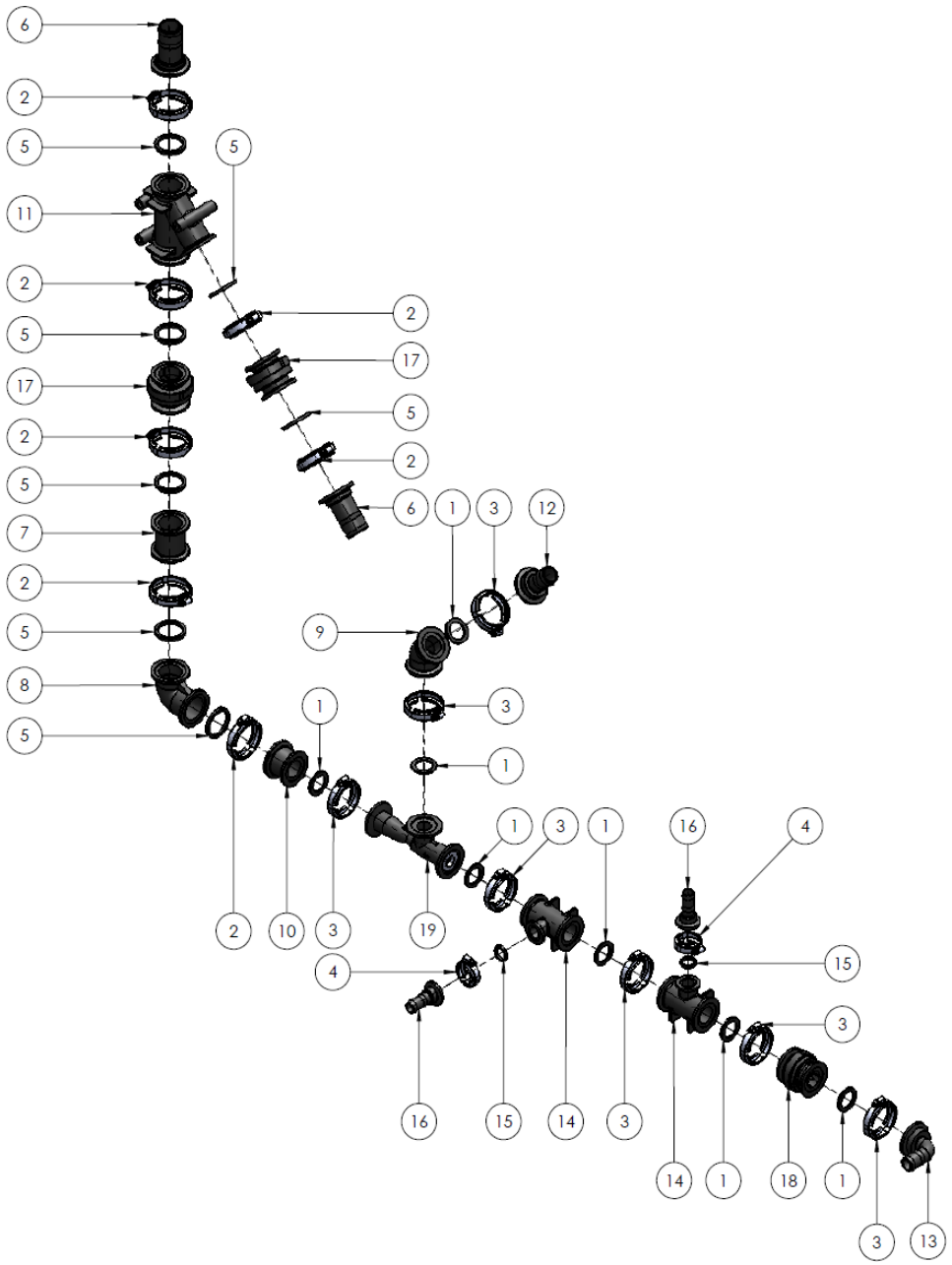

30Amp
12 V BATTERY
**MT90LOOM/PWR
**MT90LOOM/PWREXT
BP-609 SWITCH
BP-606 COMPRESSOR
**CBLOOM-COMP
NOTE:
** INCLUDED WITH CBLOOM-COMP
CBLOOM/1
UP-402 SENSOR
PUMP RPM
AR250 PUMP
SERVO VALVE
DUMP VALVE
PSI
FLOW METER
UP-409A CABLE
RELIEF VALVE
PRESSURE FILTER
DRAIN
BP-800-11-3 LOOM ASSY
BP-636-1 SWITCH
UP-424 (OPTION)
OPTIONAL A4622BA61717 FILLING FLOWMETER
UP-402 SENSOR
SPEED
CBLOOM/5
CBLOOM/9 (OPTION)
FENCEJET
MOTOR VALVES

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	BP-608B	AIRBAG SPRING S-21208	1
2	TFEL1438	ELBOW 1/4 X 3/8 TAIL	12
3	TFM3814	NIPPLE 3/8 x 1/4 BRASS	3
4	FM-NRV	NON RETURN VALVE 3/8"	1
5	BP-606	AIR COMPRESSOR AIRRIDE	1
6	TFT1414FF	TEE 1/4" FEMALE	4
7	BP-609	PRESSURE SWITCH	1
8	TFRB1418NPT	REDUCING BUSH 1/4 x 1/8	1
9	TFA1438F	TAIL BRASS 1/4 x 3/8 FM	1
10	L-G1421	63MM GAUGE	1
11	BP-620A	AIR TANK	1
12	BALL14MF2M	BALL VALVE 1/4 MF	2
13	TFM1238	NIPPLE 1/2 x 3/8	1
14	TFM1412	NIPPLE 1/4 x 1/2 BRASS	1
15	FM-403	REGULATOR ASSEMBLY	1
16	TFM1414	NIPPLE 1/4" BRASS	4
17	FM-NRV14	NON RETURN VALVE 1/4"	1
18	BP-622	RELIEF VALVE	1
19	TFA1438	TAIL 1/4 x 3/8 M	2
20	TFF14	PLUG 1/4" BRASS	3
21	BP-610	AIRRIDE VALVE SP0204	3
22	BP-808	AIR BAG HNC20127	2
23	BP-834	HOSE COMP - TANK	1
24	TR38HC	HOSE CLAPM 3/8"	14
25	HPW10	HOSE 10mm	14m
26	PR71-6	PANEL MOUNT KIT	1
27	TFEL1414MF	ELBOW 1/4M x 1/4FM	4
28	TFEL3838MF	ELBOW 3/8M x 3/8FM	1
29	A-A3412	HOSEBARB 3/4"M x 12MM TAIL	1
30	FM-FDSOCKET	3/4' GAL SOCKET	1
32	BP-623	AIR FILTER ASSEMBLY	1
33	TR12HC	1/2" HOSE CLAMP	2
34	HPW12	HOSE 12MM	4
35	TFEL1412	ELBOW 1/4M x 1/2 BARB	1

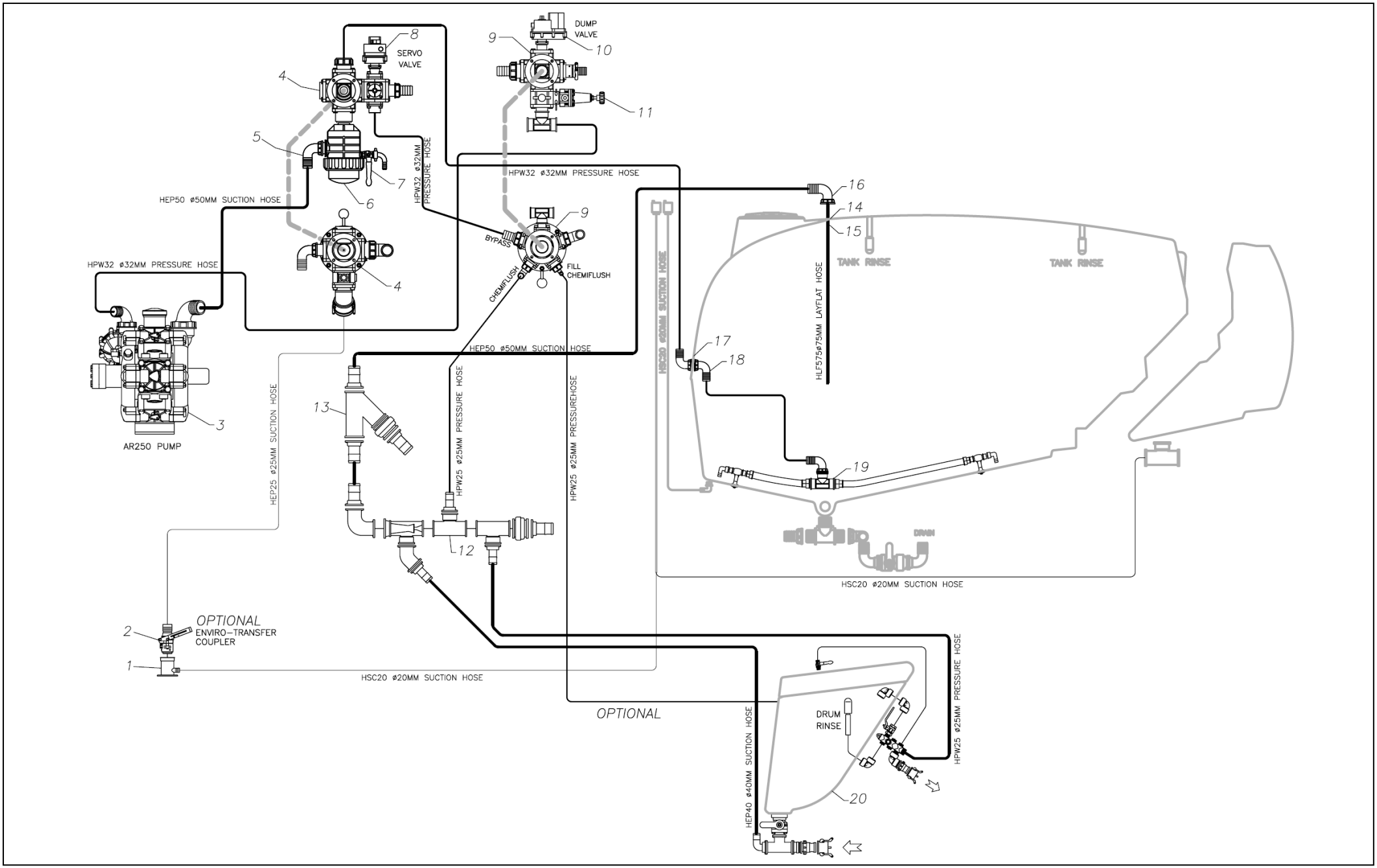


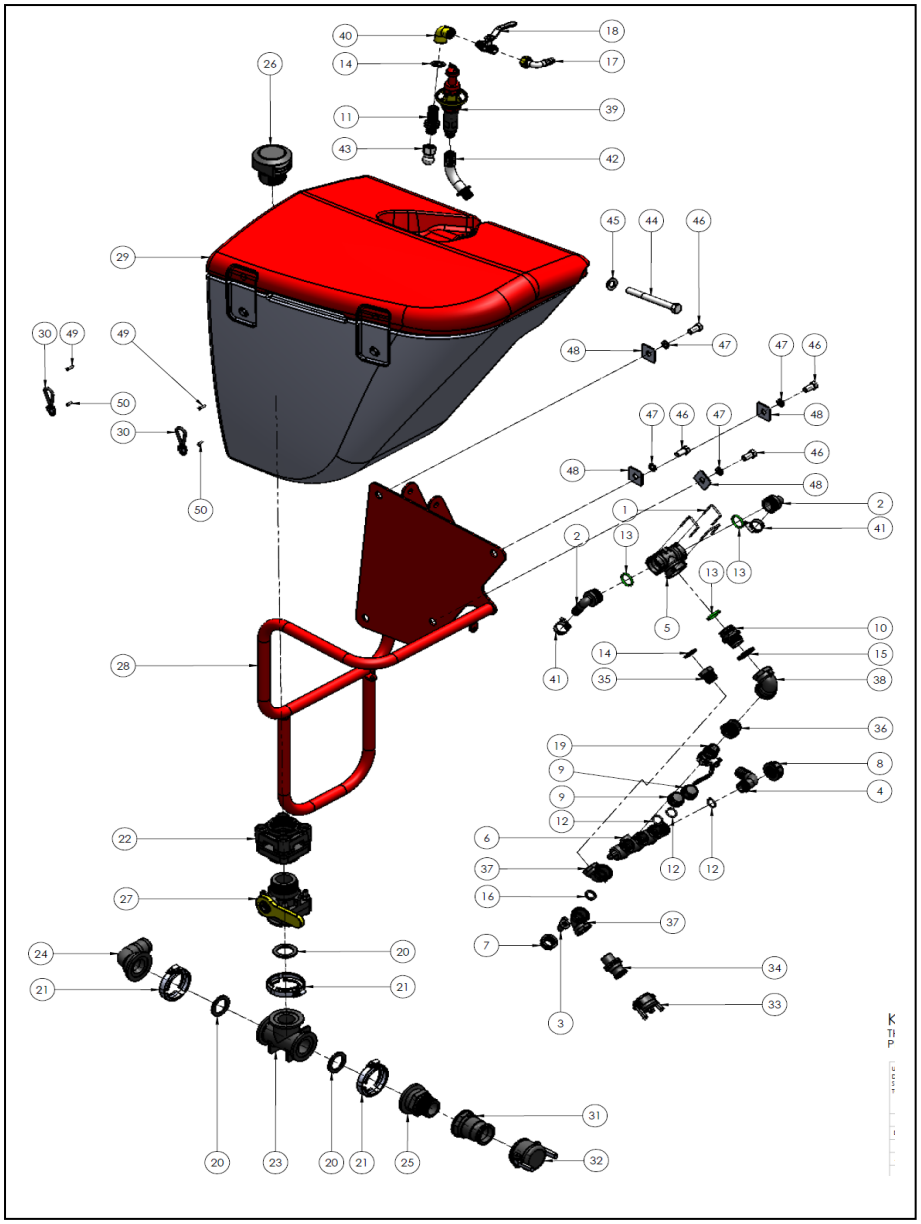

16
14
15
21
19
17
18
TANK RINSE
TANK RINSE
HLF75 ø75MM LAYFLAT HOSE
HEP50 ø50MM SUCTION HOSE
12
12
DRAIN
3
4
5
HEP50 ø50MM SUCTION HOSE
2
6
7
OFF
FILL FLUSH
FILL MAIN
8
11
1
9
10
2" QUICK FILL
HPW32 ø32MM PRESSURE HOSE
HEP50 ø50MM SUCTION HOSE
HEP40 ø40MM SUCTION HOSE
HEP40 ø40MM SUCTION HOSE
DRUM RINSE
HPW25 ø25MM PRESSURE HOSE
20

