

CROPLANDS

OPERATORS MANUAL
SONIC
WEED-IT

5000, 50/15, 70/30 MODELS

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STOP

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



BT-OMSONICWi-A



CROPLANDS IS CONTRIBUTING TO A SUSTAINABLE FUTURE

INTRODUCTION

GENERAL MANAGER'S WELCOME



Sean Mulvaney
General Manager

Dear Customer

Congratulations on the purchase of your new sprayer and thank you for supporting another true blue Australasian manufacturer.

For over 50 years Croplands have been delivering spraying solutions and ongoing support for a variety of applications whilst investing in long term partnerships with our suppliers, distributors, end users and local communities. These partnerships are absolutely key in our commitment to support our products into the future.

At Croplands, we are committed to sourcing the very best technology from around the globe and adapting these products to our specific requirements. When these products don't yet exist, we innovate through continuous investment in our own research and development.

Croplands is a wholly owned subsidiary of Nufarm Ltd, the largest supplier of crop protection products in Australasia. This brings a unique understanding and collaborative approach to new market developments, challenges and opportunities.

Please take the time to thoroughly read this manual before you operate your sprayer. This will provide direction to ensure safe usage and help optimise the performance of your investment. Your feedback is welcome and valued.

We trust you will be happy with your sprayer and the level of support - our goal is to be your preferred spraying solutions partner from this point onwards.

Yours Sincerely

Sean Mulvaney
General Manager



SECTION 1

IMPORTANT INFORMATION

ABOUT THIS MANUAL

This manual provides assembly, setting up, operating and maintenance instructions for the Croplands Sonic WEED-IT sprayer.

In addition to this manual, the sprayer will be delivered with the General Safety Manual (GP-SAFE-A) and all other relevant manuals.

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

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

This manual, BT-OMSONICWi-A, was published in November 2023. Sustainable print update; Nov 2023.

Check online as there may be more recent revisions of this manual. www.croplands.com.au

TERMINOLOGY

These terms/symbols used throughout this manual:

NOTE	This Note sign is in place to convey useful information and will help you to identify the best possible way to operate the machine.
CAUTION	This Caution sign shows the potential for incident. An incident may include damage to the machine itself, or possible injury to the operator.
WARNING	This warning sign shows the potential for risk or injury and highlights the need for steps to be taken to protect ones safety.

NOTE

To convey useful operating information.

WARNING

To stress potential dangers and the importance of personal safety.

taking steps to prevent risk or injury.

CAUTION

To highlight potential injury or machinery damage.

DANGER

Probability of death or serious injury if an accident occurs

BEFORE OPERATING YOUR SPRAYER

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

This Operator's Manual, **and all other supplied manuals** for items such as controller, pump and PTO etc.



And properly understand:

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

For details not covered by the manuals, please contact Technical Support on 1300 650 724.

2. Read and follow instructions on chemical manufacturers' labels.
3. Always wear applicable protective clothing.

INTENDED USE

Croplands sprayers are designed to be used for multipurpose spraying of herbicides, pesticides and fertilisers. The sprayer must not be used for any other purpose.

SECTION 1

IMPORTANT INFORMATION

WARRANTY POLICY

Each sprayer module will be delivered with a Specifications, Safety, Warranty & Delivery Booklet which includes:

- the sprayer's specification sheet including the sprayer's unique serial number,
- a safety induction checklist,
- a delivery checklist and customer induction,
- the Croplands Warranty policy and warranty registration form.

We ask that our customers complete these forms in the presence of a Dealer and/or Croplands representative as a part of the sprayer's delivery process.

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

NOTE

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

SPRAYER SPECIFICATIONS SAFETY, WARRANTY & DELIVERY WEED-IT

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STOP

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



SECTION 2

SAFETY

SAFETY FIRST

Please read and understand all supplied manuals, guides and safety decals before operating this sprayer. This includes the **Croplands Operators Safety Manual** – as pictured here.

This manual is available on the Croplands website, or for printed versions contact Croplands customer support and ask for part number GP-SAFE-A (or later version if available).



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INTRODUCTION

Congratulations on your purchase of a SONIC WEED-IT Boomspray.

The Sonic WEED-IT Boomspray is a collaboration between Sonic Boomsprays and Croplands, the WEED-IT spot spraying specialists.

SONIC is a well known Australian manufacturer of premium quality boomsprays and has gained an enviable reputation for quality and reliability of its products, gained from years of contracting, listening and acting on the feedback from our customers.

SONIC sprayers are well known for their structural integrity; ease of use and extremely long life.

SONIC is dedicated to on-going research and development and to this end welcome any comments from the users of this product. Please examine the machine completely on receipt and report any damage or missing parts to your SONIC dealer as soon as possible. Every care has been taken with the assembly of this product, however due to transport, machine error or human error during assembly, problems can occur.

This machine has been water tested at the factory and every effort has been made to eliminate any water leaks. With proper care and maintenance this machine will give you many years of trouble free service.

NOTE: Specifications may change due to on-going development.

NOTE: This operators manual is for the operation of the Sonic sprayer chassis and plumbing only. For the operation of the WEED-IT optical spot spray system we refer you to the relevant operators manuals supplied with the machine.

Intended Use:

Sonic Boomsprays are designed to be used for multipurpose spraying of herbicides, pesticides and fertilisers.

They are not to be used for pumping or spraying flammable materials.

SAFETY REQUIREMENTS



WARNING

HAZARDOUS MACHINERY

MISUSE OR INCORRECT OPERATION
COULD CAUSE SERIOUS INJURY OR DEATH

READ OPERATORS MANUAL
BEFORE OPERATING

FOLLOW ALL SAFETY PROCEDURES
SECURE BOOM BEFORE TOWING OR TRANSPORTATION

KEEP ALL SAFETY GAURDS IN PLACE
WHILE THE MACHINE IS IN OPERATION

ENSURE ALL PEOPLE ARE WELL CLEAR
BEFORE OPERATING THIS MACHINE

SOUND HORN BEFORE STARTING

STOP THE ENGINE AND REMOVE THE KEY/LOWER
HYDRAULICS AND RELEASE RESIDUAL PRESSURE
BEFORE WORKING ON THE MACHINE OR
IF THE MACHINE IS UNATTENDED

BOOMSPRAY OPERATION

- 1) Read your operator's manual thoroughly before operating the sprayer.
- 2) Do not under any circumstance ride on or allow anyone else on sprayer at any time.
- 3) Ensure boom is secured in the transport position before transporting on public roads.
- 4) Always ensure tank lid is closed before moving off **or** before tank rinse is operated.
- 5) Inspect hose fittings and jets daily for signs of wear.
- 6) Do NOT couple or uncouple Hydraulic connectors under pressure. **If hydraulic fluid enters skin seek medical attention immediately as gangrene can occur.**
- 6) Always read chemical manufactures labels before use (**READ THE LABEL, HEED THE LABEL**).
- 7) Always observe all warnings on chemical containers. Always dispose of chemical containers and mixed chemicals in accordance with local and State laws.
- 8) Do not disconnect hoses, jets or filters while sprayer is operating.
- 9) Never under any circumstance enter the main tank without the appropriate safety equipment.
- 10) Always keep chemicals in a safe place out of the reach of children.
- 11) Do not contaminate dams, rivers or streams with spray or chemical containers. Fish and bees are particularly susceptible to chemical poisoning.
- 12) Some local community groups operate container-recycling services, **it is advisable to take advantage of these.**
- 13) Always **triple rinse** containers and **do not** burn them.

ROAD LAWS COMPLIANCE

Some models of Sonic Boomsprays will exceed legal dimension limits and will require the following to be towed on public roads:

- A pilot
- Oversize signs
- Flashing lights
- Flags

Sonic Boomsprays are not designed to exceed **40kph** when towed or driven on a public road.



CHEMICAL SAFETY AND HANDLING

WEAR YOUR PPE EQUIPMENT

Personal Protection Equipment

A basic Personal Protection Equipment kit has been provided for the operator in the equipment tool box located at the front hitch. Please wear this equipment when handling or dealing with chemicals, pesticides etc.

PPE equipment should be kept in good working order:


- Inspect regularly; equipment should be fit for purpose, no holes, no liquid penetration etc.
- Change respirator filters as recommended by safety equipment manufacturer.
- Contaminated equipment should be replaced

SONIC Safety kit contains:

- 1x Disposable coverall (XL)
- 1x Safety goggles anti-fog (Clear)
- 1x Eye wash bottle
- 1x Nitrile gloves, long (XL) / pair
- 1x Half face respirator with twin chemical filters



SAFETY



WARNING

CHEMICAL HAZARD

BEFORE MIXING OR APPLYING ANY CHEMICALS WITH THIS MACHINE

- 1.) READ LABELS ON CHEMICAL CONTAINERS AND FOLLOW ALL INSTRUCTIONS
- 2.) WEAR A MASK, GOGGLES, GLOVES AND PROTECTIVE CLOTHING AS RECOMMENDED BY THE CHEMICAL MANUFACTURER


CHEMICAL SAFETY AND HANDLING

- All chemicals and pesticides are dangerous when handled incorrectly or carelessly.
 - They can be a danger to humans, crops and animals.
 - The safe handling and application of chemicals and pesticides is of the utmost importance to the operator and the rest of the farming community.
 - You are legally required to obtain Material Safety Data Sheets (MSDS) for hazardous materials and make them available to the people using the material
 - Read the MSDS sheet and the container label and follow all instructions.
 - Be aware of its effect on adjacent crops (chemical drift) and or animals (bees, fish) or humans.
 - Does it have a withholding period?
 - Use the appropriate safety clothing for the chemicals being used. **“The operator is at the greatest risk when handling the concentrate”**.
 - Triple rinse all containers before disposal. **“It makes sense to use all the chemical, you paid for it”**.
 - Dispose of containers at a designated disposal site.
 - Do not mix more chemicals than is necessary. **“It is a costly waste”**.
 - Always wash as soon as possible after spraying.
 - Wash before eating or drinking.
 - **Always** have clean water on hand in case of contamination in the field.
 - Always keep chemicals in a safe place and away from children.
 - Use activated charcoal cabin filters where available and appropriate.
 - Do not enter cabins wearing contaminated safety clothing
- Safety Gear** is available from your **SONIC** dealer or reputable chemical resellers and safety equipment suppliers.

EMERGENCY PROCEDURES

Read the MSDS sheets to determine emergency procedures for all materials, and ensure that the emergency facilities specified are always available.

MACHINE SET UP



DANGER

BATTERY EXPLOSION
MAY OCCUR IF INCORRECTLY CONNECTED
ALWAYS CONNECT POSITIVE TERMINAL FIRST
MAKE FINAL CONNECTION OF NEGATIVE TERMINAL AWAY
FROM BATTERY TO ENSURE THERE ARE NO SPARKS NEAR

Fitting of Computer

Always fit computer first before setting up any other part of Machine.
Power wire for computer must be connected to battery.
Please refer to computer manual for this set up.
All electrics are 12 Volt DC and negative earth.

Programming of Computer

Programming of computer is set from factory, but should you need to re enter details at any time refer to page 11 for broadacre settings & page 12 for WEED-IT settings.

Broadacre option settings.

Wheel Calibration _____

Flow Calibration _____

Broadacre Section Width Calibration

Section 1 _____ Section 6 _____

Section 2 _____ Section 7 _____

Section 3 _____ Section 8 _____

Section 4 _____ Section 9 _____

Section 5 _____ Section 10 _____

MACHINE SET UP



Pre-Delivery Form



BOOM DETAILS:				CUSTOMER DETAILS:			
BRAND:		NAME:					
MODEL:		ADDRESS:					
SERIAL:							
YEAR:							
WIDTH:		Mobile:					

LEFT	SN:	HEIGHT:	DISTANCE:	OFFSET:	RIGHT	SN:	HEIGHT:	DISTANCE:	OFFSET:
A				-	A				+
B				-	B				+
C				-	C				+
D				-	D				+
E				-	E				+
F				-	F				+
G				-	G				+
H				-	H				+
I				-	I				+
J				-	J				+
K				-	K				+
L				-	L				+
M				-	M				+
N				-	N				+
O				-	O				+
P				-	P				+
Q				-	Q				+
R				-	R				+

CONSOLE SN:
WALD SN:

FLUID SPEED:	
MARGIN:	
TRACK:	
PRESS CAL	
SPEED PULSES	

DEALER:
REP:
DATE:
SIGNATURE:

D: distance from front of sensor to nozzle.
H: height of nozzle from ground.

*sensor height should always be 1100mm

The diagram shows a side view of a spray boom. A red triangle labeled 'SENSOR' is positioned at the front. A blue triangle labeled 'NOZZLE' is at the end of the boom. A horizontal double-headed arrow labeled 'D' indicates the distance between the sensor and the nozzle. A vertical double-headed arrow labeled 'H' indicates the height of the nozzle above the ground line.

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NOTES:

MACHINE SET UP

- **Connecting Hydraulics:** The hydraulic hoses for boom functions are labeled for easy identification, See below for colour coding.
Note: The Hypro pump should have it's Return line connected to a **Motor Return port** on the tractor, please refer to recommendations on Page 14.
- **Unfolding Boom:** Make sure machine is in an open area with enough space to fold the wings in and out safely and ensure all people and vehicles are at a safe distance.
- Operate the cab controls to lift the wings to full lift height.
- Operate the cab controls to fold the wings very carefully to ascertain which way the booms move.
- If required swap the hoses around to suit operators preference for the remote switches in the tractor cab.
- Carefully and Slowly unfold booms to the fully open position
- If booms move too fast, adjust the hydraulic flow rate in the tractor remote settings.
- If the tractor is not fitted with a hydraulic flow control valve, use the flow control valves that are supplied on the hydraulic hoses at the front of the machine (Fig.1). Adjust valve to smooth folding speed then lock off valve with allen key grub screw fitted.