HOPPER VENTURI MANIFOLD

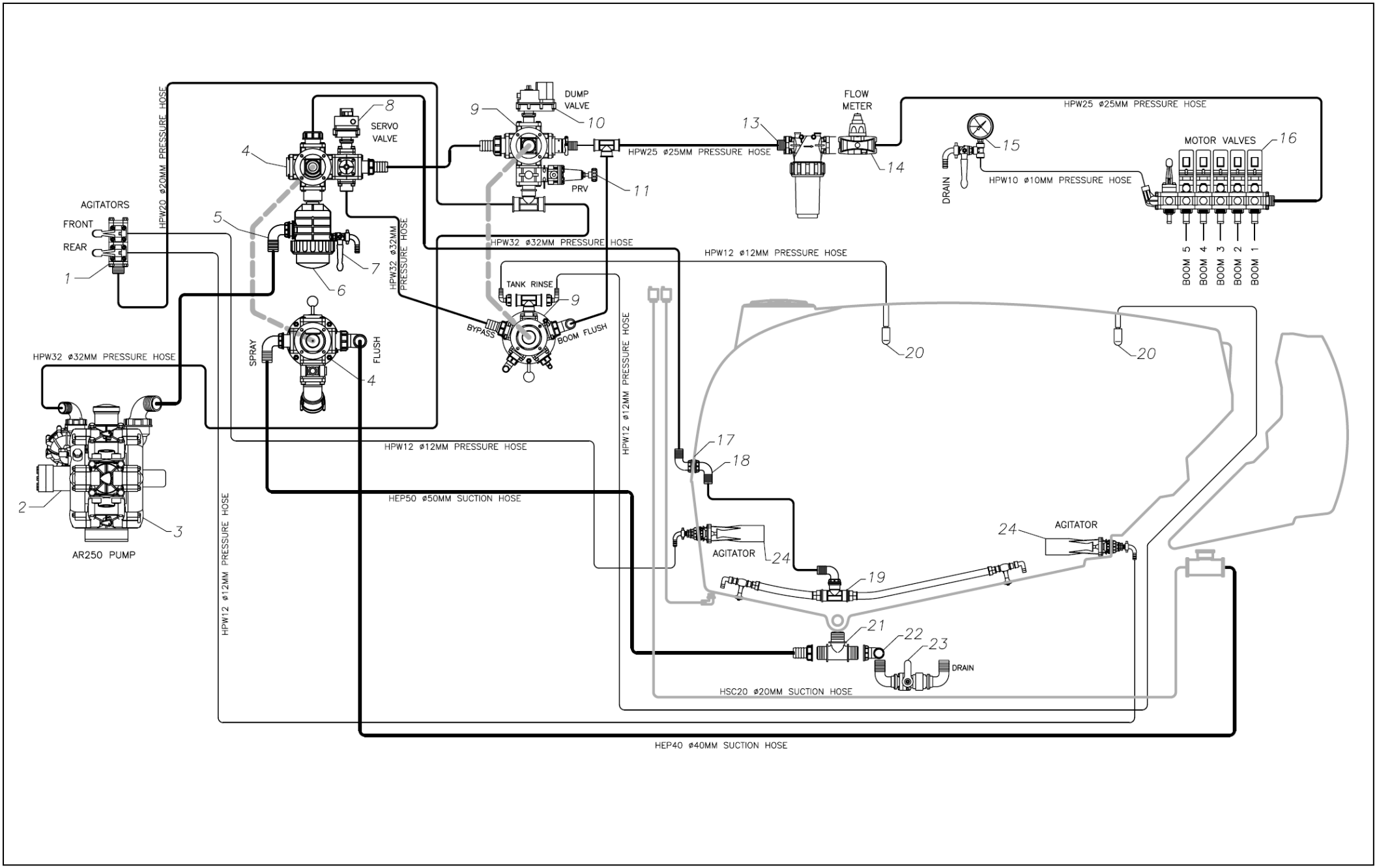


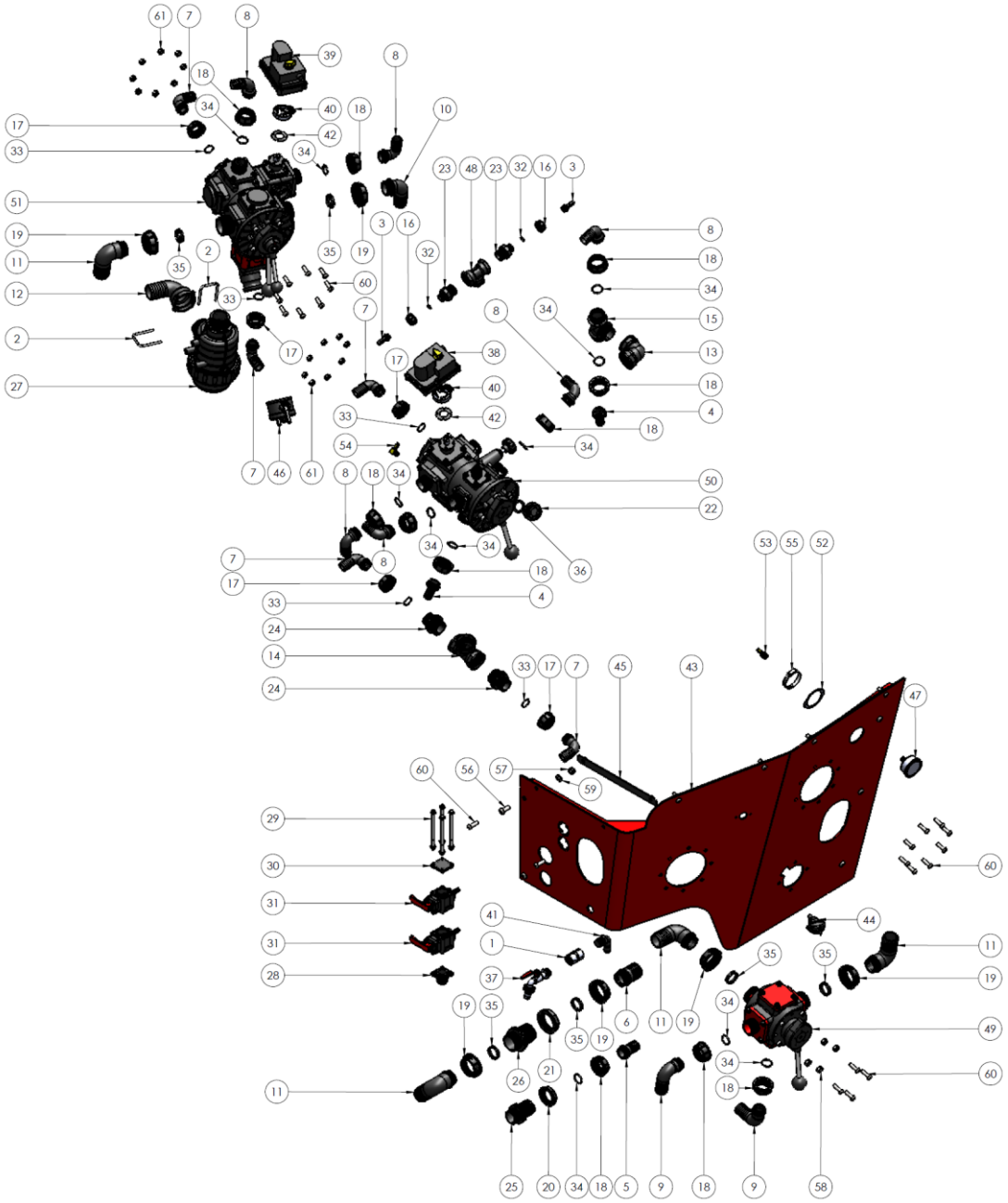
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	BJ150G	GASKET EPDM 200 SERIES	7
2	BJFC220	WORM SCREW CLAMP 2" FP	7
3	BJFC200	WORM SCREW CLAMP 2"	7
4	BJFC100	WORM SCREW CLAMP FLANGE 1" FP	2
5	BJM221G	MANIFOLD GASKET 2" FP RIB EPDM	7
6	BJM220BRB	MANIFOLD BARB 2" X 2" FP FLANGE	2
7	BJM220CPG	FULL PORT FLANGE 2"	1
8	BJM220CPG90	MANIFOLD COUPLING 2" FP X 2" FP	1
9	BJM200CPG45	FLANGE 2" 45 DEGREE	1
10	BJM220200CPG	MANIFOLD REDUCER 220 X 200	1
11	BJM220Y45	Y FLANGE 2" FULL PORT 45	1
12	BJM200150BRB	MANIFOLD BARB 2" X 1 1/2"	1
13	BJM200125BRB90	MANIFOLD ELBOW 2" X 1 1/4" BARB	1
14	BJM200100TEE	MANIFOLD TEE 2" X 1"	2
15	BJM101G	MANIFOLD GASKET 1" RIB EPDM	2
16	BJM100BRB	FLANGE TO 1 " BARB	2
17	BJMCV220	MANIFOLD CHECK VALVE ASSY 2" FP	2
18	BJMCV200	MANIFOLD CHECK VALVE ASSY 2"	1
19	BJMHV200	FLANGED VENTURI 1 1/2" HV150FLA	1


8
SERVO VALVE
4
5
7
6
HPW32 ø32MM PRESSURE HOSE
HEP50 ø50MM SUCTION HOSE
HPW32 ø32MM PRESSURE HOSE
4
AR250 PUMP
3
HEP25 ø25MM SUCTION HOSE
9
DUMP VALVE
10
11
HPW32 ø32MM PRESSURE HOSE
9
BYPASS
CHEMIFLUSH
FILL CHEMIFLUSH
HEP50 ø50MM SUCTION HOSE
13
HPW25 ø25MM PRESSURE HOSE
HPW25 ø25MM PRESSUREHOSE
12
16
14
15
TANK RINSE
TANK RINSE
HLF575ø675MM LAYFLAT HOSE
HSC20 ø20MM SUCTION HOSE
17
18
19
DRAIN
HSC20 ø20MM SUCTION HOSE
2
OPTIONAL
ENVIRO-TRANSFER COUPLER
1
HSC20 ø20MM SUCTION HOSE
OPTIONAL
DRUM RINSE
HEP40 ø40MM SUCTION HOSE
HPW25 ø25MM PRESSURE HOSE
20



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	A010004	MANIFOLD FORK T4	3
2	A119420	ELBOW T4M .20	2
3	A115313	ELBOW 13MM X FLAT SEAT	1
4	A116425	ELBOW 0.25 FOR FLY	1
5	A139044	TEE T4F	1
6	A152643	FITTING 6 WAY	1
7	A200030	FLY NUT 3/4"	1
8	A200040	FLY NUT 1"	1
9	A210030	CAP BLANK 3/4"	2
10	A249144	HOSETAIL T4M 1"M	1
11	A250021	NIPPLE 1/2"	1
12	AG10041	O RING 1"	3
13	AG11054V	O RING VITON	3
14	AG40002	FLAT SEAL 1/2" EPDM	2
15	AG40004	FLAT SEAL 1" EPDM	1
16	AG40013	FLAT SEAL EPDM 25DIA	1
17	B163.604.13	ELBOW 1/2" C/W HEX NUT 1/2"	1
18	B165.1501.7	BALL VALVE 1/2" X 1/2" LH	1
19	B176.1501.11	BALL VALVE 3/4" MALE FEMALE	1
20	BJ150G	GASKET 1 1/2"	3
21	BJFC200	NORM CLAMP FLANGE 2"	3
22	BJBF200BD	FLANGE TANK FITTING 2"	1
23	BJM200TEE	MANIFOLD TEE 2"	1
24	BJM200150BRB90	MANIFOLD ELBOW 2" X 1 1/2" BARB	1
25	BJM200150MPT	MANIFOLD 2" FLANGE- 1 1/2" MALE	1
26	BJVC200	ANTI VORTEX FITTING 2"	1
27	BJVSMT200CF	BALL VALVE 2" STUBBY FLANGE	1
28	BP-800-11-2	HOPPER BRACKET	1
29	BP-811	HOPPER TANK 100LT PEGASUS 8000	1
30	BP-811-1	ELASTIC TIE DOWN WITH ROUND HOOK	2
31	K-150-A	CAMLOCK 1 1/2" FEMALE THREAD "A"	1
32	K-150-CAP	CAMLOCK 1 1/2" CAP "DC" POLY	1
33	K-075-CAP	CAMLOCK 3/4" CAP "DC" POLY GLASS	1
34	K-075-F	CAMLOCK 3/4" MALE THREAD "F" POLY	1
35	PH4121	REDUCING BUSH 3/4" X 1/2"	1
36	PH4132	REDUCING BUSH 1" X 3/4"	1
37	PH4622	ELBOW 3/4" FEMALE	2
38	PH4633	ELBOW 1"	1
39	POL6M41169V	RINSING NOZZLE WITH SOV	1
40	TFEL1212F	ELBOW 1/2" BSPF X 1/2" BSPF	1
41	TR34HC	HOSE CLAMP 20MM 3/4" WORM DRIVE	2
42	UP-142B	STEM RINSING NOZZLE 100LT HOPPER	1
43	VSM-1/2-44	RINSING NOZZLE	1
44	M14X150	M14 X 150 BOLT HT ZP	2
45	M14FWASHER	M14 FLAT WASHER ZP	2
46	M12X25	M12 X 25 SET SCREW HT ZP	4
47	M12SWASHER	M12 SPRING WASHER ZP	4
48	40SQWASHER	40MM SQUARE WASHER	4
49	M4X16CSSCREW	M4 X 16 COUNTER SUNK HEAD SCREW S/S	2
50	M4X12BHSCREW	M4 X 12 BUTTON HEAD SCREW S/S	2