Printed label colour code

COLOUR	DESCRIPTION	HOSE SIZE
Blue	LIFT	1/2"
Yellow	FOLD IN	1/2"
Yellow	FOLD OUT	1/2"
Green	WING TILT	1/2"
Blue	HYPRO PRESSURE BROADACRE	3/4"
Blue	HYPRO RETURN BROADACRE	3/4"
Blue	HYPRO PRESSURE WEED IT	3/4"
Blue	HYPRO RETURN WEED IT	3/4"



HYPRO HYDRAULIC MOTOR

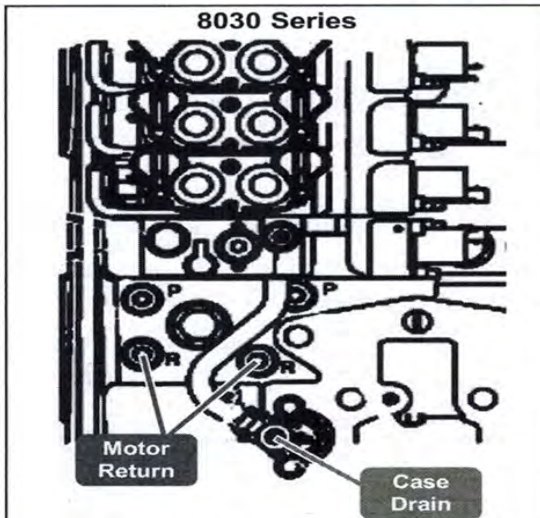
IMPORTANT: LOW PRESSURE RETURN (Motor Return)

Hypro recommend that the return pressure line uses a low pressure return (Motor Return) for the return of oil. Low pressure return ports (Motor Return) vary from tractor to tractor.

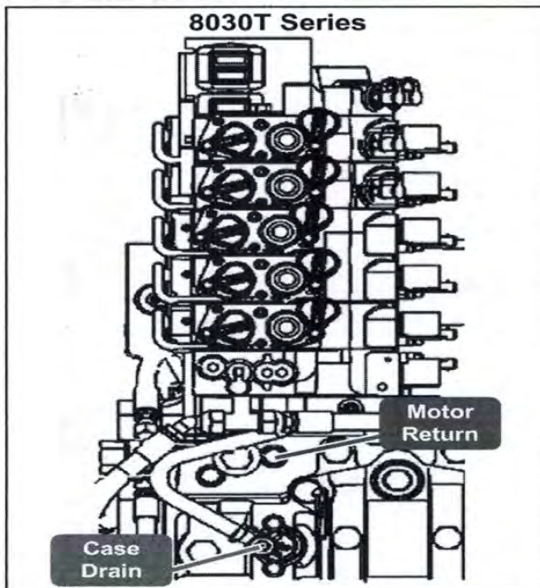
- Return line must go to a low pressure return port (Motor Return) - (Not straight back to remote or case drain line). Call Sonic Boomsprays/Dealer if you want help with individual tractors
- Return hoses should be installed first then pressure line when connecting the pump to the tractor and this order should be reversed when unplugging hoses. (This avoids pressure spikes).
- When turning the pump off you must us the float decent. If you don't have the correct fittings please contact Sonic Boomsprays/Dealer with your tractor details for correct fittings.



8030 & 8030T Series



NOTE: Two possible motor return port locations are shown.



Case Drain

If the tractor is not equipped with a 3/8" body size ISO 16028 zero pressure female flat face case drain coupler, then order and install John Deere case drain kit part number RE222721.

Motor Return

If the tractor is not equipped with a 3/4" body size ISO 7241-1 Series A female motor return coupler, then order and install the following parts:

Eaton Aeroquip P/N GG108-NP12-22
Parker P/N 12M22F8OMXS

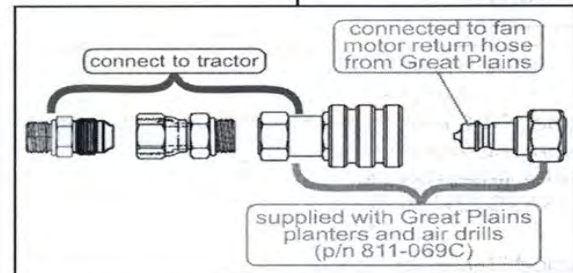
M22 x 1.5
MORB

1-1/16-12
MJIC

Eaton Aeroquip P/N 2266-12-12
Parker P/N 12F65OMXS

1-1/16-12
FJIC

1-1/16-12
MORB



IMPORTANT: ALWAYS connect case drain first, motor return second, then pressure line to prevent motor damage. ALWAYS disconnect pressure line first, motor return second, then case drain last to prevent motor damage.

NOTE: Can use John Deere P/N RE248312 to extend case drain coupler and motor return coupler out from rear of tractor if needed.

John Deere P/N RE248312

M22 x 1.5
MORB

M22 x 1.5
FORB

5.7"

MACHINE SET UP

- On initial operation it is strongly suggested that you re-tension your wheel nuts and thereafter check at regular intervals (Page 14).
- Check all tyre pressures and make necessary correction (Page 14).
- After first tank load, check all U bolts, turnbuckles, dee shackles, bolts, nuts and hose clamps.
- Grease all pivot and suspension points. (Refer to Lubrication section)
- Check main tank suction filter, as a range of foreign particles can be present in the system, although all care is taken during assembly.

Hydro Motor R.P.M. Setup: For Broadacre pump

Adjust rotary valving for Broadacre pump to spray position, have all spray lines and control valve open (flush mode) adjust man prop valve to approx. mid stroke (agitation bypass), Adjust hydraulic speed of pump until you have a pressure read out of between 400kpa - 600kpa on pressure gauges, situated at the front of the boom. This will give maximum speed necessary for all spraying conditions plus giving adequate agitation.

Hydro motor R.P.M setup: for WEED-IT system.

Adjust rotary valving for WEED-IT pump to spray position , On your WEED-IT monitor turn on eve-ry sensor so that all the nozzles on boomspray are spraying, Start with oil flow from tractor ap-prox. 40-50% adjust the pressure relief valve at the plumbing station up or down until you have 3 bar pressure on the gauge. If you wind pressure relief valve right in & can not achieve 3 bar oil flow is insufficient.



WHEEL & TYRE MAINTANENCE

RECOMMENDATIONS FOR TORQUE SETTINGS & INSPECTION INTERVALS

Minimum recommended tension intervals for agricultural wheels:

INITIAL FITMENT

Re-tension at : 4 hours of operation
 8 hours of operation
 16 hours of operation
 24 hours of operation
 48 hours of operation

Alternatively, after the first 50km and subsequently every 100kms, the stud bolt nuts are to be tightened by means of a tension wrench and with the torque values listed below.

Ongoing inspection and re-tensioning should be done in accordance with daily wheel/tire inspection procedures. These inspection periods may vary depending on the vehicle operating conditions.

METRIC		
STUD SIZE	TORQUE (Foot Pounds)	TORQUE (Newton Meters)
M12	55ft.lbs	74Nm
M14	88ft.lbs	118Nm
M16	135ft.lbs	182Nm
M18	200ft.lbs	270Nm
M20	250ft.lbs	337Nm
M22	250ft.lbs	337Nm
M24	250ft.lbs	337Nm

IMPERIAL		
STUD SIZE	TORQUE (Foot Pounds)	TORQUE (Newton Meters)
7/16"	55ft.lbs	74Nm
1/2"	55ft.lbs	74Nm
9/16"	88ft.lbs	118Nm
5/8"	135ft.lbs	182Nm
3/4"	200ft.lbs	270Nm
7/8"	250ft.lbs	337Nm

TYRE PRESSURES

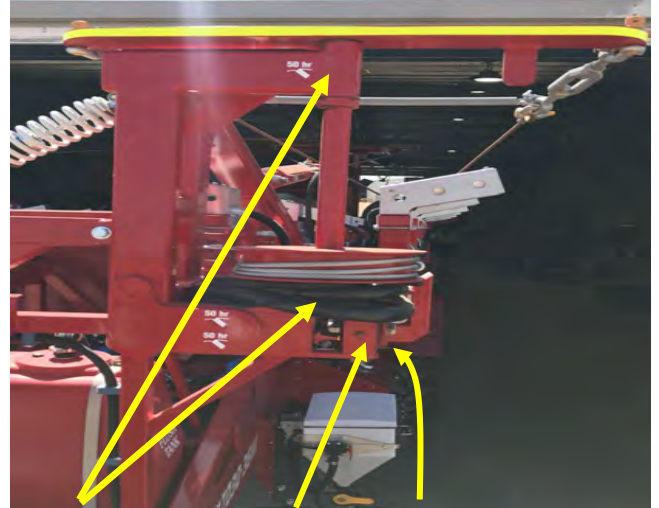
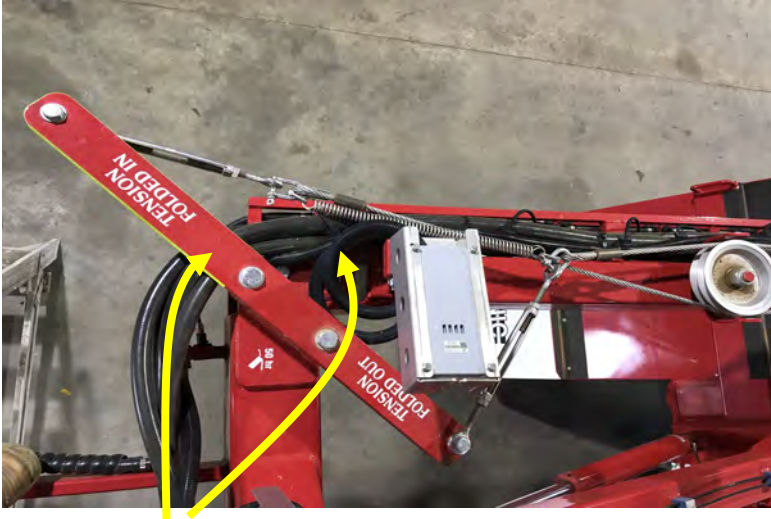
TYRE	MIN – MAX PRESSURE	LOAD INDEX - SPEED SYMBOL	SPEED RATING PER TYRE
24 x 32 TT (BKT)	30-35 PSI	163A6	4,875Kg @ 30Kph
20.8 x 42 TT (BKT)	30-35 PSI	(12 Ply) 157A6	4,125Kg @ 30Kph
540/65 R34 TT (OZKA)	35-40 PSI	152D/155A8	3,875Kg @ 40Kph
540/65 R28 TT (BKT)	35-40 PSI	149D/152A8	3,550Kg @ 40Kph
18.4 x 28 IL (BKT)	35-40 PSI	157A8	4,125Kg @ 40Kph
16.9 x 28 IL (BKT)	35-40 PSI	152A8	3,550Kg @ 40Kph
15.5 x 24 TT (BKT)	65-70 PSI	163A8	4,875Kg @ 40Kph
6.0 x 9.0 (J/WHEEL)	25-32 PSI	N/A	N/A

Tyre pressure has a direct effect on the tyres load rating and speed capacity

LUBRICATION

- 1) All petrol engines are 20w50 engine oil. This should be changed after the first 50 hours and then every 100 hours thereafter.
- 2) Grease all nipples according to grease schedule on grease point.
- 3) Do not ignore if grease does not penetrate bush in suspension. (Remove pin/bush, clean and re-assemble or suspension failure may result)

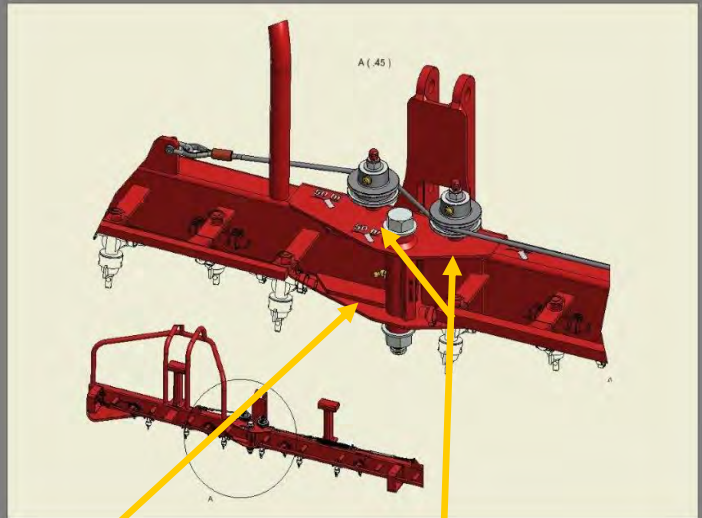
Grease Points:



Main Wing Outer pivot (2): Fold pivot(2) 50 Hours



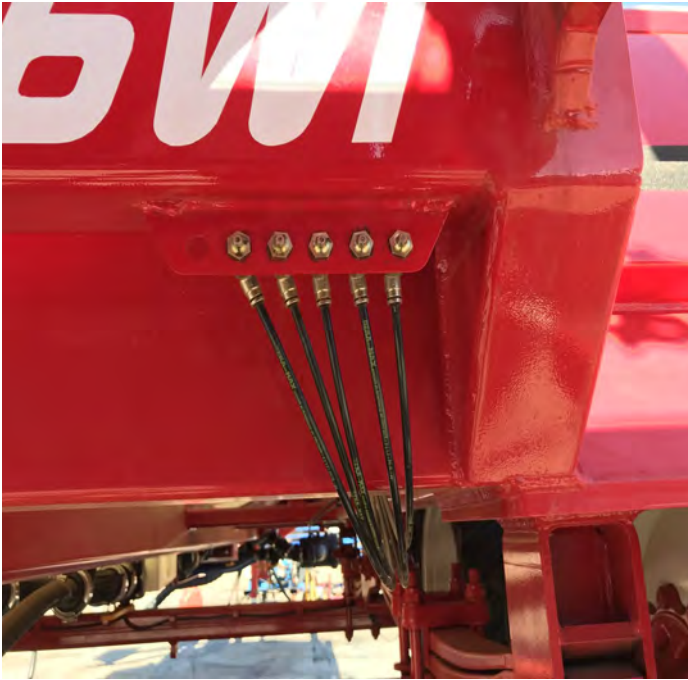
Hitch (1) & Jack (2) & 50 Hours



Break Away pivot (2) & Pully(2): 50 Hours



AXLE & SUSPENSION LUBRICATION



Tandem Steer Axle/Suspension
10 Hours



Tandem Suspension Rocker
10 Hours

PARALLEL ARMS & TOP ARM PIN



Parallel Arms & Top Arm Pins
50 Hours



Top Arm Pins
50 Hours

Parallel Arms

GENERAL MAINTENANCE

- 1) Check and clean engine air filter on a weekly basis - Daily in dusty conditions.
- 2) Check and clean all spray filters daily or more often in adverse chemical conditions. Clean filters with a tooth brush and water.
DO NOT use pressure cleaners on filter screens. Check for splits and tears.
- 3) Flush boom out with clean water at the end of each day. Use boom clean if necessary.
Flowables and granules can settle out of suspension. Agitate properly before rinsing out.
- 4) Wash boom down thoroughly with clean water at the end of each day.