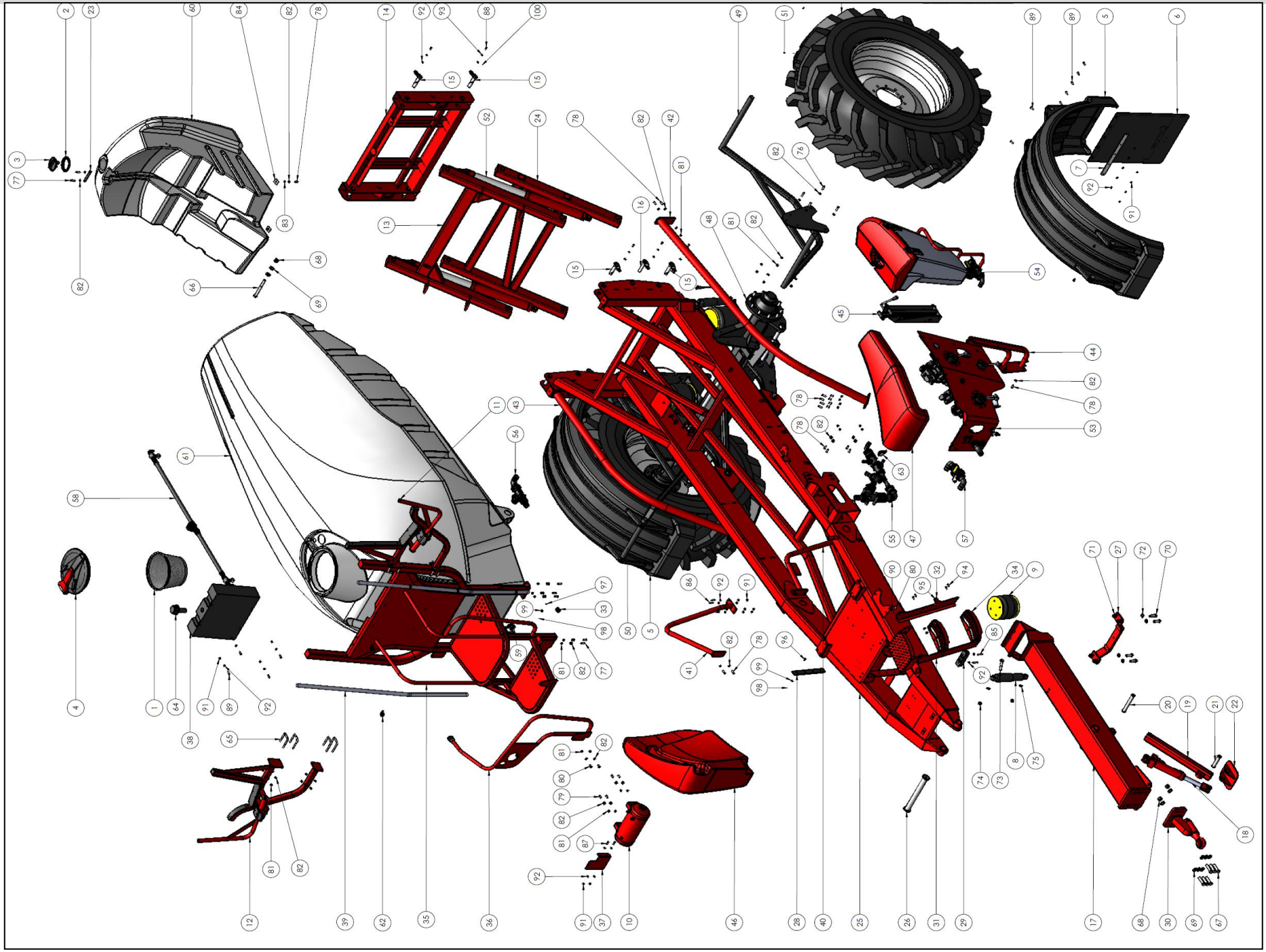

AGITATORS
FRONT
REAR
1
HPW20 ø20MM PRESSURE HOSE
SERVO VALVE
8
4
5
6
7
HPW32 ø32MM PRESSURE HOSE
DUMP VALVE
9
10
11
PRV
HPW25 ø25MM PRESSURE HOSE
FLOW METER
13
14
15
DRAIN
HPW10 ø10MM PRESSURE HOSE
MOTOR VALVES
16
BOOM 5
BOOM 4
BOOM 3
BOOM 2
BOOM 1
HPW12 ø12MM PRESSURE HOSE
TANK RINSE
BYPASS
BOOM FLUSH
SPRAY
FLUSH
HPW32 ø32MM PRESSURE HOSE
AR250 PUMP
2
3
HPW12 ø12MM PRESSURE HOSE
HEP50 ø50MM SUCTION HOSE
HPW12 ø12MM PRESSURE HOSE
20
17
18
AGITATOR
24
19
21
22
23
DRAIN
HSC20 ø20MM SUCTION HOSE
HEP40 ø40MM SUCTION HOSE



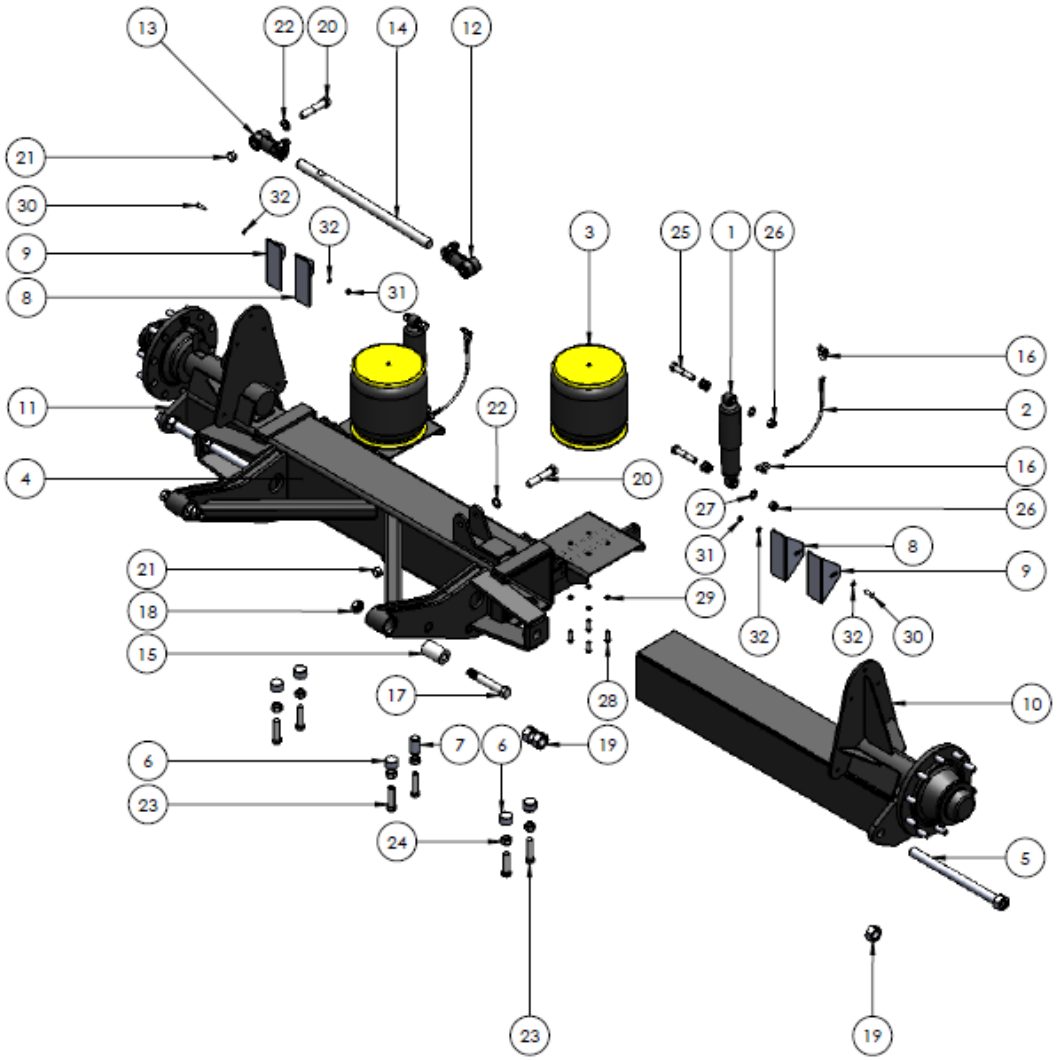
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	A-CS3400	SOCKET BSPF 3/4" NYLON	1
2	A010007	FORK D.5 INTERN.59	2
3	A106313	TAIL 3/4" TO 13MM	2
4	A106625	TAIL 1 1/2" TO 25MM	2
5	A106633	TAIL 1 1/2" TO 32MM	1
6	A106750	TAIL 2" TO 50MM	1
7	A116533	ELBOW 1 1/4" - 32MM HOSE	5
8	A116633	ELBOW (32MM HOSE)	6
9	A116640	ELBOW 1 1/2"	2
10	A116740	ELBOW	1
11	A116750	ELBOW 2"	4
12	A1190750	ELBOW T7F D.50	1
13	A120066	ELBOW 1 1/2" X 1 1/2" FEMALE THREAD	1
14	A130060	TEE 1 1/2" X 1 1/2" FEMALE THREAD	1
15	A1312060	TEE 1 1/2" MALE	1
16	A200030	FLY NUT 3/4"	2
17	A200050	FLY NUT 1 1/4"	5
18	A200060	FLY NUT 1 1/2"	11
19	A200070	FLY NUT 2"	6
20	A205060	BACK NUT 1 1/2"	1
21	A205070	BACK NUT 2"	1
22	A210050	BLANK CAP 1 1/4"	1
23	A240034	NIPPLE 1" - 3/4" REDUCING	2
24	A2402065	REDUCER NIPPLE 1 1/2"-1 1/4"	2
25	A250061	NIPPLE 1 1/2"	1
26	A250071	NIPPLE 2"	1
27	A3160F3	FILTER SUCTION T7 50MM	1
28	A463000.040	FLANGE 463 SERIES 1" BSP	1
29	A463000.920	MOUNTING KIT 2 VALVE	1
30	A463011.120	CLOSED ADAPTOR	1
31	A463051	VALVE MANUAL 13MM TAIL	2
32	AG10031	O RING 3/4"	2
33	AG10051	O RING 1 1/4"	5
34	AG10061	O RING 1 1/2"	11
35	AG10071	O RING 2"	12
36	AG40003	FLAT SEAL 3/4" EPDM	1
37	BALL34BIB	BALL BIBCOCK 3/4"	1
38	BJEV4100	MOTOR ON/OFF VALVE 1.25SEC 3 WIRE	1
39	BJEVR4102	MOTOR SERVO VALVE 6 SECTION 2 WIRE	1
40	BJFC100	WORM SCREW CLAMP FLANGE 1" FP	2
41	BJHB075-90	ELBOW 3/4" NPT X 3/4" BARB	1
42	BJMVE004	GASKET ELECTRIC MOTOR	2
43	BP-800-11	PANEL VALVE	1
44	BP-800-11-3	SWITCH & LOOM ASSY BOOM FLUSH	1
45	BP-806-1	BOLTING PLATE COVER	3
46	K-200-CAP	CAMLOCK 2" CAP "DC" POLY GLASS	1
47	L-G1421	GAUGE 63MM 0-1600KPA 1/4" CBM	1
48	PH4533	TEE 1" FEMALE THREAD	1
49	POLVTD90600	POLMAC 2" 5 WAY VALVE	1
50	POLVTDC6000	VALVE DOUBLE PRESSURE	1
51	POLVTDC7000	VALVE DOUBLE SUCTION	1
52	PR71-6	PANEL MOUNT KIT 63MM	1
53	TFA1438F	TAIL BRASS 1/4" BSPF X 3/8" TAIL	1
54	TFEL1438	ELBOW 1/4" BSPM X 3/8" TAIL	1
55	TR2HC	HOSE CLAMP 50MM 2" WORM DRIVE	1
56	M12X30BHSCREW	M12 X 30 BUTTON HEAD SCREW S/S	5
57	M12NNUT	M12 NYLOC NUT HT ZP	5
58	M12HNUT	M12 HEX NUT HT ZP	4
59	M12FWASHER	M12 FLAT WASHER ZP	5
60	M10X35BHSCREW	M10 X 35 BUTTON HEAD SCREW S/S	26
61	M10HNUT	M10 HEX NUT HT ZP	16