Good Housekeeping is paramount with chemical and liquid fertilizers





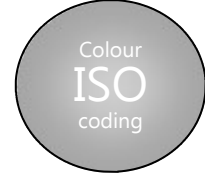
Pressure Filters 126 Series

- 1.1/2" BSPT (F) threads or 75 Series Flange
- Filtering capacity 291 l/min with 5 PSI pressure drop
- Cartridge Ø 57 x 201mm
- VITON® gaskets

FILTER CODE	INLET & OUTLETS	SCREEN TYPE	DESCRIPTION
AA126ML-6-100	1.1/2" (F) BSP	Inox 100 Mesh	FILTER – 126 Series 1.1/2" INLINE (100#)
AA126ML-6-120	1.1/2" (F) BSP	Inox 120 Mesh	FILTER – 126 Series 1.1/2" INLINE (120#)
AA126ML-F75-100	FLANGED 75 Series	Inox 100 Mesh	FILTER – 126 Series 75 FLANGE (100#)
AA126ML-F75-120	FLANGED 75 Series	Inox 120 Mesh	FILTER – 126 Series 75 FLANGE (120#)



SCREEN CODE	SCREEN TYPE suit 126 Series (57 x 201mm)
CP15941-2-SSPP	Inox 32 Mesh
CP15941-3-SSPP	Inox 50 Mesh
CP15941-4-SSPP	Inox 80 Mesh
CP15941-5-SSPP	Inox 100 Mesh
CP15941-6-SSPP	Inox 120 Mesh



Please note: 120 Mesh is not covered under ISO standard

Please note: Fully Stainless steel SCREENS are available on request:
80 Mesh = CP12290-4-SS
100 Mesh = CP12290-8-SS



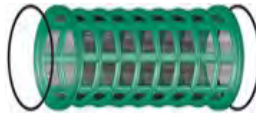
319 Series - 3" SUCTION FILTER

Suction filters 319 Series

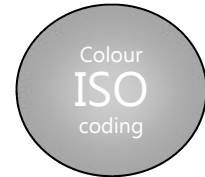
- 3" BSP threads
- Filtering capacity 400-800 l/min
- Cartridge Ø 145 x 320mm



FILTER CODE	F (BSP)	SCREEN TYPE	h (mm)	DESCRIPTION
319 0935	3"	Inox 80 Mesh	35	FILTER - 3" SUCTION (80#) COMPLETE: BOLT ON

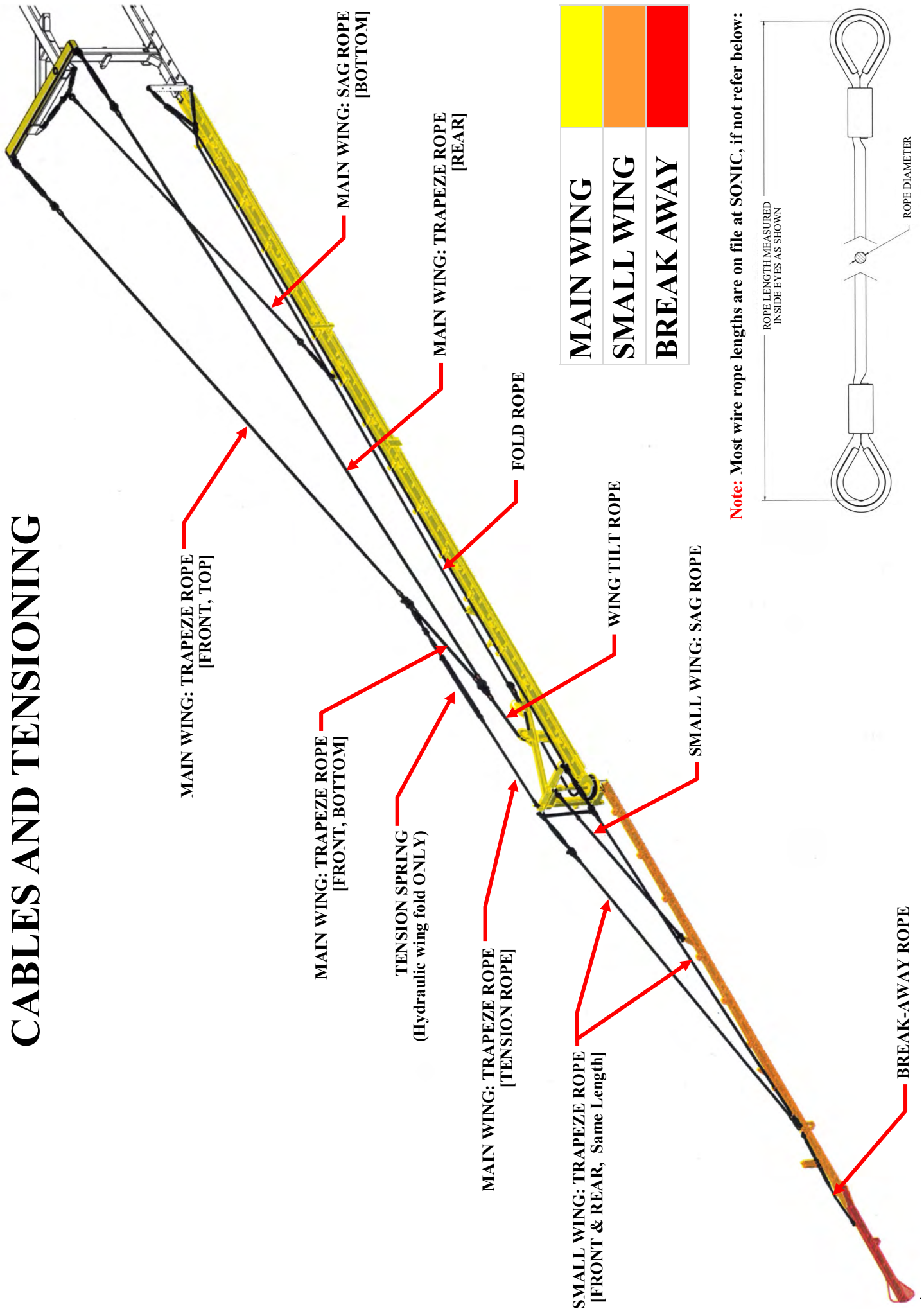


SCREEN CODE	SCREEN TYPE suit 3" (145 x 320mm)
335 2002.030	Inox 32 Mesh
335 2003.030	Inox 50 Mesh
335 20035.030	Inox 80 Mesh
335 2204.030	Inox 100/32 Mesh



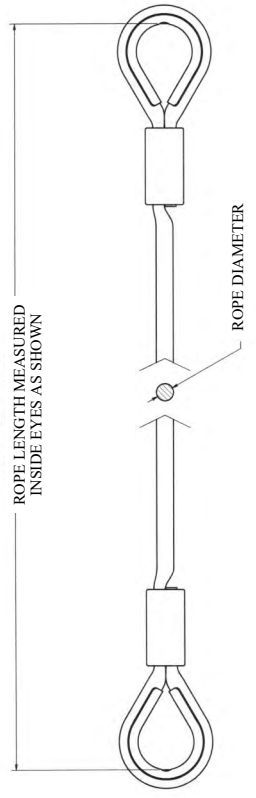
Please note: 120 Mesh is not covered under ISO standard

CABLES AND TENSIONING



MAIN WING
SMALL WING
BREAK AWAY

Note: Most wire rope lengths are on file at SONIC, if not refer below:



CABLES AND TENSIONING

It is very important that all cables are adjusted correctly for optimum performance. All cables are adjusted by turnbuckles which all have a locking nut. To adjust, undo locking nut, adjust to correct tension and reset locking nut.

MAIN WING

MAIN WING how to level

The aim is to have the wing beam supported by all the wire cables when in transport position and also when in the spray position. To check levelness of boom:

- 1) Park the machine on level ground where possible, this will help when eyeballing wing level
- 2) Fold out the wing assembly completely, then lift boom until jockey wheels are not touching the ground.
- 3) The wings should be level with the mast's lower beam, known as the CENTRE BEAM, Ref. Page. 25.

To adjust UP or DOWN:

If the Main wing is slopping down or up too high:

- 1) Take all the weight off the cables and turnbuckles by lifting the end of main wing up until main support cables become loose.
- 2) Adjust the main wing trapeze turnbuckles: Tighten to go up & loosen to go down.
- 3) **Please Note:** Adjust both turnbuckles evenly (E.g. If you adjust the Front turnbuckle = 3 turns then adjust the Rear turnbuckle = 3 turns)
- 4) Lower the main wing to check the adjustment made.
- 5) Stand at end of wing and make sure Main wing is in line with main upright (Centre beam).
- 6) If still slopping down repeat procedure, adjusting as required, until main wing becomes parallel with the centre beam arm on the parallel lift.
- 7) Adjust as required and tighten up the locknuts. Also refer to Pages 22-25 for images

To adjust FRONT to BACK:

The front to back adjustment should be done in conjunction with the up and down adjustments when possible. It is acceptable if wing is slightly bias towards the front of the machine and slightly up.

- 1) Repeat steps 1-3 above when adjusting
- 2) To adjust the wing Forward: Tighten the front turnbuckle while loosening the rear turnbuckle to compensate for boom level
- 3) To adjust the wing Backward: Tighten the rear turnbuckle while loosening the front turnbuckle to compensate for boom level
- 4) Repeat steps 4 & 6 above until wing is in the desired position

SAG ROPE

The main wing should not be bowing up in the centre (**NO** Sad smile), if you can't get them dead straight, it is acceptable for the wing to be slightly bowed down in the middle (Happy smile). This keeps the weight focused on the Main trapeze cables as its designed to be.

- 1) **Transport Position:** Adjust the bottom turnbuckle (No. 5) on the main wing centre support cable, whilst the boom is in the FOLDED IN position. This turnbuckle should be adjusted until the centre of main wing is straight and level. Refer to Pages 25-26.
- 2) **Spray Position:** Adjust the top turnbuckle (No.6) on the main wing centre support cable, near the mast whilst the boom is in the FOLDED OUT position. This turnbuckle should be adjusted until the centre of main wing is straight and level. Refer to Pages 25-26.
- 3) Fold the boom IN and OUT a few times to check your adjustments look correct.
- 4) Adjust as required and tighten up the locknuts.

SMALL WING how to level

SMALL WING

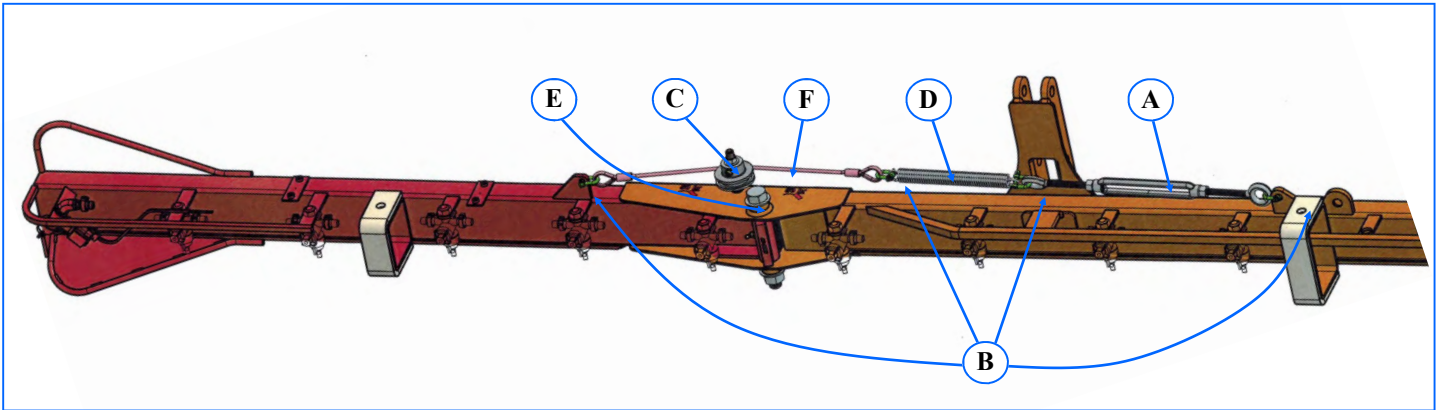
If the outer (Small wings) need adjusting, use the same procedure as with the main wing shown above.

CABLES AND TENSIONING

BREAK AWAY

BREAKAWAY adjustment

If the breakaway does not return completely, tighten turnbuckle to suit. Do not over tighten. Adjust the tension just enough so that the breakaway returns softly. If the breakaway still isn't returning correctly, check that the bolt has sufficient grease and moves freely. Possibly replace spring if it looks fatigued or over extended.



Parts:

- A) 12mm Stainless Turnbuckle (Eye/Eye)
- B) 6mm Stainless Dec
- C) 70mm Alloy pulley
- D) Break Away Spring (S/S) (QA74840)
- E) Bolt H/T (7/8" UNC x 7.1/2")
- F) Break away wire rope (530mm or 755mm)

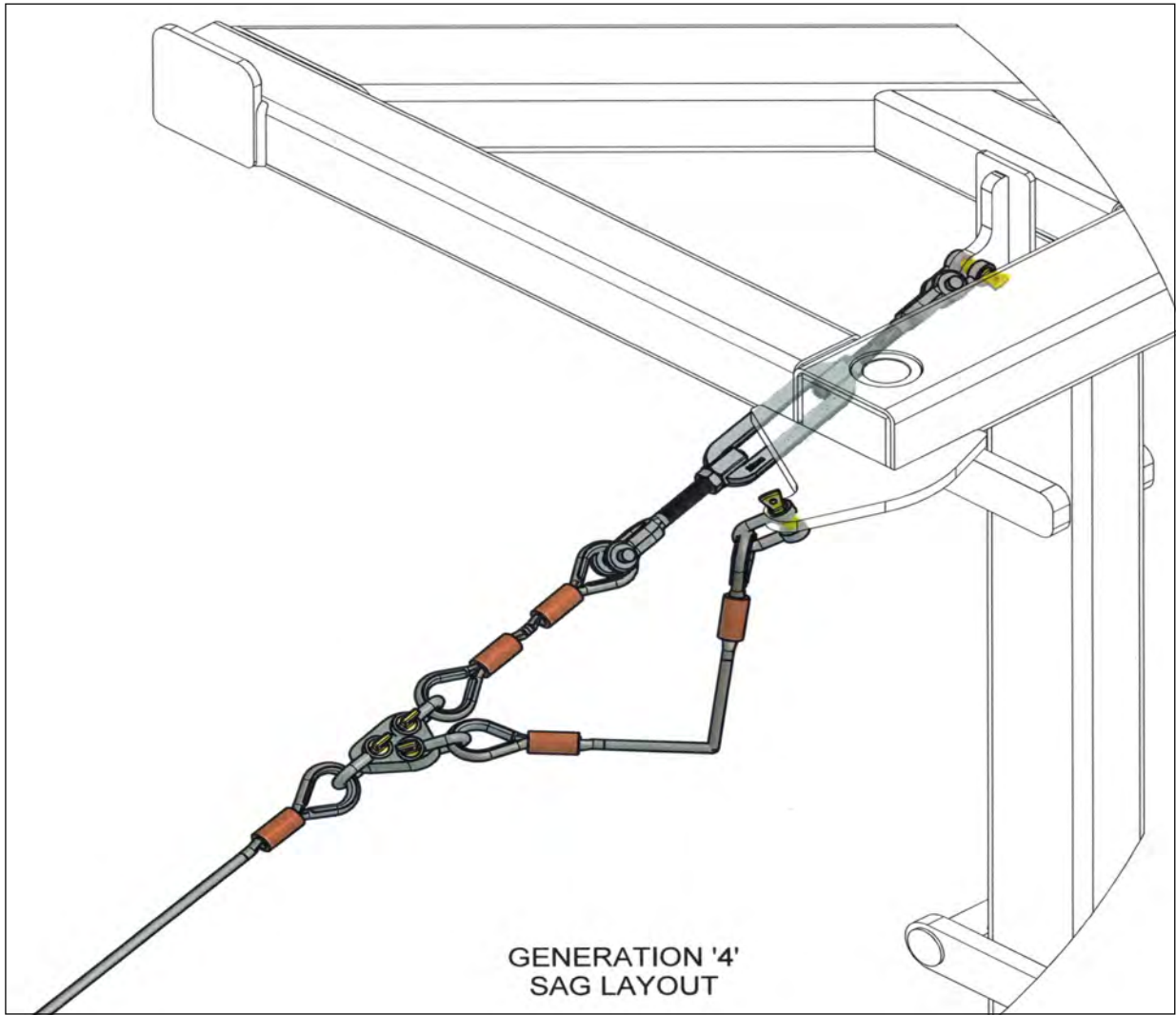
MAIN LIFT UPRIGHT (MAST POST)



END OF MAIN WING

CABLES AND TENSIONING





TOP: Turnbuckle No.6



BOTTOM: Turnbuckle No.5

CABLES AND TENSIONING

Fold Cable Adjustment

When adjusting the fold cable, the aim is to have the secondary wing (**Small wing**) in line with the main wing when the wings are open and the operator is spraying. So the small wings shouldn't be hanging back while driving down the paddock.

When the wings are folded into transport position, the secondary wing (**Small wing**) should be sitting tight against the crash pad.

To Adjust:

- 1) Open your wings completely to the spray position
- 2) Loosen both adjustment turnbuckles so they are fully open (Fig. 1)
- 3) Loosen the wire rope clamps on the outside drum (Fig.2) and adjust the rope so the **Folded Out** side is tight and all the slack is on the **Folded In** side back at the adjustment turnbuckles (Fig.1)
- 4) Once your happy the cables are good, tighten the cable clamps on the drum (Fig.2)
- 5) Tighten the **Folded Out** turnbuckle until the small wing is in line with the main wing, tension should be good and tight.
- 6) Fold the boom back into transport position
- 7) Tighten the **Folded In** turnbuckle until the small wing is touching the crash pad (Fig.3), also shown on the previous page A. Tension should be firm but not too tight.
- 8) Fold the wings fully in and fully out, adjust tension turnbuckles as required.
- 9) Close off the lock nuts on the turnbuckles and check that the pins on the Dee shackles are tight.

Parts:

- A. 12mm Stainless Turnbuckle (Eye/Eye)
- B. 10mm Stainless Dee
- C. 10mm (S/S) Wire rope clamp
- D. Fold Spring (S/S) (QA99153)

- E. Alloy wire rope guide, double eye
- F. Poly hose clamp 22mm, double eye
- G. Poly hose clamp 22mm, single eye
- H. 6" Alloy pulley
- I. 8" or 9" Alloy pulley

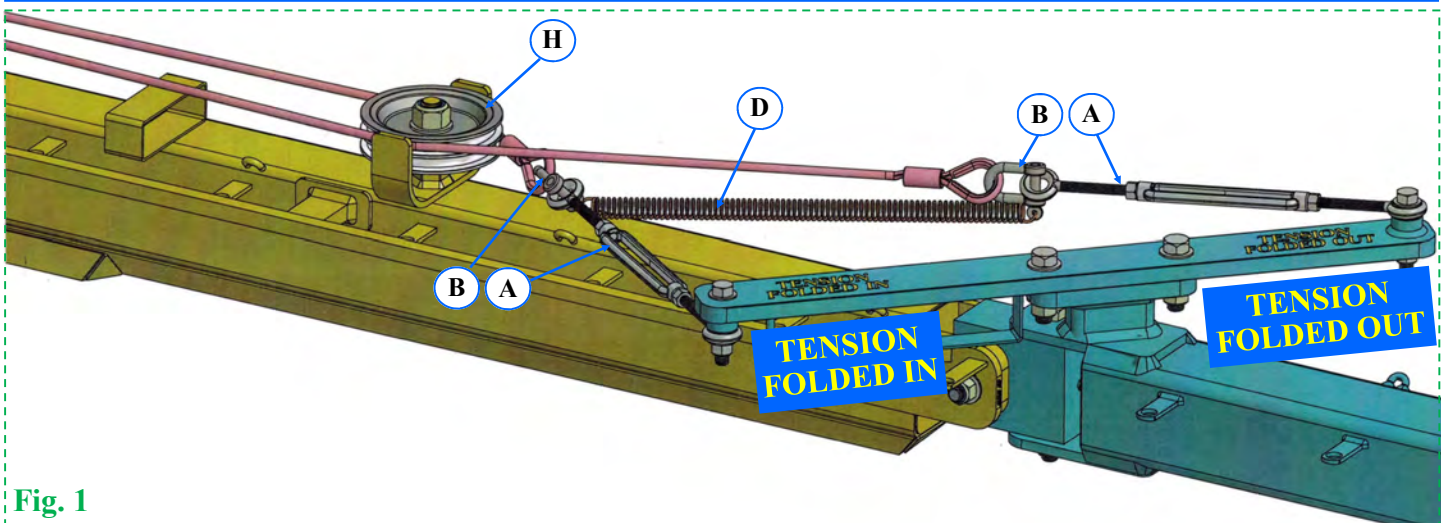


Fig. 1

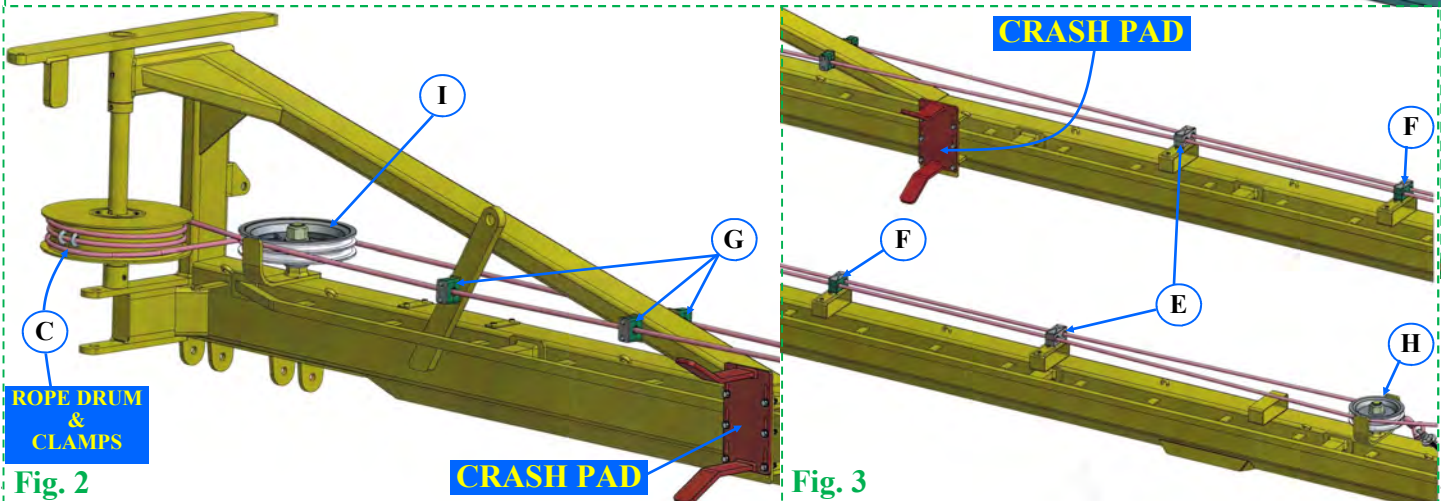


Fig. 2

Fig. 3

Plumbing operation

Plumbing basic's

Your Sonic WEED-IT boomspray is equipped with dual rotary ball valves, each valve distributes both suction & pressure fluid flow. Models with the dual tank system will have one valve representing the WEED-IT hot tank & spraying system & one valve representing the Broadacre tank & spraying system & are labelled accordingly.

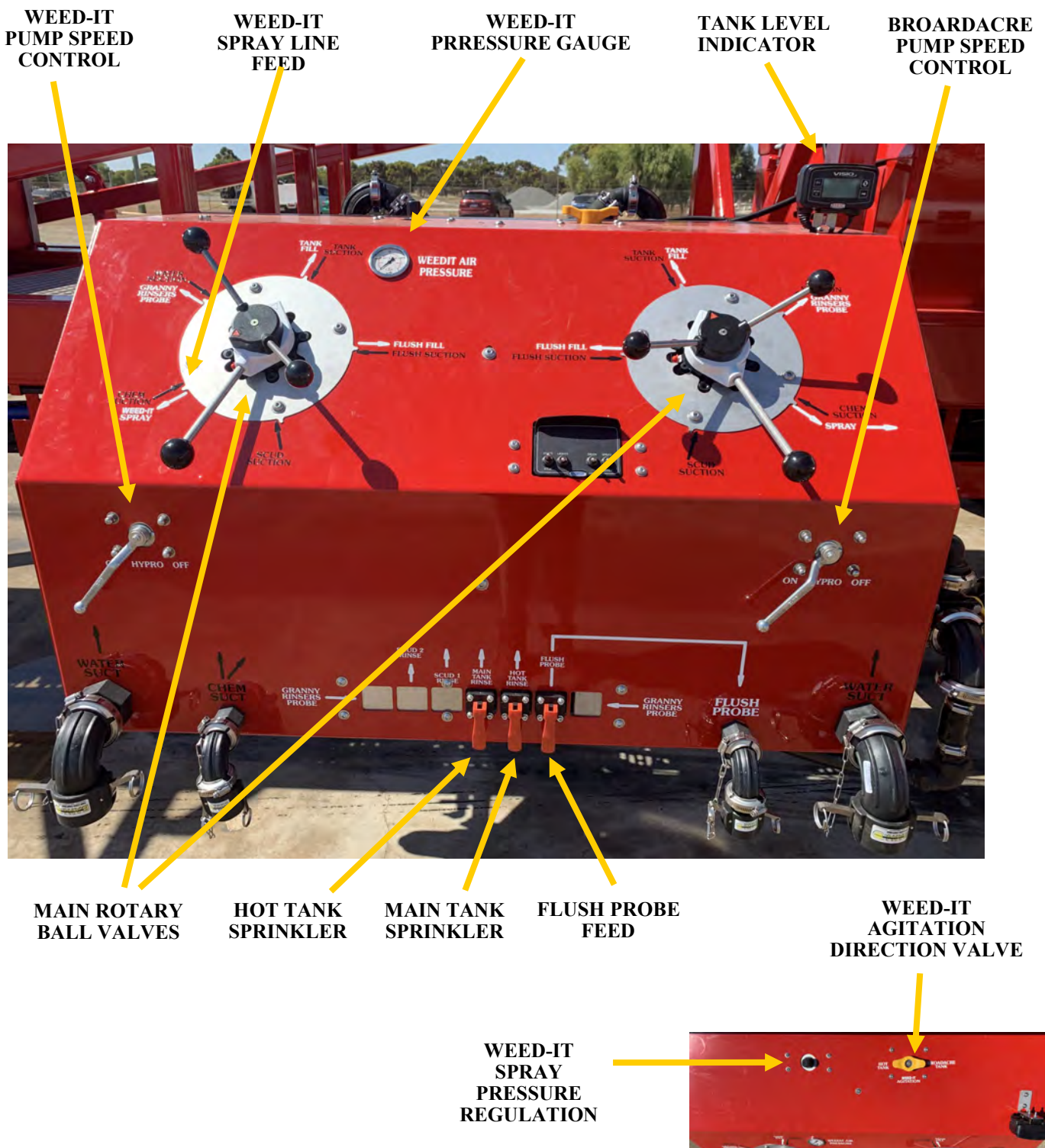
The direction of fluid flow is represented with white & black lines & arrows

White centre dial & white lines = Pressure (fluid to somewhere).