Chassis, Tank & Wheels

Assembly Drawings

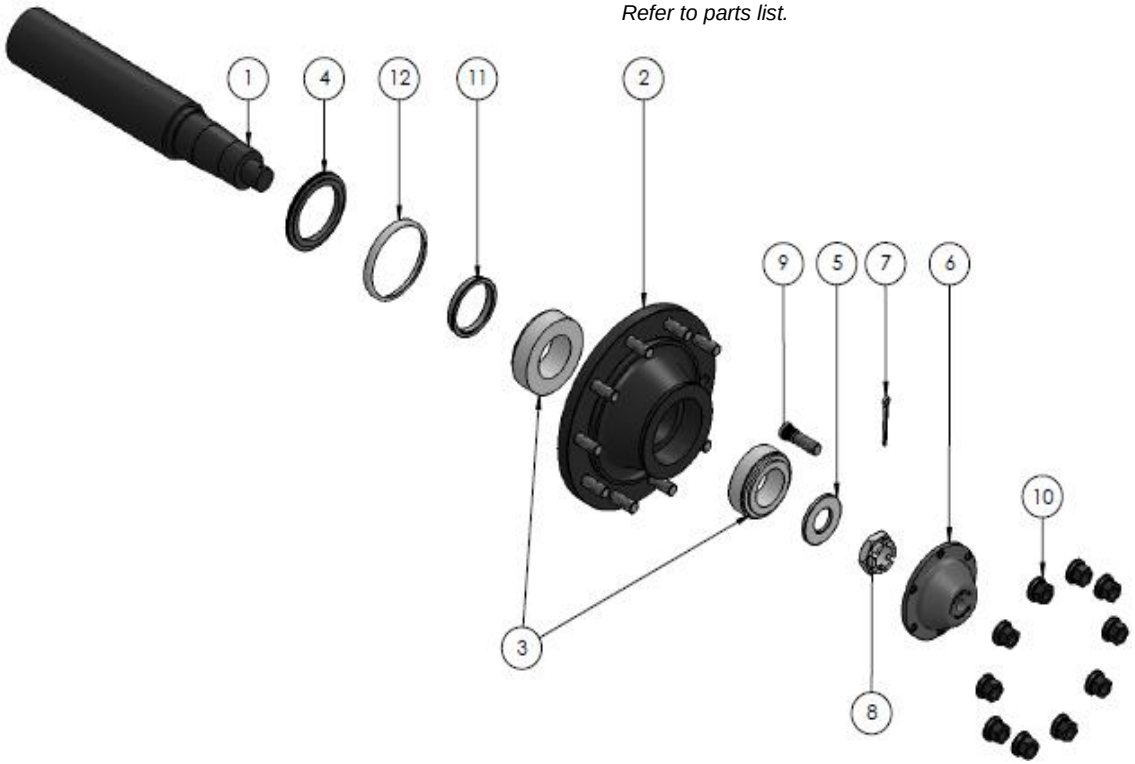


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	A300130	FILTER BASKET LARGE 254MM DEEP	1
2	A350401	LID RING 159MM	1
3	A352002	LID BREATHER SPRING VALVES	1
4	A356060	LID HINGED 180 DEGREE 455MM	1
5	BP-526D	MUDGUARD POLY 1150MM RADIUS	2
6	BP-542B	MUDFLAP 720 X 900 BLACK	2
7	BP-542B-1	MUDFLAP STRAP	2
8	BP-607	SHOCK ABSORBER AIR RIDE P126	1
9	BP-608B	AIRBAG SPRING	1
10	BP-620	AIR TANK HK JADE	1
11	BP-700-13L	PARKING BRACKET L.H. 33/36M AB191	1
12	BP-700-13R	PARKING BRACKET RH 33/36 AB191	1
13	BP-700-8A	UPPER PARALLELOGRAM ARM PEGASUS	1
14	BP-700-8C	REAR PARALLELOGRAM SECTION PEGASUS	1
15	BP-700-9AA	PIN 30MM X 155MM HAYLITE	8
16	BP-700-9BA	PIN 1" DIA X 155MM HAYLITE	2
17	BP-800-1	DRAWBAR 8000LT PEGASUS	1
18	BP-800-1-1	HYDRAULIC CYLINDER 2.5 X 8 JACK STAND	1
19	BP-800-1-2	DROP LEG ARM 8000LT PEGASUS	1
20	BP-800-1-2-1	PIN DROP LEG UPPER 8000LT PEGASUS	1
21	BP-800-1-2-2	DROP LEG BOTTOM PIN	1
22	BP-800-1-3	DROP LEG SWIVEL 8000LT PEGASUS	1
23	BP-800-12	PIN FLUSH TANK	1
24	BP-800-13	PARALLELOGRAM H FRAME LOWER 8000LT	1
25	BP-800-2	CHASSIS 8000LT PEGASUS	1
26	BP-800-2-1	PIN DRAWBAR 8000LT PEGASUS	1
27	BP-800-2-2	BRACKET MOUNTING AIRBAG DRAWBAR	1
28	BP-800-2-3	WEAR PAD DRAWBAR	2
29	BP-800-2-4	RUBBER BUFFER DRAWBAR 57601	1
30	BP-800-3	TOW EYE SWIVEL 8000LT PEGASUS	1
31	BP-800-4L	SIDE FRAME STEP LH	1
32	BP-800-4R	SIDE FRAME STEP RH	1
33	BP-800-4-1	STEP BUMPER (0666-002/0666-001)	1
34	BP-800-4-2	STEP CAST 8000LT PEGASUS	2
35	BP-800-6	PLATFORM 8000LT PEGASUS	1
36	BP-800-6-1	HAND RAIL PLATFORM	1
37	BP-800-6-2	BRACKET MOUNTING AIR COMPRESSOR	1
38	BP-800-6-4	TANK HAND WASH 35LT	1
39	BP-800-6-5	PERSPEX TUBE 38.1 X 34.9 X 3000MM	2
40	BP-800-7	LEFT FRONT RAIL	1
41	BP-800-8	SIDE RAIL FRONT RH	1
42	BP-800-9	SIDE RAIL REAR LH	1
43	BP-800-10	SIDE RAIL REAR RH	1
44	BP-800-11-1	BRACKET PANEL & HOPPER	1
45	BP-800-11-4	DROPDOWN BRACKET 8000LT PEGASUS	1
46	BP-805	TOOLBOX SIDE PANEL 8000LT PEGASUS	1
47	BP-806	VALVE PANEL COVER FIBREGLASS	1
48	BP-809	AIR RIDE ASSEMBLY 8000LT PEGASUS	1
49	BP-809-5L	MUDGUARD BRACKET LH	1
50	BP-809-5R	MUDGUARD BRACKET RH	1
51	BP-810	WHEEL ASSY 710 X 42 70R	2
52	HP-019B	PTE HYD DISPLACEMENT CYLINDER 3.0 X 20	2
53	KB-8001-2	PANEL SUB ASSEMBLY KIT	1
54	KB-8003	HOPPER 100LT 8000LT PEGASUS	1
55	KB-8004	HOPPER VENTURI MANIFOLD SUB ASSY	1
56	KB-8005	SUMP SUCTION & DRAIN KIT	1
57	KB-8006	SUMP DRAIN KIT	1
58	KB-8007	SPARGE TUBE KIT	1
59	L-H9556	RINSING SOCKET K2DV1-002	1
60	P600A-RAW	TANK 600LT FLUSHING TANK 8000 PEGASUS	1
61	P8000-RAW	TANK 8000LT POLY RAW PEGASUS	1
62	TRSGU138W5	P CLAMP 38MM RUBBER SLEEVE S/S	6
63	UP-134	U-BOLT EXHAUST CLAMP C11 2 3/8"	1
64	UP-167A	PLASTIC CAP W/ STRAINER STAUFF	1
65	XBMBB75	U-BOLT 75MM X 10	8
66	M24X220	M24 X 220 HEX BOLT HT ZP	1
67	M24X90	M24 X 90 HEX SCREW HT ZP	6
68	M24NNUT	M24 NYLOC NUT ZP	7
69	M24FWASHER	M24 FLAT WASHER ZP	14
70	M20X65	M20 X 65 SET SCREW HT ZP	4
71	M20NNUT	M20 NYLOC NUT HT ZP	4
72	M20FWASHER	M20 FLAT WASHER ZP	8
73	0.75X100UNCBOLT	3/4" X 4" UNC BOLT HT ZP	1
74	0.75UNCNNUT	3/4" UNC NYLOC NUT HT ZP	2
75	0.75FWASHER	3/4" FLAT WASHER ZP	7
76	M12X45	M12 X 45 SET SCREW HT ZP	8
77	M12X40	M12 X 40 SET SCREW HT ZP	13
78	M12X35	M12 X 35 SET SCREW HT ZP	26
79	M12X30	M12 X 30 SET SCREW HT ZP	4
80	M12X30BHSCREW	M12 X 30 BUTTON HEAD SCREW S/S	4
81	M12NNUT	M12 NYLOC NUT HT ZP	67
82	M12FWASHER	M12 FLAT WASHER ZP	118
83	M12SWASHER	M12 SPRING WASHER ZP	2
84	50SQWASHER	50MM SQUARE WASHER	2
85	M10X60BOLT	M10 X 60 BOLT HT ZP	2
86	M10X35	M10 X 35 SET SCREW HT ZP	8
87	M10X30	M10 X 30 SET SCREW HT ZP	2
88	M10X20	M10 X 20 SET SCREW HT ZP	10
89	M10X35BHSCREW	M10 X 35 BUTTON HEAD SCREW S/S	22
90	M10X20SHSCREW	M10 X 20 SOCKET HEAD SCREW S/S	2
91	M10NNUT	M10 NYLOC NUT HT ZP	32
92	M10FWASHER	M10 FLAT WASHER ZP	58
93	M10SWASHER	M10 SPRING WASHER ZP	10
94	M8X30BHSCREW	M8 X 30 BUTTON HEAD SCREW S/S	8
95	M6X25	M6 X 25 BOLT S/S	1
96	M6CSHEADSCREW	M6 X 25 COUNTER SUNK HEAD SCREW	8
97	M6X20BHSCREW	M6 X 20 BUTTON HEAD SCREW S/S	1
98	M6NNUT	M6 NYLOC NUT	10
99	M6FWASHER	M6 FLAT WASHER ZP	12
100	M6GNIPPLE	M6 GREASE NIPPLE	10



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	BP-607	SHOCK ABSORBER AIR RIDE P126	2
2	BP-617A	LIMIT ROPE 6.3MM X 420LG	2
3	BP-808	AIR BAG HNC20127	2
4	BP-809-1	AXLE HOUSING 8000LT PEGASUS	1
5	BP-809-1-2-13	M36 THREADED ROD	2
6	BP-809-1-1-19	AXLE LOCK BLOCK	5
7	BP-809-1-1-21	SPIGOT	1
8	BP-809-1-1-23	PACKER PLATE 5MM	2
9	BP-809-1-1-24	PACKER PLATE 3MM	2
10	BP-809-1-2L	STUB AXLE ASSEMBLY LH	1
11	BP-809-1-3R	STUB AXLE ASEMBLY RH	1
12	BP-809-2L	TIE ROD END LH BUSHED 7/8"	1
13	BP-809-2R	TIE ROD END RH BUSHED 7/8"	1
14	BP-809-3	SUSPENSION TIE ROD	1
15	BP-809-4	FLEXIBLE BUSH AIR RIDE SUSPENSION	2
16	MP-564	DEE SHACKLE SIZE 10	4
17	WT1234	AIR RIDE AXLE BOLT M30 X 190	2
18	WT1235NL	AIR RIDE AXLE NYLOC NUT M30	2
19	M36HNUT	M36 HEX NUT	6
20	1.00X5UNCBOLT	1/2" X 1 1/2" UNC BOLT HT ZP	2
21	1.00UNCHNUT	1" UNC HEX HALF NUT	2
22	1.00FWASHER	1" FLAT WASHER ZP	2
23	M24X75	M24 X 75 HEX SCREW HT ZP	6
24	M24HNUT	M24 HEX NUT HT ZP	6
25	0.75X100UNCBOLT	3/4" X 4" UNC BOLT HT ZP	4
26	0.75UNCNNUT	3/4" UNC NYLOC NUT HT ZP	4
27	0.75FWASHER	3/4" FLAT WASHER ZP	20
28	0.50X1.50UNCSCREW	1/2" X 1 1/2" UNC SCREW HT ZP	8
29	M12SWASHER	M12 SPRING WASHER ZP	8
30	M10X40	M10 X 40 SET SCREW HT ZP	2
31	M10NNUT	M10 NYLOC NUT HT ZP	2
32	M10FWASHER	M10 FLAT WASHER ZP	4

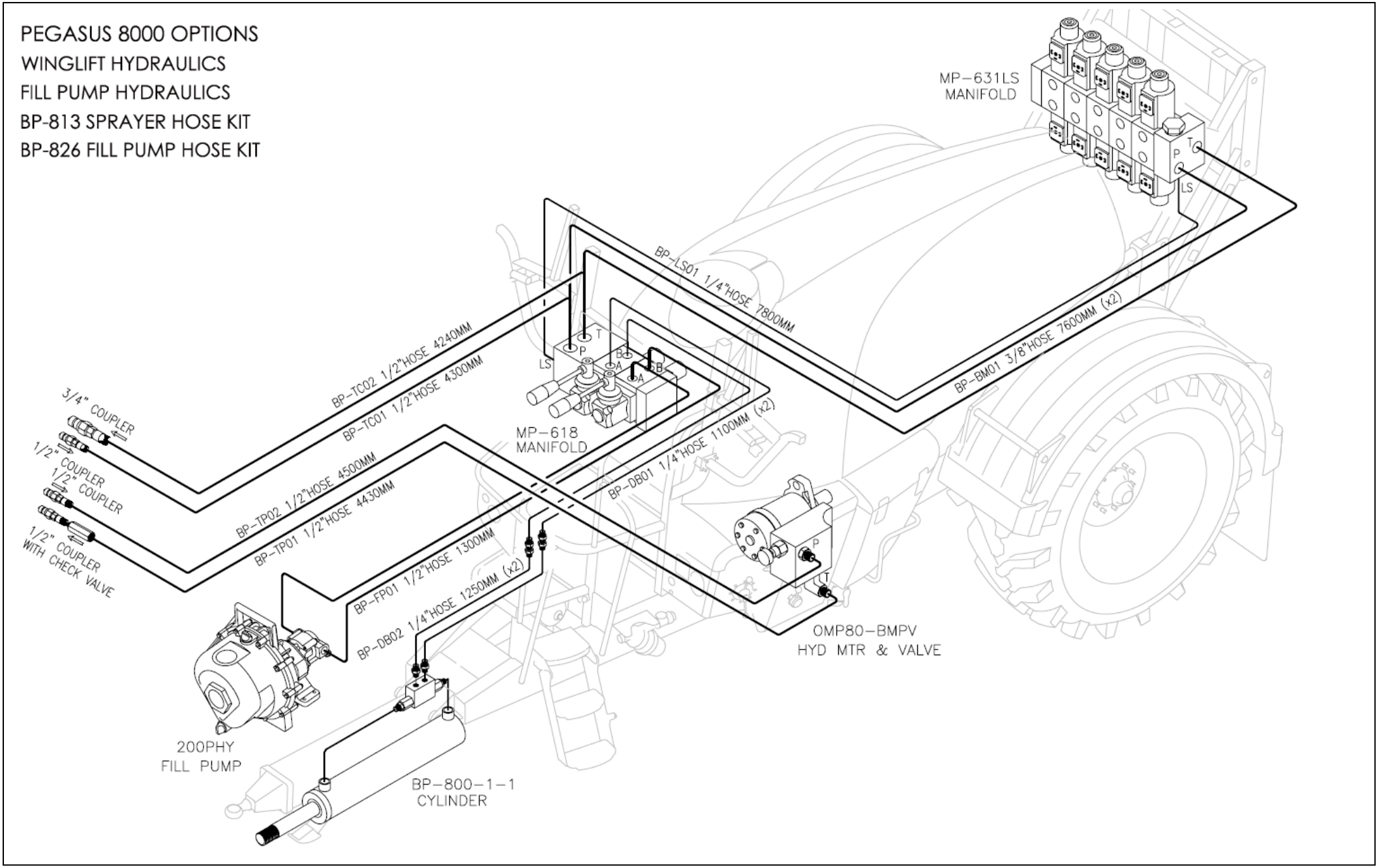
Note: Drawing is for illustration purpose only
Refer to parts list.