Black centre dial & black lines = Suction (water from somewhere).

Rotate the relevant colour handle arrow to face the line going in the direction you would like the fluid to come from or go to.

PLUMBING MANIFOLD LAYOUT



Plumbing operation

GRANULE INDUCTOR PLUMBING LAYOUT

HOT TANK / BROADACRE TANK
DIVERSION VALVES



HOPPER RINSE VALVE

GRANULE FLOW VALVE

GRANULE INDUCTOR
FEED VALVE



Plumbing operation

Granule inductor operation.

The Granule inductor can be used for both the WEED-IT hot tank & the Broadacre tank separately. The picture below shows the correct position for the dual rotary valves & the granule inductor feed valve in the up (on) position .

Set the relevant rotary valve suction handle (black) to the suction position desired either water suction or tank suction then set pressure handle (white) to the bank of flip handle valves & have the granule inductor handle in the up (on) position, set the granule inductor diverter valves to the relevant tank . Start you pump & open the granule flow valve & add your granules.

The hopper rinse valve can be used at anytime.

Caution always have hopper lid shut during the rinsing procedure unless you are rinsing containers.



**GRANULE INDUCTOR
DIVERSION VALVES**

BOTH IN THE OFF



**GRANULE INDUCTOR
DIVERSION VALVES**

**SET TO WEED-IT HOT
TANK ON**



**GRANULE INDUCTOR
DIVERSION VALVES**

**SET TO BROADACRE
TANK ON**

SONIC SCUD CHEMICAL TRANSFER

Intro

The SCUD chemical metering unit is quick, clean and safe. The chemical is transferred from the Envirodrum to the boom tank in a closed system, which protects the operator from toxic chemical fumes and chemical splash. The SCUD system includes a 200ltr SCUD tank fitted to the boom enabling large quantities of chemical to be stored and transported for remote filling stations. An electric Sotera double diaphragm SCUD pump is fitted as standard when a scud kit is optioned and is capable of shifting up to 50 ltrs of chemical per minute allowing chemical to be transferred in a short time frame, which is ideal for chemicals with rates upwards of 1 ltr/ha. The SCUD system is a proven product. Response from farmers has been excellent, it's simplicity and safety give it the edge over any other system on the market.

The SCUD system is very simple to use, so once it's mounted onto your boom there is no more set up required. Have your Envirodrums set up so that when you arrive at your water fill-up point the Micromatic coupler hose will reach the Envirodrums. Ensure the main spray system is in agitate mode before filling and follow the instructions to follow.

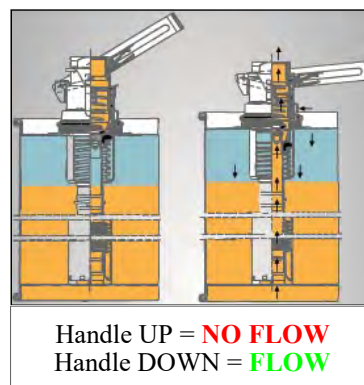
To operate:

- 1) After connecting water supply to fill the Main tank, remove the Micromatic male coupler from Micromatic female rinser and connect to Envirodrum, by turning clockwise (similar to a light bulb fitting).
- 2) Push down the handle of Micromatic male coupler to open the Micromatic drum valve (**Note:** It should click down into place). The system is now open and ready for the SCUD pump to be turned on. (**Note:** Before switching the SCUD pump on always check to make sure SCUD tank is empty)
- 3) Open the corresponding tap on the scud manifold to fill relevant SCUD tank.
- 4) Lift the metal lever on the right hand side of the SCUD pump to switch the pump on. You should see the chemical start filling into the bottom of the SCUD tank. If it's not filling then make sure the Micromatic coupler is connected properly and that the handle is pushed down all the way. If this does not solve the problem try another Envirodrum, in case the first one was faulty. If this fails check your SCUD pump.
- 4) When chemical fills to the required amount of litres (E.g. Read off the side of the calibrated SCUD tank), switch off SCUD pump. You can also stop the flow by releasing the Micromatic male coupler from the Envirodrum.
- 5) When you are satisfied that you have the right amount of chemical, remove the Micromatic male coupler from the Envirodrum (Unclick and turn anti-clockwise).
- 6) Re-connect the handpiece to the Micromatic female rinser (turn clockwise) and engage the handle of the male coupler until it clicks down into place (similar to step 2).

To Rinse:

- 1) Turn SCUD pump on again (for approximately 10 seconds), this will allow fresh water to flow from the Micromatic female rinser through the Micromatic male coupler into the SCUD pump and then into the SCUD tank. This flushes the chemical out of the system so you always have clean water left in the system.

Note: Once you've finished rinsing the SCUD system. Be aware that if you leave the handle fully engaged the system will be open. **Disengage** the handle to stop liquid flow. Head pressure from the flush tank could cause liquid to flow through the pump into your scud tank, giving you a false reading in the scale.



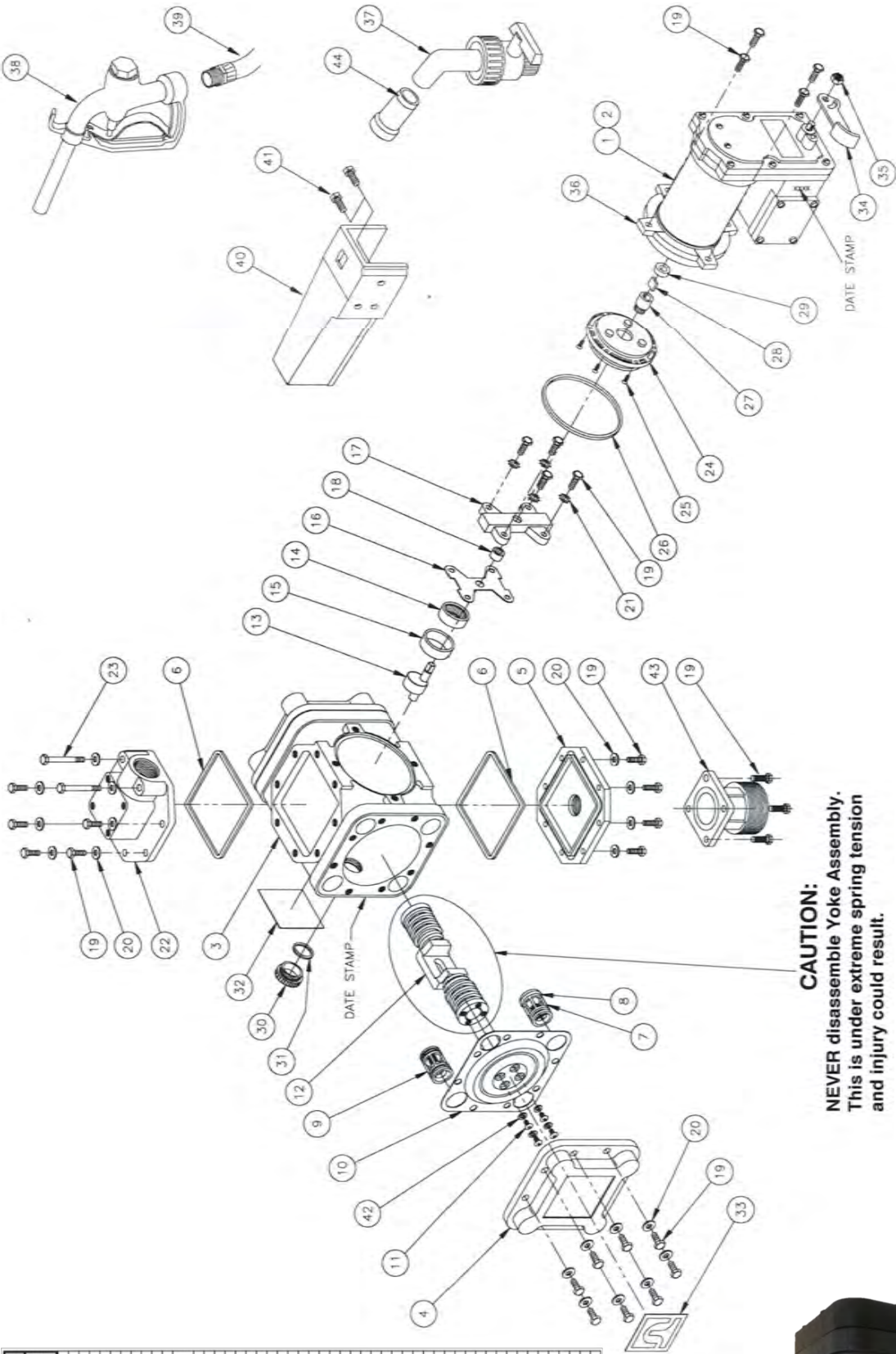
SERIES 400 PUMP PARTS LIST				
ITEM NO.	NEW PART NO.	OLD PART NO.	DESCRIPTION	QTY.
1	400KTF683	400KTF683	Motor Assembly - 12 VDC	1
2	400F751	400F751	Motor Assembly - 115 VAC	1
3	400F657	400F657	Motor Assembly - 235 VAC	1
4	400F659	400F659	Pump Body	2
5	400F660	400F660	Pump Cover	2
6	400F662	400F662	L-C Gasket (S&T)	2
7	400F657	400F657	Check Valve - Inlet	2
8	400F658	400F658	Check Valve - Outlet	2
9	400F659	400F659	O-ring (117) (Included with item 7)	4
10	400F657	400F657	O-ring (117) (Included with item 7)	4
11	400F659	400F659	O-ring (117) (Included with item 7)	4
12	400F657	400F657	O-ring (117) (Included with item 7)	4
13	400F659	400F659	O-ring (117) (Included with item 7)	4
14	400F657	400F657	O-ring (117) (Included with item 7)	4
15	400F659	400F659	O-ring (117) (Included with item 7)	4
16	400F657	400F657	O-ring (117) (Included with item 7)	4
17	400F659	400F659	O-ring (117) (Included with item 7)	4
18	400F657	400F657	O-ring (117) (Included with item 7)	4
19	400F659	400F659	O-ring (117) (Included with item 7)	4
20	400F657	400F657	O-ring (117) (Included with item 7)	4
21	400F659	400F659	O-ring (117) (Included with item 7)	4
22	400F657	400F657	O-ring (117) (Included with item 7)	4
23	400F659	400F659	O-ring (117) (Included with item 7)	4
24	400F657	400F657	O-ring (117) (Included with item 7)	4
25	400F659	400F659	O-ring (117) (Included with item 7)	4
26	400F657	400F657	O-ring (117) (Included with item 7)	4
27	400F659	400F659	O-ring (117) (Included with item 7)	4
28	400F657	400F657	O-ring (117) (Included with item 7)	4
29	400F659	400F659	O-ring (117) (Included with item 7)	4
30	400F657	400F657	O-ring (117) (Included with item 7)	4
31	400F659	400F659	O-ring (117) (Included with item 7)	4
32	400F657	400F657	O-ring (117) (Included with item 7)	4
33	400F659	400F659	O-ring (117) (Included with item 7)	4
34	400F657	400F657	O-ring (117) (Included with item 7)	4
35	400F659	400F659	O-ring (117) (Included with item 7)	4
36	400F657	400F657	O-ring (117) (Included with item 7)	4
37	400F659	400F659	O-ring (117) (Included with item 7)	4
38	400F657	400F657	O-ring (117) (Included with item 7)	4
39	400F659	400F659	O-ring (117) (Included with item 7)	4
40	400F657	400F657	O-ring (117) (Included with item 7)	4
41	400F659	400F659	O-ring (117) (Included with item 7)	4
42	400F657	400F657	O-ring (117) (Included with item 7)	4
43	400F659	400F659	O-ring (117) (Included with item 7)	4
44	400F657	400F657	O-ring (117) (Included with item 7)	4
45	400F659	400F659	O-ring (117) (Included with item 7)	4

† Effective 2/1/99
* Prior to 2/1/98

400KTF683 Diaphragm Repair Kit
(Includes items 6, 10, 24-28, & 49)



Check oil level regularly: SAE 30w or 15w40



CAUTION:
NEVER disassemble Yoke Assembly.
This is under extreme spring tension
and injury could result.



12V ELECTRIC SCUD PUMP — SOTERA 400 Series

HIGH FLOW SCUD CHEMICAL TRANSFER

INRO

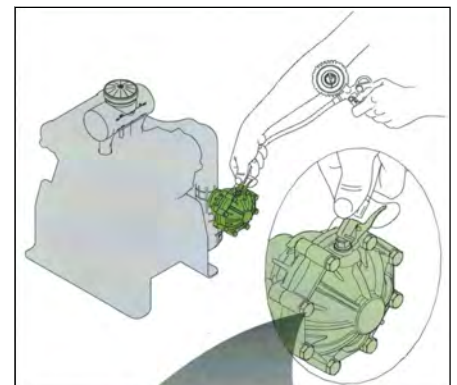
The high flow SCUD chemical transfer unit is quick, clean and safe. This pumping system is capable of higher flows than the electric driven unit, with a potential of up to 110 l/min compared to the 50 l/min potential of the electric setup (**Note:** Fittings and couplers used may restrict full flow). There are two options for driving the pump. The pump can be fitted with either a Hydraulic driven or a Petrol driven motor.

Procedures for filling and flushing are the same as described for the electric unit on previous pages, only difference being how the motor is switched on and off. The Hydraulic motor can be switched off via the hydraulic ball valve under the motor. The Honda motor can be switched off via the standard ON-OFF switch on the motor. (**Note:** Max RPM is 550rpm for these diaphragm pumps: Pre-set at SONIC factory)

SERVICING

- Check oil level periodically. The pump should be level and cold when checking and the oil level should be between the marked MAX-MIN markings on the reservoir bottle.
- If necessary, top up the oil, using the recommended oil from your pump user manual.
- Replace oil annually as per user manual provided.
- Check Diaphragm pressure periodically

For more detailed service and parts information consult the Manufacturers Owner's Operation & Safety Manual (as supplied).



Checking the inflation pressure

If the pump has a pressure accumulator, check its level of inflation with the pump at a standstill, using an tyre inflation gun with a pressure gauge. The accumulator is inflated by the manufacturer to the maximum pump pressure. Refer to the table below for desired pressure setting.

D113– D123 {Imovilli} Pressure Accumulator

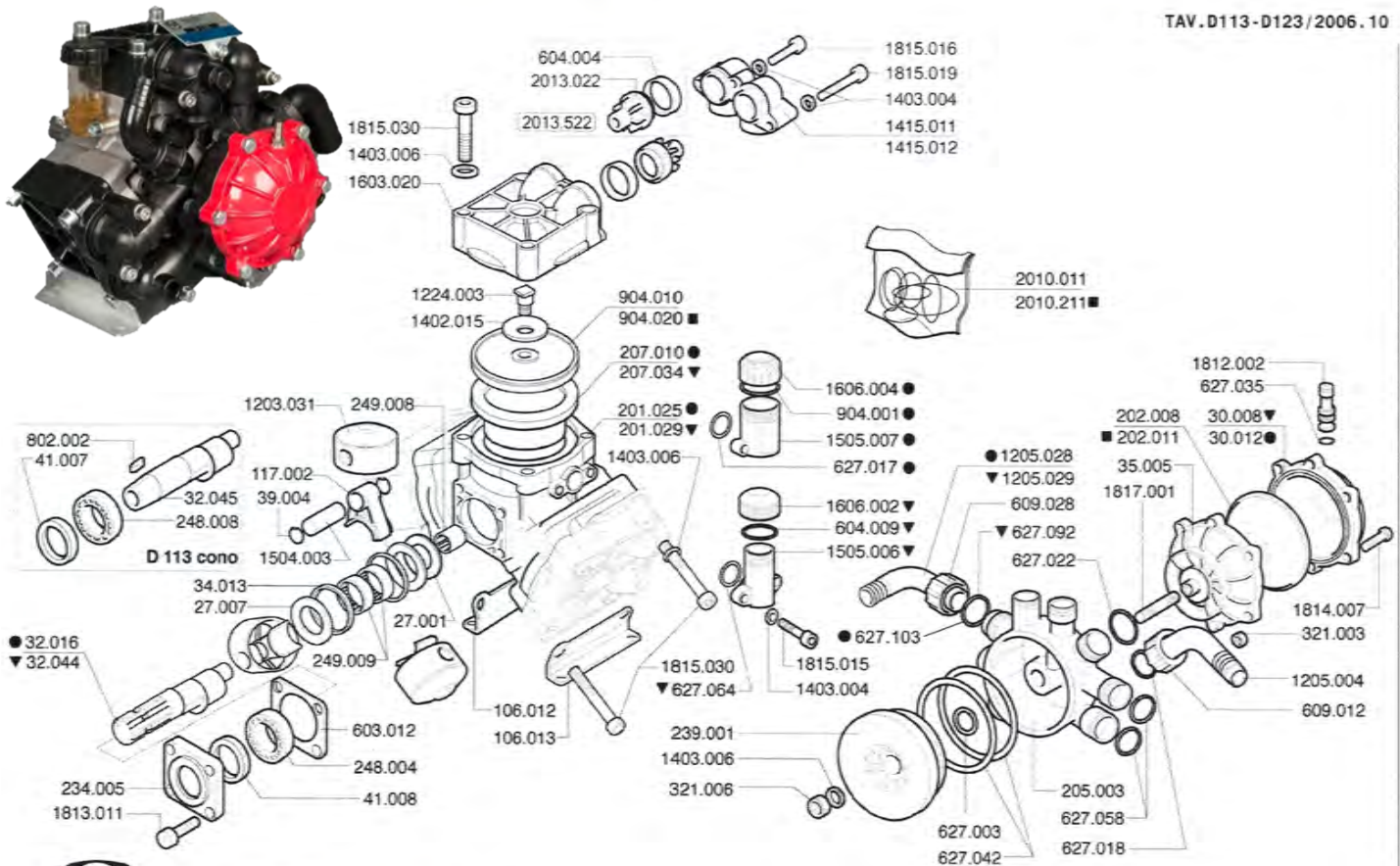
SCUD TANK		MAIN TANK	
BAR	PSI	BAR	PSI
20	290	8	115
15	215	7	100
10	145	5	70
5	70	3	40

D113– D123 {Imovilli} Pump Data

l/1"	USGPM	RPM	RPM	BAR	PSI	Kg	Oil	HP	KW	Pompa
MAX	MAX	MIN	MAX	MAX	MAX		SAE 40			Pump
110	29	350	550	20	290	12,5	0,740	5,7	4,2	D113
120	31,7	350	550	20	290	12,5	0,800	6,5	4,8	D123

HIGH FLOW SCUD PUMP — IMOVILLI D113 & D123 Series

TAV. D113-D123/2006.10



imovilli pompe

▽ D 113 ● D 123 ■ DESMOPAN

D113-D123

D 113 - D 123

TAV. D113-D123/2006.10

CODICE	DESCRIZIONE	N° PEZZI
27.001	Anello spallamento A.	1
27.007	Anello spallamento B.	2
30.008	Accumulatore sup. D 113	1
30.012	Accumulatore sup. D 123	1
32.016	Albero pompa D 123 cardano	1
32.044	Albero pompa D 113 cardano	1
32.045	Albero pompa D 113 cono	1
34.013	Anello unione	2
35.005	Accumulatore inf.	1
39.004	Anello arresto Ø 16	6
41.007	■ Anello radiale Ø 30 x 47 x 7	1
41.008	■ Anello radiale Ø 35 x 47 x 7	1
106.012	Base pompa SX	1
106.013	Base pompa DX	1
117.002	Biella	3
201.025	Carter D 123	1
201.029	Carter D 113	1
202.008	Camera aria gomma	1
202.011	Camera aria desmopan	1
205.003	Collettore aspirazione	1
207.010	Cilindro D 123	3
207.034	Cilindro D 113	3
234.005	Coperchio cuscinetto	1
239.001	Coperchio coll.asp	1
248.004	Cuscinetto a sfere 6007	1
248.008	Cuscinetto a sfere 6206	1
249.008	Cuscinetto a rullini HK 20/30	1
249.009	Cuscinetto a rullini HK 40/16	2
321.003	Dado es. M 8 UNI 5587	6
321.006	Dado es. M10 UNI 5587	1
603.012	■ Guarn. coperchio cuscinetto	1
604.004	■ Guarn. valvola A-M	6
604.009	■ Guarn. Ø 23 x 32 x 2 D 113	1
609.012	Girello Ø 1" RS	1
609.028	Girello Ø 1 1/2 RS	1
627.003	■ Guarn. OR 109	1
627.017	■ Guarn. OR 3075 D 123	1
627.018	■ Guarn. OR 3081	1
627.022	■ Guarn. OR 3137	1

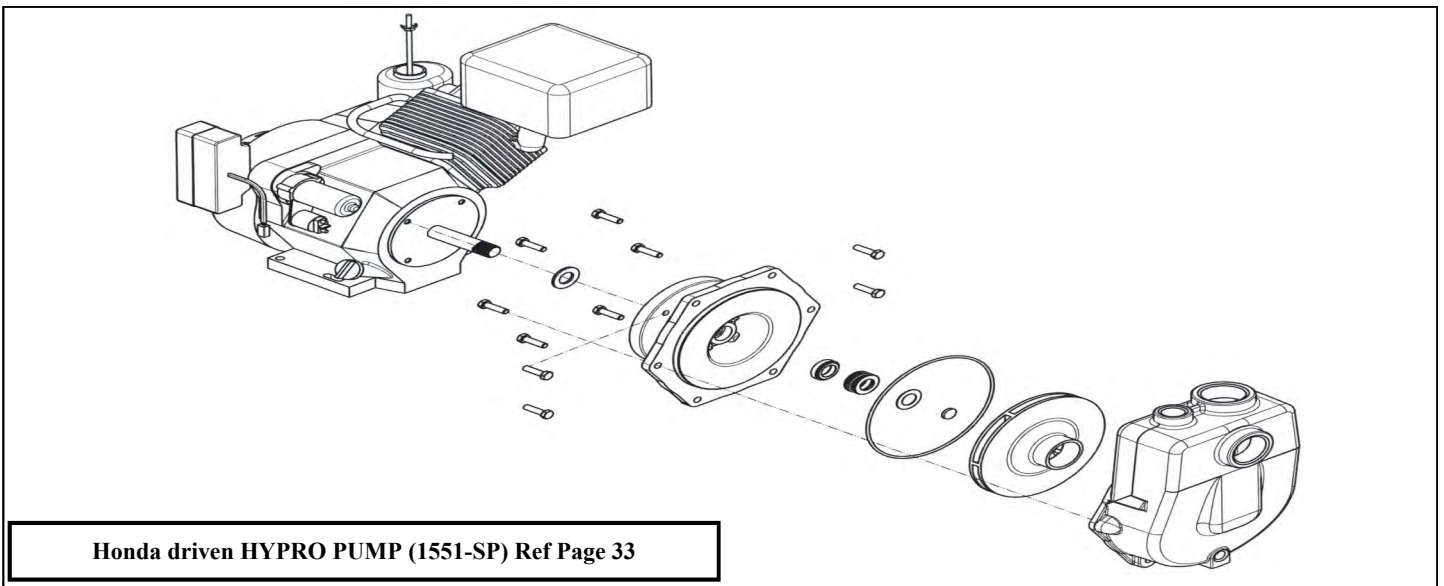
CODICE	DESCRIZIONE	N° PEZZI
627.035	■ Guarn. OR Ø 12 x 6 x 3	1
627.042	■ Guarn. OR 109104	2
627.058	■ Guarn. OR Ø 25 x 31 x 3	6
627.064	■ Guarn. OR 3087 D 113	1
627.092	■ Guarn. OR 3131	1
627.103	■ Guarn. OR Ø 38,5 x 32,5 x 3	2
802.002	Linguetta 8 x 7 x 25 UNI 6604	1
904.001	■ Membrana polmone olio D 123	1
904.010	Membrana gomma	3
904.020	Membrana desmopan	3
1203.031	Pistone	3
1205.004	Portagomma curvo Ø 25 x 1"	1
1205.028	Portagomma curvo Ø 40 x 1 1/2 D 123	1
1205.029	Portagomma curvo Ø 30 x 1 1/2 D 113	1
1224.003	Perno bloccaggio membrana	3
1402.015	Rondella richiamo membrana	3
1403.004	Rondella Bis. Ø 8 UNI 1750	12
1403.006	Rondella Bis. Ø 10 UNI 1750	9
1415.011	Raccordo collettore	2
1415.012	Raccordo collettore con tappo	1
1504.003	Spinotto Ø 16 x 60	3
1505.006	Serbatoio olio D 113	1
1505.007	Serbatoio olio D 123	1
1603.020	Testata	3
1606.002	Tappo serbatoio olio D 113	1
1606.004	Tappo serbatoio olio D 123	1
1812.002	Valvola aria	1
1813.011	Vite TE M8 x 20 - 8.8 UNI 5739	4
1814.007	Vite TE M8 x 40 - 8.8 UNI 5737	6
1815.015	Vite TCEI M8 x 35 - 8.8 UNI 5931	2
1815.016	Vite TCEI M8 x 40 - 8.8 UNI 5931	3
1815.019	Vite TCEI M8 x 60 - 8.8 UNI 5931	6
1815.030	Vite TCEI M10 x 65 - 8.8 UNI 5931	12
1817.001	Vite prigioniera inox	1
2010.011	Set guarnizioni	1
2010.211	Set guarnizioni desmopan	1
2013.022	Gruppo valvola A-M	6
2013.522	Kit valvola A-M	6

SPRAY PUMPS

Flush pump with fresh water on completion of each days spraying. This will pro-long the life of the pump. Running the pump dry can lead to premature seal failure. If the seal should leak, liquid will emerge between the motor and the pump housing. Should this occur it is recommended that the shaft seal (Mechanical seal) in the pump be replaced. In some cases liquid can penetrate engine seal and cause complete engine failure.