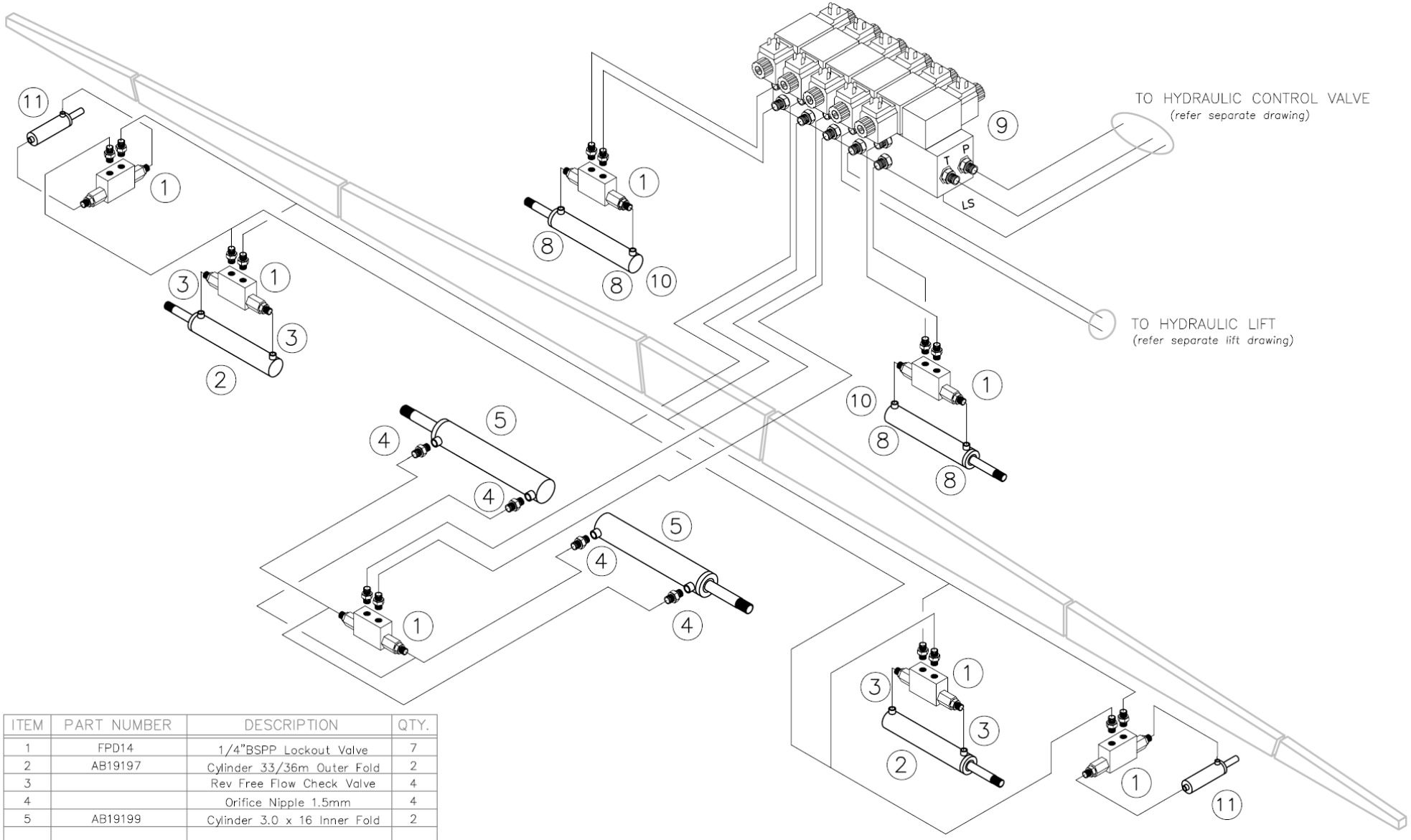


STUB AXLE BP-809-1

Item	Part No.	Description
1	BP-809-1-1	STUB 110 ROUND x 627LG
2	BP-809-1-2	WHEELHUB 10/335 PCD
3	BP-809-1-3	BEARING KIt 33217/33215
4	BP-809-1-4	TRIPLE LIP SEAL 150x110x12mm
5	BP-809-1-5	WASHER O/D 96x8
6	BP-809-1-6	DUST CAP *(6 screws items 13 and 14)*
7	BP-809-1-7	SPLIT PIN 80x8mm
8	BP-809-1-8	SLOTTED NUT M45 X 2
9	BP-809-1-9	WHEEL STUD M22x1.5x85
10	BP-809-1-10	WHEEL NUT M22x1.5
11	BP-809-1-11	SEAL RING 95x110.5x16.5mm
12	BP-809-1-12	WEAR RING (to suit triple lip seal)
13	BP-809-1-13	SOCKET HEAD CAP SCREWS M8x20 (*not shown*)
14	BP-809-1-14	M8 RIB LOCK WASHERS (*not shown*)

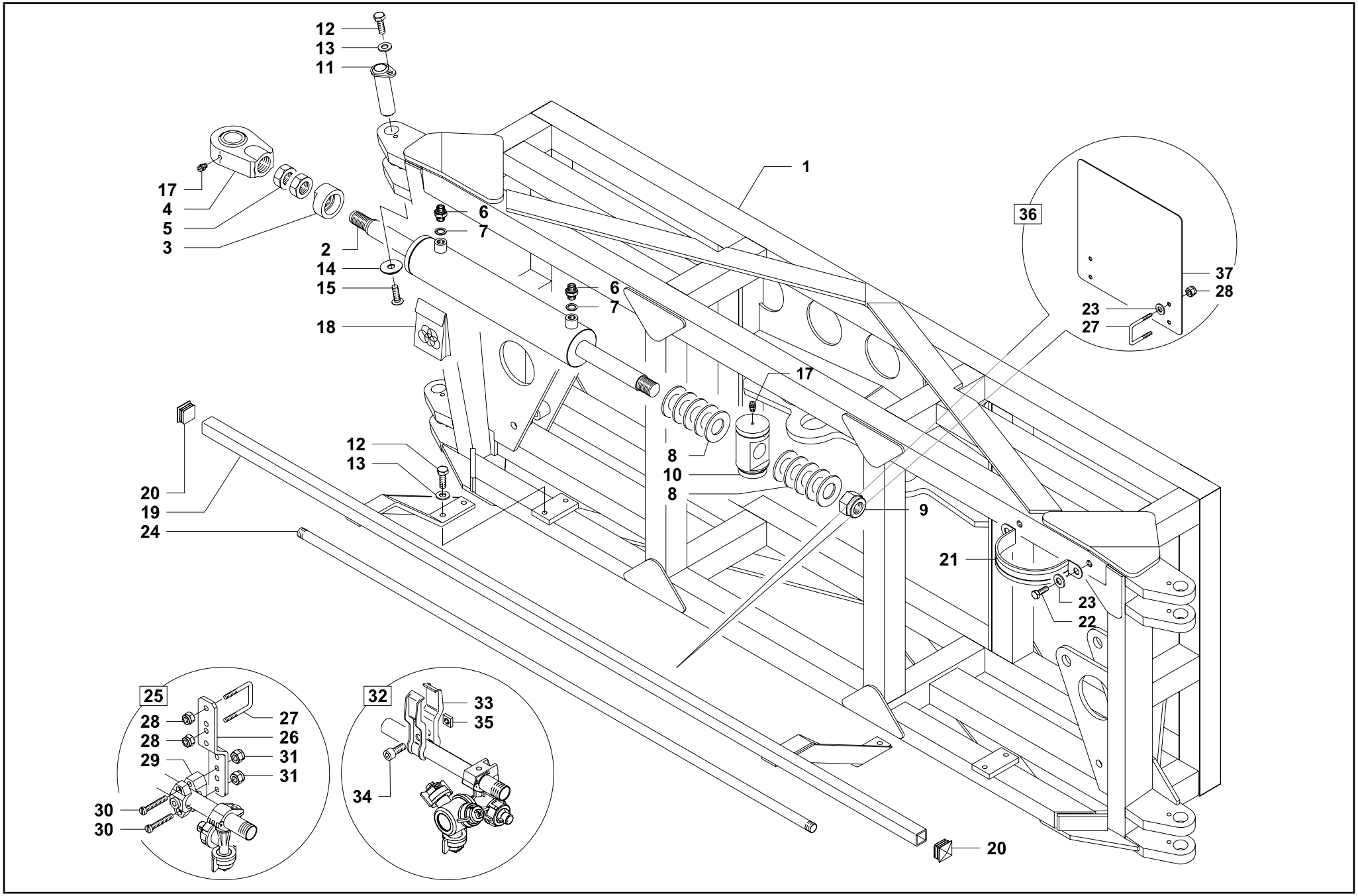
PEGASUS 8000 OPTIONS
WINGLIFT HYDRAULICS
FILL PUMP HYDRAULICS
BP-813 SPRAYER HOSE KIT
BP-826 FILL PUMP HOSE KIT





ITEM	PART NUMBER	DESCRIPTION	QTY.
1	FPD14	1/4"BSPP Lockout Valve	7
2	AB19197	Cylinder 33/36m Outer Fold	2
3		Rev Free Flow Check Valve	4
4		Orifice Nipple 1.5mm	4
5	AB19199	Cylinder 3.0 x 16 Inner Fold	2
8		Orifice Nipple 1.5mm	4
9	MP-631LS	Hyd Valve Manifold 5 Function	1
10	AB19100-A-3	Cylinder 33/36m G-var	2
11	AB20800	Hyd Cylinder Outer fold Lock	2

33/36m BOOM G-VAR OPTION
HYDRAULIC FOLD WITH WINGLIFT OPTION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30.5 metre Boom Centre Section Parts

Pos	Part No	Description	Qty
1	*GBBG001108*	*30m CENTRE SECTION*	*1*
2	GB703570018V	HYDRAULIC RAM	2
3	*GB500300032V*	*M30 SPACER NUT*	*2*
4	GBBG001752	M30 BALL JOINT	2
5	*GB905215028Z*	*M30 LOCK NUT*	*4*
6	GB570500011Z	1/4" NIPPLE 1.5 ORIFICE	4
7	*GB50243113*	*COPPER WASHER*	*4*
8	GB913671040	BELLVILLE WASHER	152
9		M30 NYLOC NUT (ZINC)	2
10	*GB500100127Z*	*CYLINDER MOUNT*	*2*
11	GBBG000024	PIN	4
12		M10 x 20mm BOLT (ZINC)	8
13		10mm SPRING WASHER	8
14	GB500400004Z	COUNTERSUNK WASHER	4
15	GB900710025Z	COUNTERSUNK SCREW	4
17	*GB919800020*	*GREASE NIPPLE*	*4*
18	GB001117	SEAL KIT	1
19	*GB201800415V*	*C/SEC RAIL MOUNT BRACKET*	*1*
20	*GB950130030*	*END CAP*	*2*
21	*GB950200059*	*CABLE RETAINER*	*2*
22		M6 x 16mm BOLT (ZINC) 8.8	8
23		M6 x 18mm WASHER (ZINC)	8
24	GB550500500	5 HOLE SPRAY RAIL	1
25	GB999900100	SPRAY RAIL MOUNT KIT	3
26	*GB201800418V*	*SPRAY RAIL MOUNT BRACKET*	*3*
27	*GB500500004Z*	*M6 U BOLT*	*3*
28		M6 NYLOC NUT (ZINC)	6
29	*GBA00425130*	*2 PIECE RAIL CLAMP*	*3*
30		M6 x 40mm SCREW STAINLESS	6
31		M6 NYLOC NUT STAINLESS	6

Pos	Part No	Description	Qty
36	*GB999900467*	*WARNING LABEL PLATE KIT*	*1*
37	*GB201800065V*	*WARNING LABEL PLATE*	*1*

NOTE

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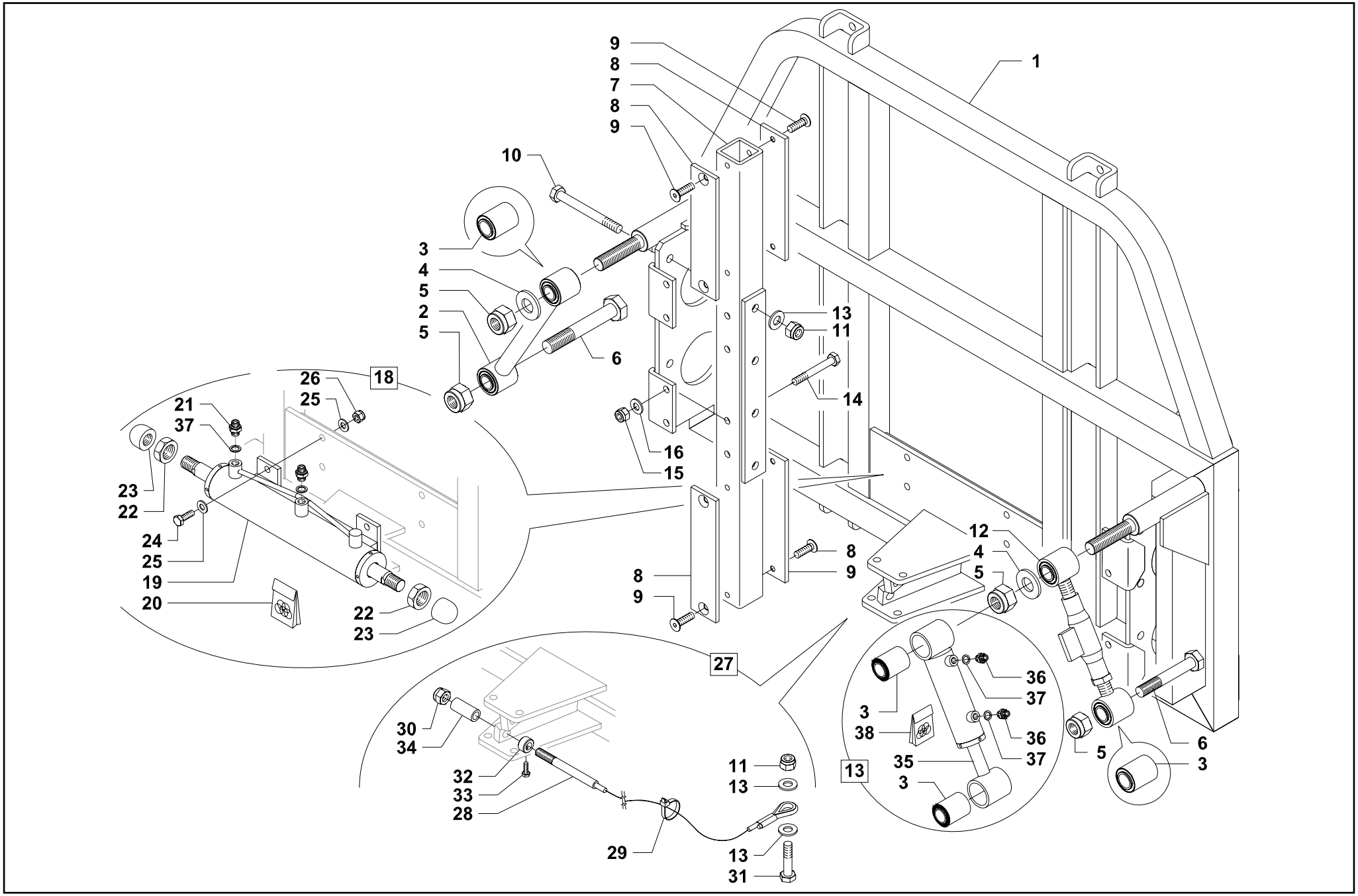
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30.5 metre Boom Self Levelling Parts

Pos	Part No	Description	Qty
1	*GB382000050V*	*SELF LEVELLING FRAME*	*1*
2	GB993806001V	TIE ROD ASSY.	2
3	GB950300004	FLEXIBLE BUSH	4
4	GB500400019Z	M24 WASHER	4
5	GB905400024	M24 NYLOC NUT	4
6		M24 x130mm BOLT (ZINC) 8.8	2
7	*GB382000075V*	*WEAR PAD BRACE*	*2*
8	GB382000078	WEAR PAD	8
9	GB900710025Z	COUNTERSUNK SCREW	16
10		M14 x 100mm BOLT (ZINC) 8.8	8
11		M14 NYLOC NUT (ZINC)	12
12	GB993806002Z	ADJUSTABLE TIE ROD ASSY.	1
13		M14 WASHER (ZINC)	12
14		M12 x 90 BOLT (ZINC) 8.8	8
15		M12 NYLOC NUT (ZINC)	8
16		M12 WASHER (ZINC)	16
18	GB997000018	LOCK RAM KIT	1
19	*GB702550023V*	*LOCK RAM*	*1*
20	*GB996000179*	*SEAL KIT*	*1*
21	GB570500011Z	1/4” NIPPLE 1.5 ORIFICE	2
22	GB905200022Z	M22 NUT	2
23	GB501100007	LOCKING RAM END PIECE	2
24		M10 x25mm BOLT (ZINC) 8.8	4
25		M10 WASHER (ZINC)	8
26		M10 NYLOC NUT (ZINC)	4
27	*GBBG001395*	*STRAINER WIRE KIT*	*1*
28	*GB500700069*	*STRAINER WIRE*	*2*
29		CABLE TIE	8
30		M14 NUT FINE THREAD (1.5)	2
31		M14 x 60mm BOLT (ZINC) 8.8	2
32	*GB919800061Z*	*LOCKING COLLAR*	*2*
33		M6 x20mm BOLT (ZINC	2

Pos	Part No	Description	Qty
34	*GBBG001396*	*SPACER*	*2*
35	*GB702550031V*	*LEVELLING RAM*	*1*
36	GB570500007Z	1/4” NIPPLE 0.7 ORIFICE	2
37	*GB600500001*	*COPPER WASHER*	*4*
38	*GB996000192*	*SEAL KIT*	*1*

NOTE

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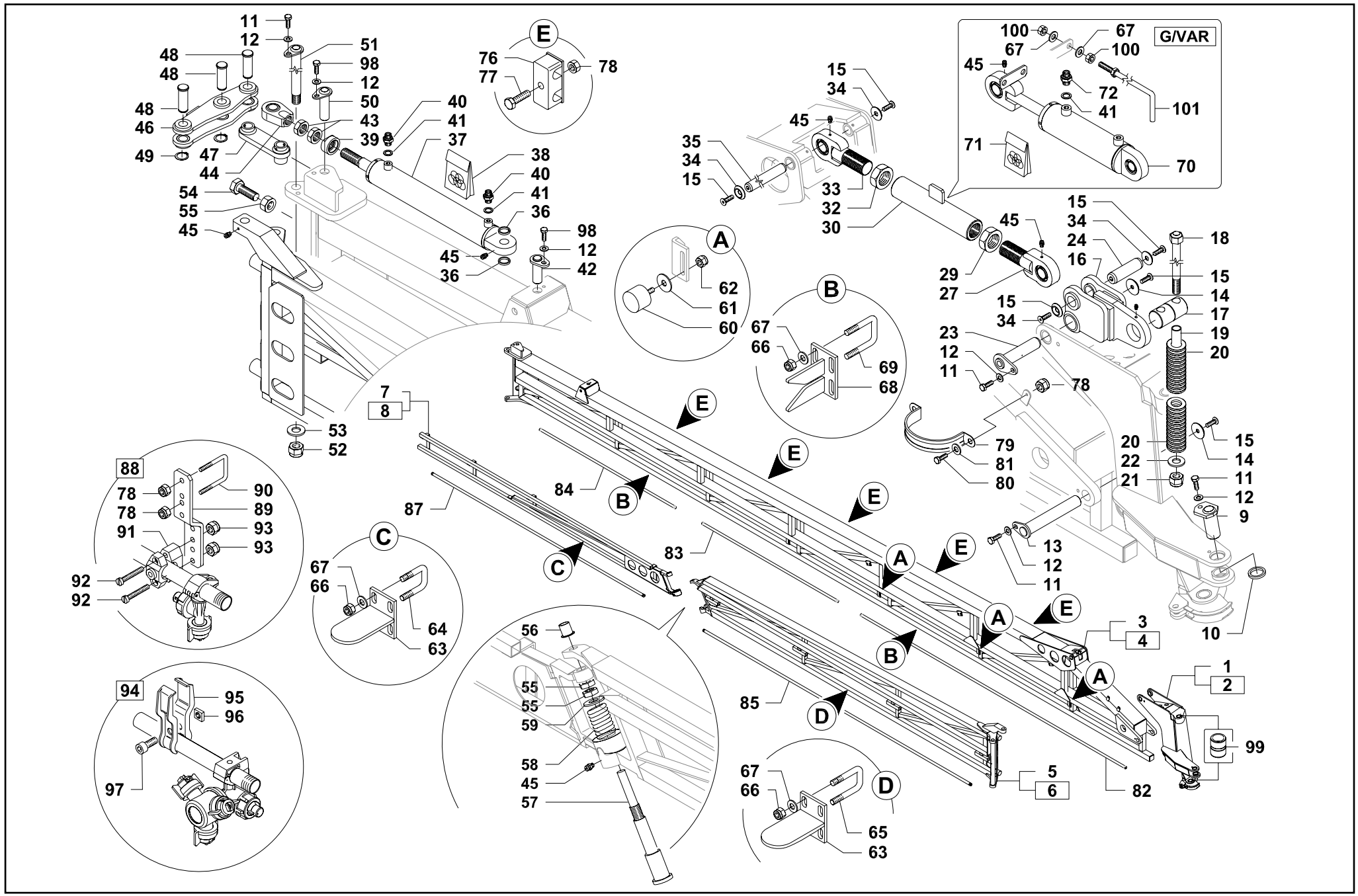
G/VAR

GBCOMPL-305-LHA or RHA - Boom Non Gvar & Gvar 30m

Pos	Part No	Description	Qty
1	*GBBG026414*	*INNER PIVOT R/H V2*	*1*
2	*GBBG026415*	*INNER PIVOT L/H V2*	*1*
3	*GBBG025150*	*INNER BOOM ARM R/H V2*	*1*
4	*GBBG025151*	*INNER BOOM ARM L/H V2*	*1*
5	GB023000050V	OUTER BOOM ARM R/H	1
6	GB023000051V	OUTER BOOM ARM L/H	1
7	GB022800080V	BREAKAWAY ARM R/H	1
8	GB022800081V	BREAKAWAY ARM L/H	1
9	GB392000330V	PIN	2
10	GB392000335Z	SPACER	2
11	GB900110025Z	M10 x 20mm BOLT (ZINC) 8.8	10
12	GB907200010Z	10mm SPRING WASHER	12
13	GB500100144VR	BOTTOM PIN	2
14	GB500400008Z	COUNTERSUNK WASHER	4
15	GB900710025Z	COUNTERSUNK SCREW	12
16	GBBG006429	PIN HOUSING	2
17	*GB500100145Z*	*STRAINER PIN*	*2*
18	*GB023200209Z*	*STRAINING BOLT*	*2*
19	*GB500200037Z*	*SLEEVE*	*2*
20	GB919900043V	SPRING	4
21	*GB905400020*	*M30 NYLOC NUT (ZINC)*	*2*
22	*GB907120046Z*	*M30 WASHER (ZINC)*	*2*
23	GB500100058V	PIN	2
24	GB500100044	PIN	2
27	GBBG017659	L/H BALL JOINT	2
29	GBBG017662	M30 NUT L/H THREAD	2
30	GBBG017657	DUAL THREADED TURNBUCKLE	2
32	GBBG017660	M30 NUT R/H THREAD	2
33	GBBG017658	R/H BALL JOINT	2
34	GB500400004Z	COUNTERSUNK WASHER	8
35	GBBG006427	PIN	2
36	GB500200029Z	SPACER	4
37	*GBBG024772*	*HYDRAULIC RAM*	*2*
38	*GBBG024776*	*SEAL KIT*	*2*
39	GB003273	M27 SPACER LOCK NUT	2
40	GB570500010Z	1/4” NIPPLE 1.0 ORIFICE	4
41	GB600500001	COPPER WASHER	6*
42	GB500100055V	PIN	2
43	GB905220027Z	M27 PLAIN NUT (ZINC)	4
44	GB920100043Z	BALL JOINT M27	2
45	*GB919800020*	*GREASE NIPPLE*	*14**
46	GB006461	LINK ARM	4
47	*GB023200216V*	*LINK PIVOT*	*2*
48	GB006426	PIN	6
49	GB000187	CIRCLIP	6
50	GB500100110V	PIN	2
51	GB500100146V	PIN	2
52	GB905400024	M24 NYLOC NUT (ZINC)	2
53	*GB907025044Z*	*M24 WASHER (ZINC)*	*2*
54	GB900124050Z	M24 BOLT	2
55	GB905200024Z	M24 PLAIN NUT (ZINC)	6
56	GB500200049	CAP WASHER	2
57	GB500100111Z	BREAKAWAY PIN	2
58	GB919900023Z	BREAKAWAY SPRING	2
59	GB500400019Z	M24 WASHER (LARGE)	2
60	GB950200004	RUBBER STOPPER 20mm	4
60	GB950200001	RUBBER STOPPER 30mm	2
61	*GB90710824Z*	*M8 X 24mm WASHER*	*6*
62	*GB905400008*	*M8 NYLOC NUT (ZINC)*	*6*
63	*GB022400053V*	*WING SUPPORT MALE*	*2*
64	XBMBB32	32mm U BOLT	4
65	XBMBB	40mm U BOLT	4
66	*GB905400010*	*M10 NYLOC NUT (ZINC)*	*16*
67	GB907010021Z	M10 WASHER (ZINC)	18*
68	*GB022400054V*	*WING SUPPORT FEMALE*	*2*
69	XBMBB50	50mm U BOLT	8
70	GBBG006474	GVAR RAM	2
70	MP-610/30-2	LOCK VALVE KIT FOR GVAR RAM	2
71	GB996000418	SEAL KIT	2
72	GB570500011Z	1/4” NIPPLE 1.5 ORIFICE	2
76	GB950200058	HOSE RETAINER	10
77	GB900306035Z	M6 x 35mm BOLT (ZINC)	10
78	*GB905300006*	*M6 NYLOC NUT (ZINC)*	*66*
79	*GB950200059*	*CABLE RETAINER*	*2*
80	*GB900106016Z*	*M6 x 35mm BOLT (ZINC)*	*4*
81	*GB907106018Z*	*M6 NYLOC NUT (ZINC)*	*4*
82/83	GB550400500	4 HOLE SPRAY RAIL	4
84/85	GB550700500	7 HOLE SPRAY RAIL	4
87	GB550600500	6 HOLE SPRAY RAIL	2
88	GB999900100	SPRAY RAIL SUPPORT KIT	26
89	*GB201800418V*	*SPRAY RAIL BRACKET*	*26*
90	*GB500500004Z*	*M6 U BOLT*	*26*
91	A425130	2 PIECE RAIL CLAMP	26
92	*GB904506040X*	*M6 x 40mm SCREW STAINLESS*	*52*
93	*GB905400006X*	*M6 NYLOC NUT STAINLESS*	*52*
98	*GB900110020Z*	*BOLT*	*2*
99	GBBG000067	BUSHING	2
100	*GB905100010Z*	*M10 PLAIN NUT (ZINC)*	*4*
101	*GB27160045V*	*LEVELLER SIGHT GAUGE*	*2*