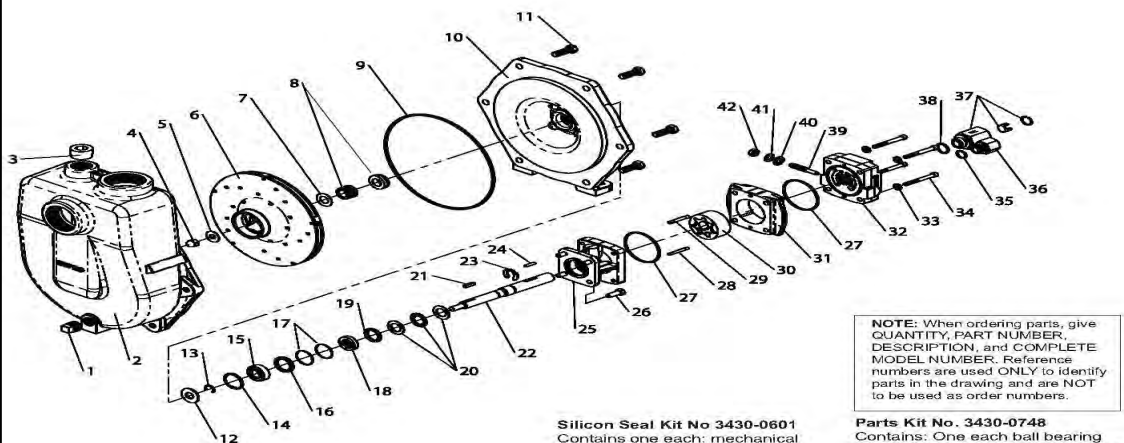
Pump can remain on machine to replace seal.

- If possible flush pump with fresh water, then drain all liquid out of pump.
- Remove all bolts from pump housing
- Prise housing apart.
- Remove diffuser from impeller. (Stalker only)
- Remove impeller (Refer pump owners manual).
- Prise the spring loaded side of the seal off the shaft with a screwdriver.
- Prise Ceramic ring (White) out of the back plate
- Clean pump housing where seal is seated and lubricate.
- Replace new seal, making sure that the two hard surfaces face each other.
- Bed Ceramic seal into housing - take care not to scratch, chip or crack, a little lubrication helps.
- Replace impeller and tighten (Use thread lock on the nut where applicable: Hydraulic driven Hypro).
- Replace housing and take care to line up evenly to ensure that the O-ring seals don't get pinched.
- Prime pump and run with some fresh water to check for leaks.



Honda driven HYPRO PUMP (1551-SP) Ref Page 33

Models 9305C-HM3C-SP and 9305C-HM3C-BSP



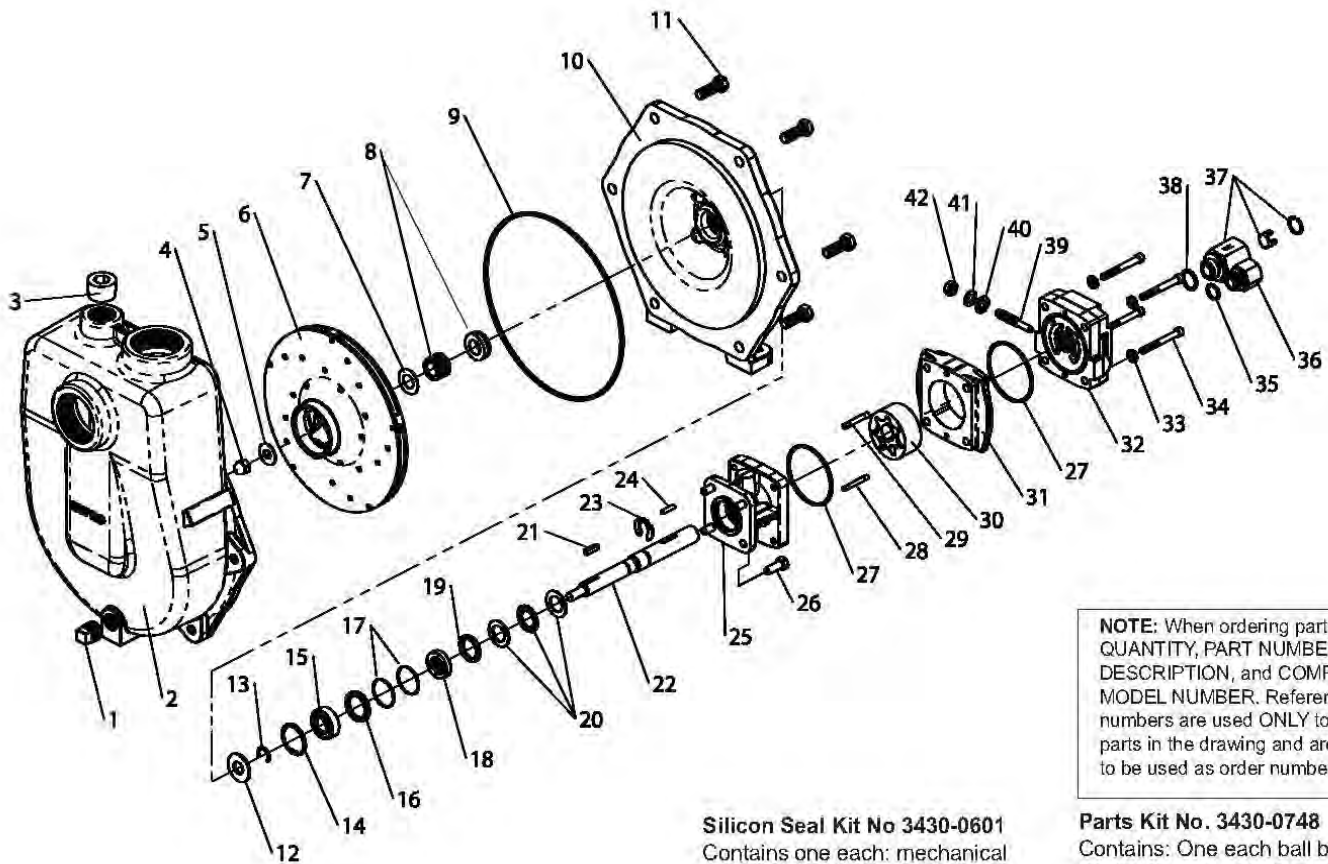
NOTE: When ordering parts, give QUANTITY, PART NUMBER, DESCRIPTION, and COMPLETE MODEL NUMBER. Reference numbers are used ONLY to identify parts in the drawing and are NOT to be used as order numbers.

Silicon Seal Kit No 3430-0601
Contains one each: mechanical seal (Ref. 8) and o-ring (Ref. 9).

Repair Parts Kit No. 3430-0500
Contains one each: mechanical seal (Ref. 8), o-ring (Ref. 9), and rubber gasket (Ref. 7).

Parts Kit No. 3430-0748
Contains: One each ball bearing (Ref. 15), motor shaft seal (Ref. 18), thread seal gasket (Ref. 40), two cartridge o-rings (Ref. 17) and washer (Ref. 41); two each motor housing o-rings (Ref. 27), and port adapter o-rings (Ref. 35 & 38).

Hydraulic driven HYPRO PUMP (9305C-HM3C) Ref. Page 31



NOTE: When ordering parts, give QUANTITY, PART NUMBER, DESCRIPTION, and COMPLETE MODEL NUMBER. Reference numbers are used ONLY to identify parts in the drawing and are NOT to be used as order numbers.

Hydraulic Motor Part No. 2500-0083C

Silicon Seal Kit No 3430-0601

Contains one each: mechanical seal (Ref. 8) and o-ring (Ref. 9).

Repair Parts Kit No. 3430-0500

Contains one each: mechanical seal (Ref. 8), o-ring (Ref. 9), and rubber gasket (Ref. 7).

Parts Kit No. 3430-0748

Contains: One each ball bearing (Ref. 15), motor shaft seal (Ref. 18), thread seal gasket (Ref. 40), two cartridge o-rings (Ref. 17) and washer (Ref. 41); two each motor housing o-rings (Ref. 27), and port adapter o-rings (Ref. 35 & 38).

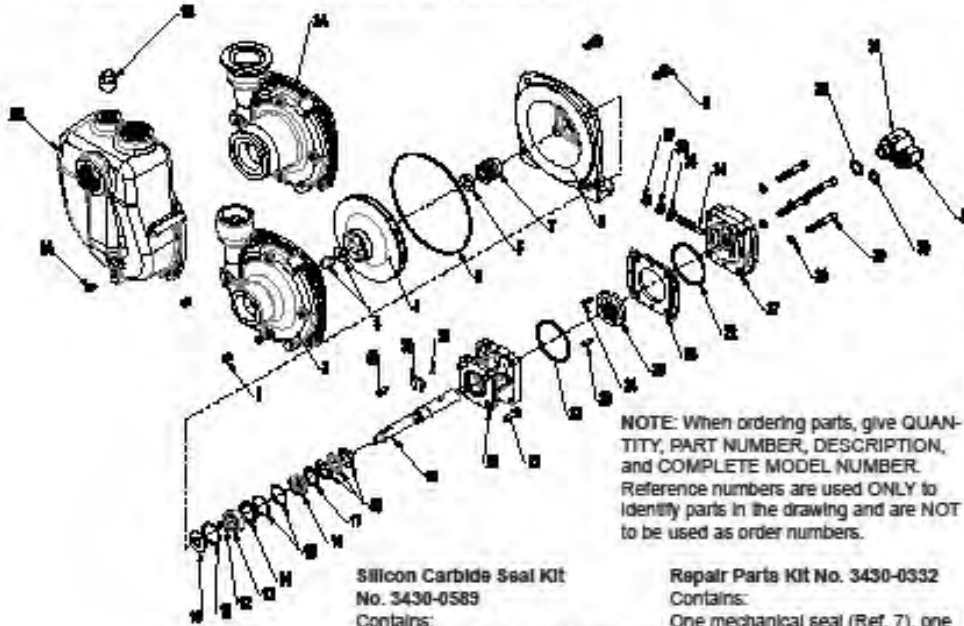
Qty. Req'd.	Part No.	Description
1	2406-0002	1/2" NPT Drain Plug (SP model only)
1	2406-0035	1/2" BSP Drain Plug (BSP model only)
1	3430-0481SP	Self Priming Chamber (SP model only)
		Includes a stainless wear ring, plugs, & o-ring
1	3430-0481BSP	Self Priming Chamber (BSP model only)
		Includes a stainless wear ring, plugs, & o-ring
1	2406-0034	1" NPT Prime Port Plug (SP model only)
1	2406-0036	1" BSP Prime Port Plug (BSP model only)
1	2253-0002	Impeller Nut
1	2270-0071	Washer
1	0403-9200P1	Impeller
1	1700-0100	Rubber Gasket
1	2120-0009	Mechanical Seal (Viton/Ceramic) (Std 9305C)
1	3430-0601	Mechanical Seal (Silicon Carbide) (Optional)
1	1720-0180	O-ring
1	0752-9200C	Mounting Flange
6	2210-0086	Hex Head Cap Screw
1	1410-0056	Slinger Ring
1	1810-0014	Snap Ring
1	1820-0013	Retaining Ring
1	2000-0010	Ball Bearing
1	1410-0131	Cartridge, Front
2	1720-0268	O-ring
1	2104-0010	Lip Seal
1	1410-0130	Seal Spacer
1	2029-0014	Thrust Bearing Assembly

Ref. No.	Qty. Req'd.	Part No.	Description
21	1	1610-0053	Square Key
22	1	0537-2500	Shaft
23	1	1810-0026	Snap Ring
24	1	1610-0055	Roll Pin
25	1	0150-2500C	Motor Body (includes needle bearing)
26	4	2210-0005	Hex Head Cap Screw
27	2	1720-0110	O-ring
28	1	1600-0052	Dowel Pin
29	1	1600-0068	Dowel Pin
30	1	3900-0024	Gerotor
31	1	0702-2500C1	Gerotor Housing 1" wide
32	1	0254-2500C2	Motor End Plate (includes needle bearing)
33	4	2270-0039	Washer
34	4	2220-0044	Cap Screw
35	1	1720-0108	O-ring
36	1	3360-0021A	Pressure Port Adapter (includes o-ring)
37	1	3320-0051A	Tank Port Adapter (includes o-ring)
38	1	1720-0262	O-ring
39	1	3220-0029	Bypass Adjusting Screw
40	1	1700-0047	Gasket
41	1	2270-0027	Washer
42	1	2250-0038	Lock Nut

Hypro Series 9303C-SP

Replacement Parts

The following drawings show the pumps and their replacement parts. **Only genuine replacement parts should be used. Failure to follow this warning can result in damage to property, serious injury or death.** If the pump malfunctions or is defective, it should be sent back to Hypro for service.



9303C(S)-HM1C, 2, 3, 4, 5 & -U and 9303C(S)-SP-HM1, 2, 3, 4, 5

Adapter Kit No. 3430-0187 (HM2 and HM4 Models Only) Contains one each:

- No. 3373-0020 (Size #1)
- No. 3373-0021 (Size #2)
- No. 3373-0022 (Size #3)
- No. 1720-0108 Adapter O-ring and
- No. 1720-0105 Orifice O-ring

SP Chamber Kit No. 3430-0480SP Contains: One chamber with wear ring (Ref. 2) one o-ring (Ref. 5), one drain vent plug (Ref. 1) and one vent plug (Ref. 1A).

Parts Kit No. 3430-0748 Contains: One each ball bearing (Ref. 13), motor shaft seal (Ref. 16), thread seal gasket (Ref. 35), two cartridge o-rings (Ref. 15), and washer (Ref. 36); two each motor housing o-rings (Ref. 22), and port adapter o-rings (Ref. 30 & 32).