* Quantities may vary between Gvar and Standard Booms

NOTE

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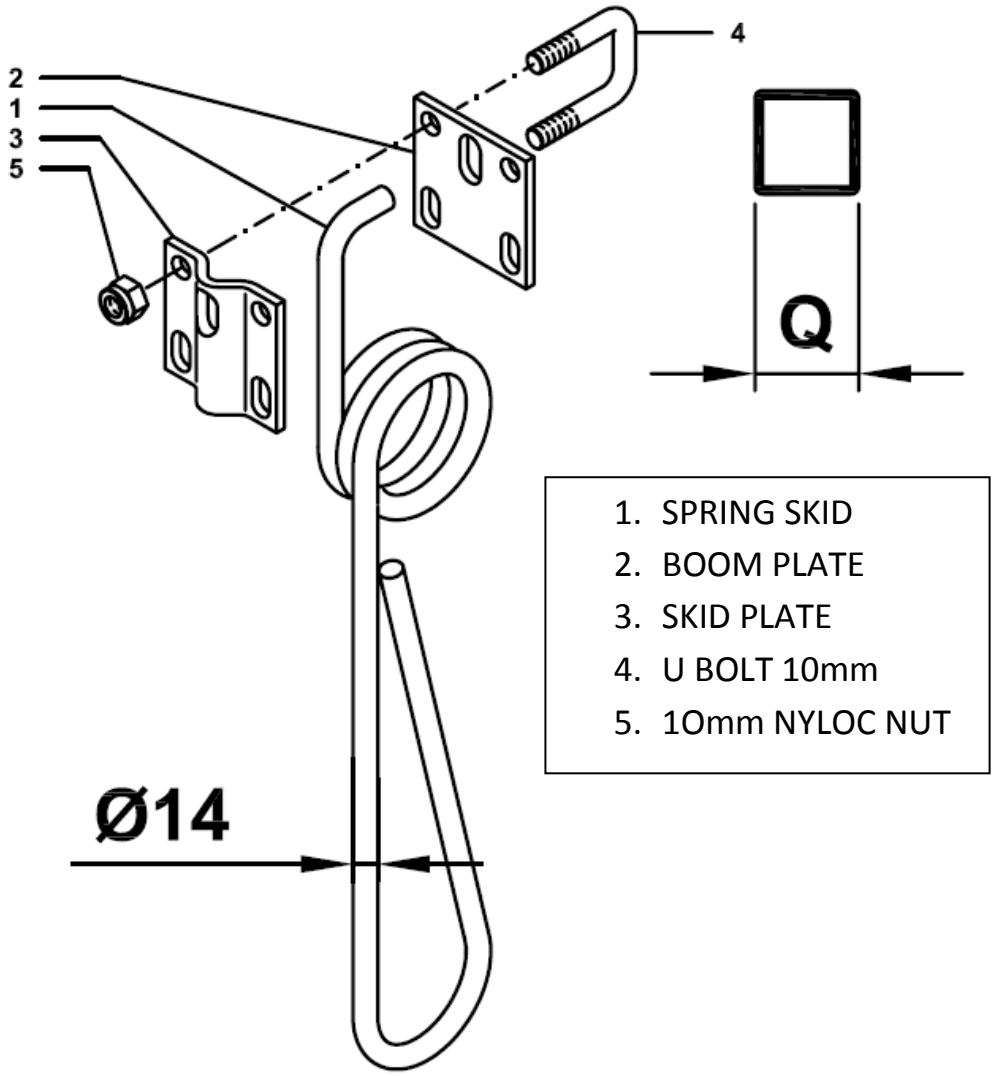
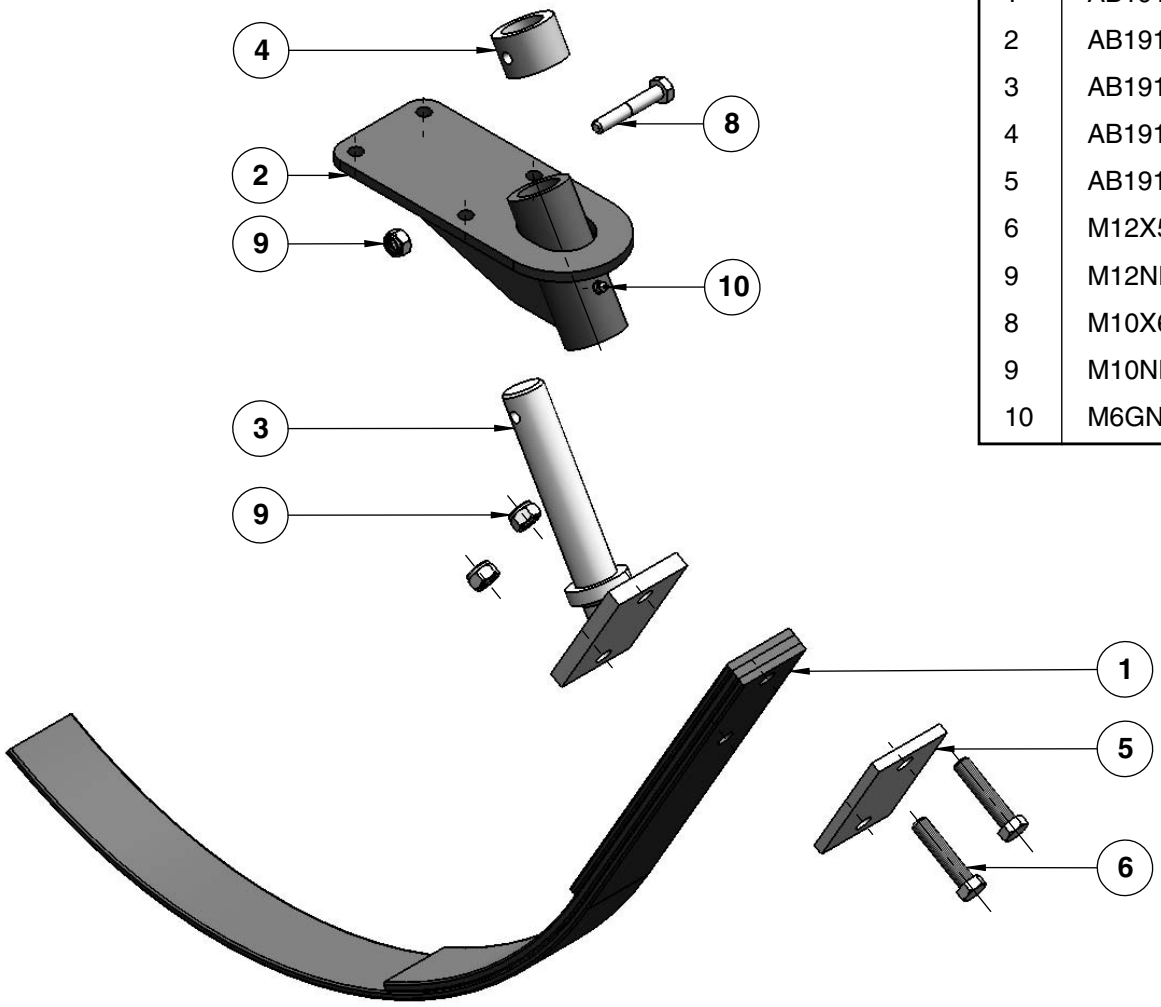
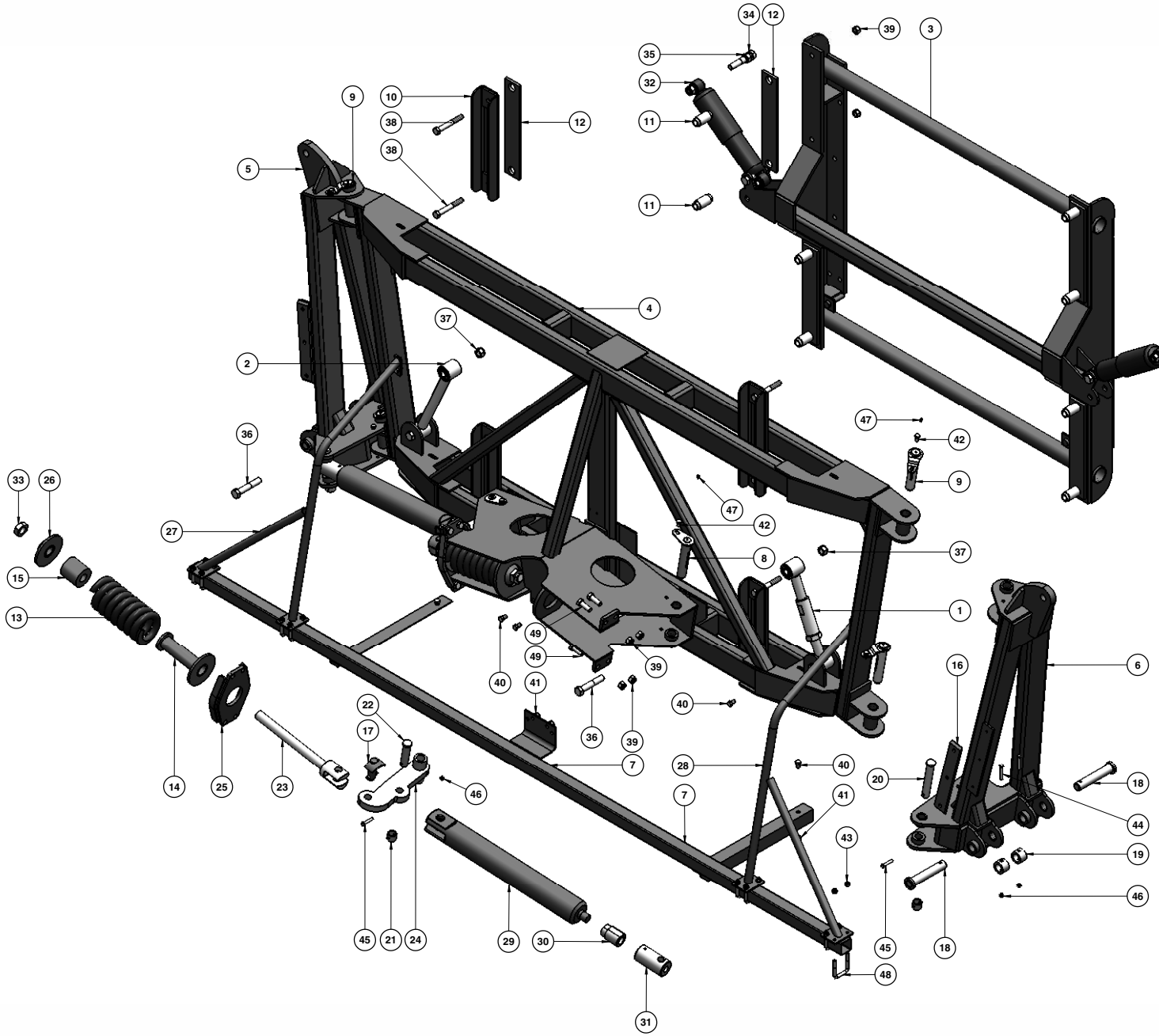


1. SPRING SKID
2. BOOM PLATE
3. SKID PLATE
4. U BOLT 10mm
5. 1Omm NYLOC NUT

Q= 50mm



Pos	Part No	Description	Qty
1	AB19196-1	SKID SET 3 PIECE	1
2	AB19196-2	SKID MOUNT 36M BOOM FEMALE	1
3	AB19196-3	SKID MOUNT SHAFT AB191 BOOM	1
4	AB19196-4	COLLAR DIA 30MM	1
5	AB19196-6	SKID LEAF CLAMP	1
6	M12X55	M12 X 55 SET SCREW HT ZP	2
9	M12NNUT	M12 NYLOC NUT	2
8	M10X60BOLT	M10 X 60 BOLT HT ZP	1
9	M10NNUT	M10 NYLOC NUT HT ZP	1
10	M6GNIPPLE	M6 GREASE NIPPLE	1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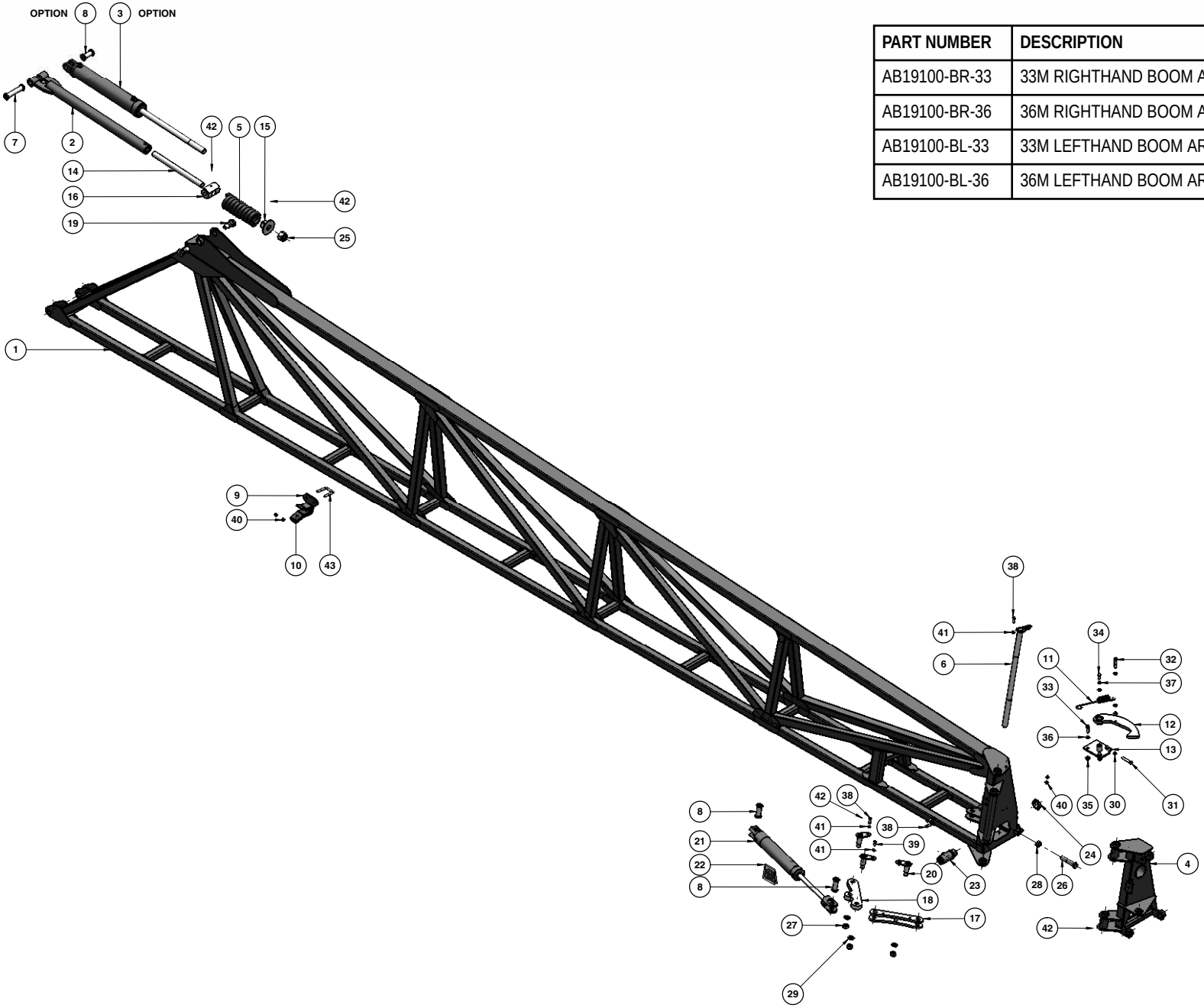
AB19100-AA - 33/36m - Centre Section/Hanger V2

Pos	Part No	Description	Qty
1	AB191-100	SELF LEVELLER ADJUSTER	1
2	AB191-101	SELF LEVELLER FIXED ARM	1
3	AB19101	CENTRE SECTION HANGER	1
4	AB19102A	CENTRE SECTION MAIN FRAME	1
5	AB19103BL	INNER FOLD PIVOT L.H.	1
6	AB19103BR	INNER FOLD PIVOT R.H.	1
7	AB19108	CENTRE SPRAY BAR SUPPORT	1
8	AB19120A	PIN Z BAR PIVOT	2
9	AB19120	INNER FOLD PIVOT PIN	4
10	AB19121	WEAR PAD SUPPORT	4
11	AB19122	WEAR PAD SPACER	8
12	AB19123	WEAR PAD SELF LEVELLER	8
13	AB19127	SPRING YAW CENTRE FRAME	2
14	AB19131A	SPRING BUFFER HOLDER	2
15	AB19131A-1	BUFFER POLY URETHANE	2
16	AB19143	BOOM FOLD STOP PAD	2
17	AB19156C	CYLINDER CLEVIS BOOM PIN VER 2	2
18	AB19183-130	PIN FIRST ARM 164 X 30	4
19	AB19183-2	COLLAR DIA 30MM	4
20	AB19184-125	PIN FOLD CYLINDER 155 X 25.4	2
21	AB19184-2	COLLAR DIA 25.4MM	4
22	AB19184-70	PIN FOLD CYLINDER 100 X 25.4	2
23	AB19191B	PIN YAW SPRING CLEVIS END	2
24	AB19192F	INNER FOLD Z BAR	2
25	AB19193	YAW SPRING CLAMP	2
26	AB19194A	SPRING BUFFER HOLDER	2
27	AB19195L	BOOM PROTECTION L.H.	1
28	AB19195R	BOOM PROTECTION R.H.	1

Pos	Part No	Description	Qty
29	AB19199	CYLINDER INNER FOLD 3” X 16” EZFIT	2
30	AB19199-M	ROD END MALE INNER FOLD CYLINDER	2
31	AB19199-F	ROD END FEMALE INNER FOLD CYLINDER	2
32	BP-607	SHOCK ABSORBER AIR RIDE P126	2
33	1.25NNUTUNF	1 1/4” UNF LOCK NUT	2
34	0.75X100UNCBOLT	3/4” X 4” UNC BOLT HT ZP	4
35	0.75UNCNNUT	3/4” UNC NYLOC NUT HT ZP	6
36	M20X110BOLT	M20 X 110 HEX HEAD BOLT HT ZP	4
37	M20NNUT	M20 NYLOC NUT HT ZP	4
38	M16X120BOLT	M16 X 120 HEX HEAD BOLT HT ZP	8
39	M16NNUT	M16 NYLOC NUT HT ZP 1	6
40	M12X20	M12 X 20 HEX HEAD SET SCREW HT ZP	6
41	M12NNUT	M12 NYLOC NUT HT ZP	4
42	M10X20	M10 X 20 SET SCREW HT ZP	6
43	M10NNUT	M10 NYLOC NUT HT ZP 1	6
44	M8X55BOLT	M8 X 55 HEX HEAD BOLT HT ZP	4
45	M8X45BOLT	M8 X 45 HEX HEAD BOLT HT ZP	4
46	M8NNUT	M8 NYLOC NUT HT ZP	8
47	M6GNIPPLE	M6 GREASE NIPPLE	6
48	XBMBB50	U-BOLT 50MM X 10	8
49	M16X45	M16 X 45 HEX HEAD SET SCREW HT ZP	8

NOTE

Parts in italics are non-stock items and may need to be ordered.



PART NUMBER	DESCRIPTION
AB19100-BR-33	33M RIGHTHAND BOOM ARM COMPLETE
AB19100-BR-36	36M RIGHTHAND BOOM ARM COMPLETE
AB19100-BL-33	33M LEFTHAND BOOM ARM COMPLETE
AB19100-BL-36	36M LEFTHAND BOOM ARM COMPLETE

33/36m Boom Inner Arm

Pos	Part No	Description	Qty
1	AB19107R	FIRST ARM R.H. 33/36M	1
	AB19107L	FIRST ARM L.H. 33/36M	1
2	AB19100-A-2	FIXED WINGTIP ADJUSTMENT	1
3	AB19100-A-3	HYDRAULIC WINGTIP ADJUSTMENT	1
4	AB19113CR	FOLD PIVOT OUTER R.H.	1
	AB19113CL	FOLD PIVOT OUTER L.H.	1
5	AB19135	PIN 36M 1ST ARM TO 2ND	1
6	AB19150-130	PIN 130 X 30	1
7	AB19150-65	PIN 65 X 25.4	3
8	AB19157A	BRACKET OUTER BOOM	1
9	AB19157Apad	PAD OUTER BOOM SUPPORT	1
10	AB19159	SPRING LOCK ARM	1
11	AB19160R	ARM HINGE LOCK R.H.	1
	AB19160L	ARM HINGE LOCK L.H.	1
12	AB19161R	PLATE HINGE LOCK RH	1
	AB19161L	PLATE HINGE LOCK L.H.	1
13	AB19163	ROD G-FIX	1
14	AB19164	SPRING RETAINER PLATE	1
15	AB19165	PIVOT BLOCK	1
16	AB19178	ARM FOLD PIVOT OUTER	1
17	AB19179	LINK PLATE OUTER FOLD RAM	1
18	AB19180	PIN PIVOT BLOCK	2
19	AB19181	PIN OUTER FOLD SCISSOR JOINT	3
20	AB19197	CYLINDER OUTER FOLD 3.5 X 12	1
21	AB19197-SK	SEAL KIT HP-016 CYLINDER	1
22	AB20800	CYLINDER FOLD LOCK 35 X 38.1	1
23	AB20800-1	LOCK NUT 1 1/4” BSP	1
24	1.25UNFNNUT	1 1/4” UNF NYLOC NUT	1

Pos	Part No	Description	Qty
25	M20X100BOLT	M20 X 100 HEX HEAD BOLT HT ZP	1
26	M20NNUT	M20 NYLOC NUT HT ZP	3
27	M20HNUT	M20 HALF NUT ZP	1
28	M20FWASHER	M20 FLAT WASHER ZP	3
29	M12HNUT	M12 HEX NUT HT ZP	2
30	M12X70	M12 X 70 SET SCREW HT ZP	1
31	M12X60BOLT	M12 X 60 BOLT HT ZP	1
32	M12X40	M12 X 40 SET SCREW HT ZP	3
33	M12X25	M12 X 25 SET SCREW HT ZP	1
34	M12NNUT	M12 NYLOC NUT HT ZP	3
35	M12FWASHER	M12 FLAT WASHER ZP	12
36	M12SWASHER	M12 SPRING WASHER ZP	1
37	M10X30	M10 X 30 SET SCREW HT ZP	4
38	M10X20	M10 X 20 SET SCREW HT ZP	2
39	M10NNUT	M10 NYLOC NUT HT ZP	6
40	M10FWASHER	M10 FLAT WASHER ZP	8
41	M6GNIPPLE	M6 GREASE NIPPLE	11
42	XBMBB50	U-BOLT 50MM X 10	1

NOTE

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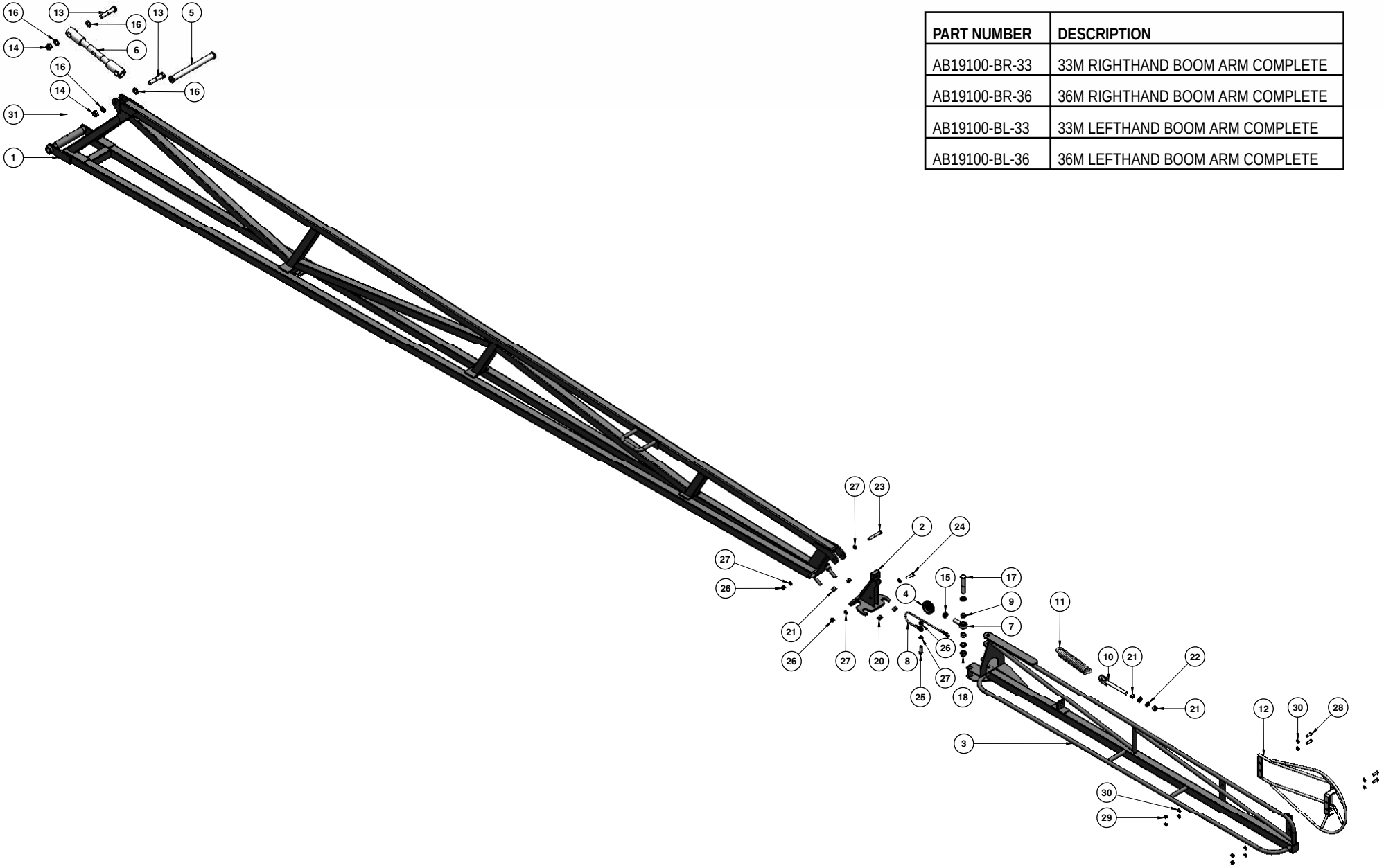

PART NUMBER	DESCRIPTION
AB19100-BR-33	33M RIGHTHAND BOOM ARM COMPLETE
AB19100-BR-36	36M RIGHTHAND BOOM ARM COMPLETE
AB19100-BL-33	33M LEFTHAND BOOM ARM COMPLETE
AB19100-BL-36	36M LEFTHAND BOOM ARM COMPLETE

Complete Left/Right Boom Arm 33/36m

Pos	Part No	Description	Qty
1	AB19109AL	BOOM ARM OUTER LH 36M	1
	AB19109AR	BOOM ARM OUTER RH 36M	1
	AB19110L	BOOM ARM OUTER LH 33M	1
	AB19110R	BOOM ARM OUTER LH 33M	1
2	AB19111A	BREAK-AWAY HITCH	1
3	AB19106AL	BREAK-AWAY TIP	1
4	AB19126-5	PULLEY	1
5	AB19152-330A	PIN OUTER BOOM SUPPORT	1
6	AB21200A	TOP LINK ADJUSTMENT	1
	AB21200A-1	BUSH	2
7	AB19126-4	MALE ROD END	1
8	AB19126-6	CABLE, PULLEY	1
9	AB19126-7	SPACER BUSH	2
10	MP-413	ADJUSTABLE SPRING HITCH	1
11	MP-519	SPRING	1
12	MP-598A	PROTECTION BRACKET FENCELINE V2	1
13	0.75X100UNCBOLT	3/4” X 4” UNC BOLT HT ZP	2
14	0.75UNCNNUT	3/4” UNC NYLOC NUT HT ZP	2
15	0.75UNFHHNUT	3/4” UNF HEX HALF NUT	1
16	0.75FWASHER	3/4” FLAT WASHER ZP	4
17	M20X100BOLT	M20 X 100 HEX HEAD BOLT HT ZP	1
18	M20NNUT	M20 NYLOC NUT HT ZP	1
19	M20FWASHER	M20 FLAT WASHER ZP	2
20	M16NNUT	M16 NYLOC NUT HT ZP	2
21	M16HNUT	M16 HEX NUT HT ZP	4
22	M16FWASHER	M16 FLAT WASHER ZP	2
23	M12X90	M12 X 90 BOLT HT ZP	1
24	M12X50	M12 X 50 SET SCREW HT ZP	1
25	M12X40	M12 X 40 HEX HEAD SET SCREW HT ZP	1
26	M12NNUT	M12 NYLOC NUT HT ZP	3
27	M12FWASHER	M12 FLAT WASHER ZP	7
28	M10X30	M10 X 30 SET SCREW HT ZP	4
29	M10NNUT	M10 NYLOC NUT HT ZP	4
30	M10FWASHER	M10 FLAT WASHER ZP	8
31	M6GNIPPLE	M6 GREASE NIPPLE	1

NOTE

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AB19106A-(L or R)-KIT - Complete Breakaway Assembly

2	AB19111A	BREAK-AWAY HITCH	1
3	AB19106AL	BREAK-AWAY TIP	1
4	AB19126-5	PULLEY	1
7	AB19126-4	MALE ROD END	1
8	AB19126-6	AB19126-6 CABLE, PULLEY	1
9	AB19126-7	SPACER BUSH	2
10	MP-413	ADJUSTABLE SPRING HITCH	1
11	MP-519	SPRING	1
15	0.75UNFHHNUT	3/4” UNF HEX HALF NUT	1
17	M20X100BOLT	M20 X 100 HEX HEAD BOLT HT ZP	1
18	M20NNUT	M20 NYLOC NUT HT ZP	1
20	M16NNUT	M16 NYLOC NUT HT ZP	2
21	M16HNUT	M16 HEX NUT HT ZP	4
22	M16FWASHER	M16 FLAT WASHER ZP	2
24	M12X50	M12 X 50 SET SCREW HT ZP	1
25	M12X40	M12 X 40 HEX HEAD SET SCREW HT ZP	1
26	M12NNUT	M12 NYLOC NUT HT ZP	3
27	M12FWASHER	M12 FLAT WASHER ZP	7
28	M10X30	M10 X 30 SET SCREW HT ZP	4
29	M10NNUT	M10 NYLOC NUT HT ZP	4
30	M10FWASHER	M10 FLAT WASHER ZP	8