Hydraulic Motor Part Nos.
 2500-0081C (HM1C Models)
 2500-0082C (HM2C Models)
 2500-0083C (HM3C Models)
 2500-0084C (HM4C Models)
 2500-0085C (HM5C Models)

NOTE: When ordering parts, give QUANTITY, PART NUMBER, DESCRIPTION, and COMPLETE MODEL NUMBER. Reference numbers are used ONLY to identify parts in the drawing and are NOT to be used as order numbers.

Silicon Carbide Seal Kit No. 3430-0589

Contains: Mechanical seal (Ref. 7) and o-ring (Ref. 5).

Repair Parts Kit No. 3430-0332

Contains: One mechanical seal (Ref. 7), one o-ring (Ref. 5) and one rubber gasket (Ref. 6).

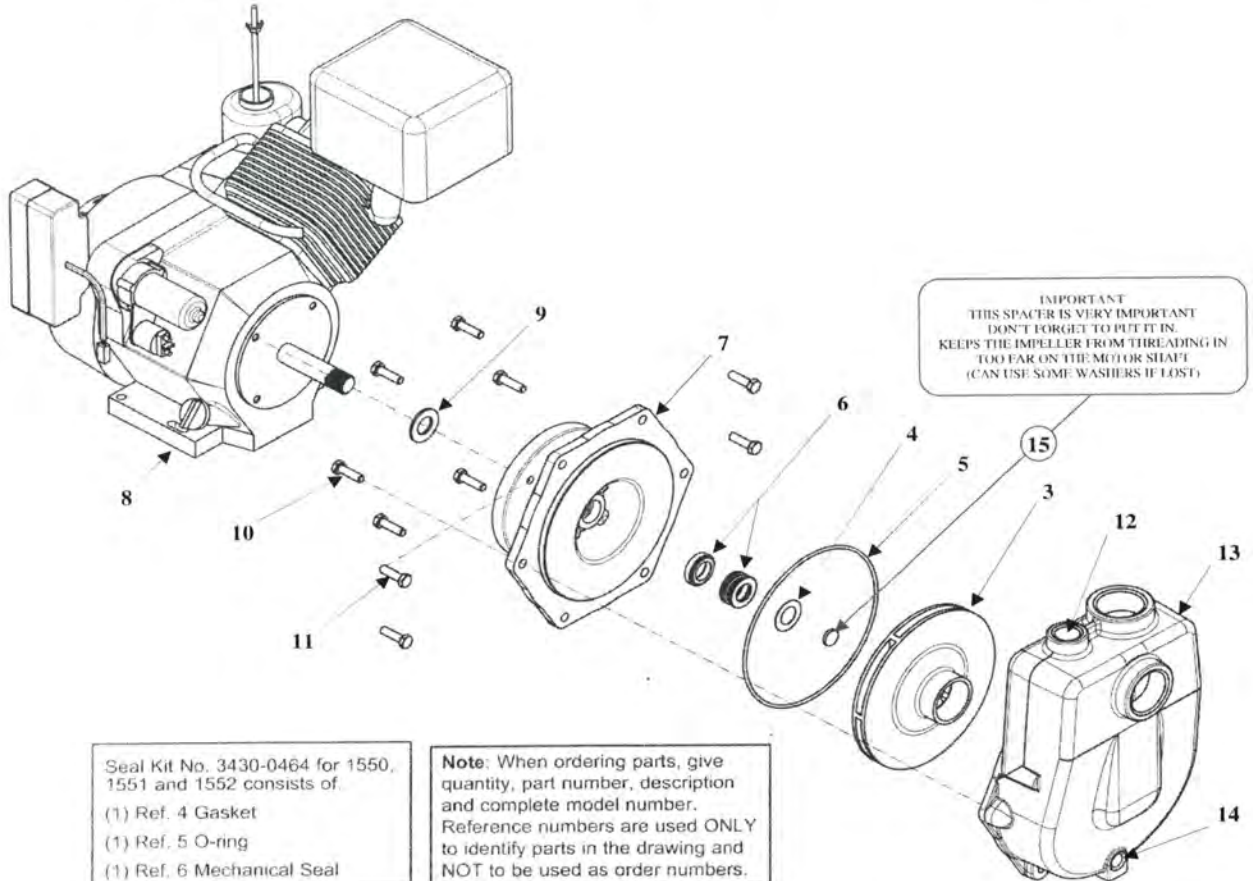
Ref. No.	Qty. Req'd.	Part No.	Description	Ref. No.	Qty. Req'd.	Part No.	Description
1	4	2406-0007	Drain/Vent Plug (9303C)	23	1	1600-0045	Dowel Pin (HM2C / HM4C)
1A	4	2406-0016	Drain/Vent Plug (9303S)	23	1	1600-0044	Dowel Pin (HM1C/HM5C)
1B	4	2406-0007	Drain/Vent Plug	23	1	1600-0052	Dowel Pin (HM3C)
2	1	0150-9000C	Pump Casing (Model 9303C)	24	1	1600-0042	Dowel Pin (HM2C / HM4C)
2A	1	0150-9000S	Pump Casing (Model 9303S)	24	1	1600-0037	Dowel Pin (HM1C/HM5C)
2A	1	0153-9000C	Pump Casing (Universal Flange Model C-U)	25	1	1600-0068	Dowel Pin (HM3C)
2A	1	0153-9000S	Pump Casing (Universal Flange Model S-U)	25	1	3900-0022	Gerotor (HM1C)
2B	1	0150-9070CM	Pump Casing	25	1	3900-0023	Gerotor (HM2C)
3	1	3430-0825	Impeller Nut (9303C)	25	1	3900-0024	Gerotor (HM3C)
3	1	3430-0825	Impeller Nut (9303S)	25	1	3900-0025	Gerotor (HM4C)
4	1	0401-9100P	Impeller (Nylon Std. 9303C)	25	1	3900-0048	Gerotor (HM5C)
4	1	0402-9100P	Impeller (Polypropylene Optional) (Std 9303S)	26	1	0701-2500C1	Gerotor Housing (HM2C Models) 1 1/4" wide
5	1	1720-0083	O-ring	26	1	0700-2500C1	Gerotor Housing (HM1C Models) 1/2" wide
6	1	1700-0100	Gasket	26	1	0703-2500C1	Gerotor Housing (HM4C Models) 5/16" wide
7	1	2120-0009	Mechanical Seal (Viton/Ceramic) (Std 9303C)	26	1	0702-2500C1	Gerotor Housing (HM3C Models) 1" wide
7	1	3430-0589	Mechanical Seal (Silicon Carbide) (Std 9303S)	26	1	0704-2500C1	Gerotor Housing (HM5C Models) 5/8" wide
8	1	0750-9300C	Mounting Flange (9303C)	27	1	0254-2500C2	Motor End Plate (Includes needle bearing)
8	1	0756-9300S	Mounting Flange (9303S)	28	4	2270-0039	Washer
9	4	2210-0020	Hex Head Cap Screw (9303C)	29	4	2220-0045	Cap Screw (HM2C / HM4C Models)
9	4	2210-0125	Hex Head Cap Screw (9303S)	29	4	2220-0021	Cap Screw (HM1C Models)
10	1	1410-0056	Slinger Ring	29	4	2220-0044	Cap Screw (HM3C Models)
11	1	1810-0014	Snap Ring	29	4	2220-0032	Cap Screw (HM5C Models)
12	1	1820-0013	Retaining Ring	30	1	1720-0108	O-ring
13	1	2000-0010	Ball Bearing	31	1	3360-0021A	Pressure Port Adapter (Includes o-ring)
14	1	1410-0131	Cartridge, Front	32	1	1720-0262	O-ring
15	2	1720-0268	O-ring	33	1	3320-0051A	Tank Port Adapter (Includes o-ring)
16	1	3430-0748	Lip Seal	34	1	3220-0029	Bypass Adjusting Screw
17	1	1410-0130	Seal Spacer	35	1	1700-0047	Gasket
18	1	2029-0014	Thrust Bearing Assembly	36	1	2270-0027	Washer
19	1	3430-0850	Shaft (HM2C/HM4C)	37	1	2250-0038	Lock Nut
19	1	3430-0852	Shaft (HM1C/HM5C)	38	1	1610-0032	Roll Pin (HM2C / HM4C)
19	1	3430-0855	Shaft (HM3C)	38	1	1610-0031	Roll Pin (HM1C / HM5C)
20	1	0150-2500C	Motor Body (Includes needle bearing)	38	1	1610-0055	Roll Pin (HM3C)
21	4	2210-0005	Hex Head Cap Screw	39	1	1810-0026	Snap Ring
22	2	1720-0110	O-ring	40	1	1610-0012	Woodruff Key (9303C)
				40	1	04432	Woodruff Key (9303S)

SPRAY PUMPS



Models 1550, 1550-SP, 1550-BSP, 1551, 1551-SP, 1551-BSP, 1552C-130, 1552C-130E

L-0300AG-13
Rev. B



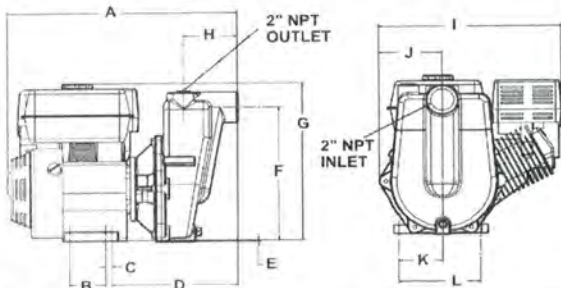
Seal Kit No. 3430-0464 for 1550, 1551 and 1552 consists of:
(1) Ref. 4 Gasket
(1) Ref. 5 O-ring
(1) Ref. 6 Mechanical Seal

Note: When ordering parts, give quantity, part number, description and complete model number. Reference numbers are used ONLY to identify parts in the drawing and NOT to be used as order numbers.

Ref. No.	Qty. Req'd.	Part No.	Description
1	4	2406-0007	Drain Plug
2	1	0153-9200C	Pump Casing (includes SS wear ring)
3	1	0404-9200P	Impeller (Nylon)
4	1	1700-0121	Gasket
5	1	1720-0180	O-ring
6	1	2120-0034	Mechanical Seal - Viton
7	1	0707-9200C	Flange
8	1	2541-0037	Honda engine (1550) (GX-270PA)*
8	1	2541-0050	13 HP PowerPro

Ref. No.	Qty. Req'd.	Part No.	Description
8	1	2541-0051	13 HP PowerPro (Electric start)
9	1	1410-0091	Slinger Ring
10	6	2210-0086	Bolt
11	4	2210-0098	Bolt
12	1	2406-0034	Priming Port Plug (Standard)
12	1	2406-0036	Priming Port Plug (BSP)
13	1	0152-9075C	Pump Casing (Standard NPT)
13	1	0152-9075C1	Pump Casing (BSP)
14	1	2406-0002	Drain Plug
15	1	12R04-1-05-15-06	SHAFT SPACER (SONIC PART)

* Contact the Engine Manufacturer for this Product Number.



1550SP	
Dimensions	
Inches	mm
A	21.69 550.9
B	3.41 86.6
C	0.59 15.0
D	11.87 301.5
E	0.13 3.3
F	13.56 344.4
G	16.05 407.7
H	5.06 128.5
I	17.30 65.0
J	6.00 152.4
K	4.14 105.2
L	7.75 196.9

PRE SEASON MAINTENANCE

1. Lift and unfold machine to ensure booms fold out and outriggers perform correctly.
2. Check all turnbuckles for defects or deformities, are pins in place, adjust as necessary & tighten lock nuts.
3. Check all Dee shackles are in place, inspect for defects, tighten pins
4. Check all cable clamps are tight and that the cables are not frayed.
5. Put some water in all tanks and operate machine in a stationary position to make sure there are no leaks.
Note. It is common for O-rings and rubber washers to contract when the unit is not used for a long period. Most of these recover their shape quickly but sometimes they may need attention.
6. Open and close all motorised valves to check they are functioning correctly (Eg. Sections, control valves, dump valves, Flush On The Go valve, Tank Drain etc.)
7. Grease suspension and all pivot points. (Pg. 15-17)
8. Change oil in motors
9. Clean air filters
10. Remove and check all chemical filters on unit and make sure they are clean.
11. Check all nozzles and make sure they are clean.
12. Check all tyre pressures. (Pg.14)
13. Jack up all tyres and check wheel bearings for excess movement - there should very minimal play in the bearings.
14. Most monitors require maintenance and possible updates. Depending on monitor used, it is a good idea to contact the manufacturer to see what you should do.
15. Re-calibrate Wheel Sensor. (Refer to Controller Owners Manual)
16. Re-calibrate Flowmeter. (Refer to Controller Owners Manual)

END OF SEASON MAINTENANCE

1. Thoroughly decontaminate Boomspray with a suitable cleaning agent.
2. Flush several times with clean water.
3. Clean and decontaminate all filters.
4. Wash down entire Boomspray.
5. Lubricate all grease points.
6. Check manufacturer recommendation for off-season storage of engines.
7. Store out of direct sunlight.



FLUSHING & DECONTAMINATION

“A CLEAN MACHINE IS A SAFE MACHINE”

Boomspray should be washed down and the boom plumbing flushed out with clean water at the end of each day and at the end of every season. Use boom clean if necessary. Flowables and granules can settle out of suspension. Agitate properly before rinsing out. This includes cleaning filters, tanks, lines, pumps, jets and jet filters. **It should also be thoroughly cleaned between different chemical groups, using an approved cleaning agent to avoid crop damage and or antagonism.**

Good Housekeeping is paramount with chemical and liquid fertilizers

A fresh water tank (Flush tank) is fitted to facilitate the flushing of the Boomspray while away from a water source.

De-Contaminating the system:

Flush the system with fresh water regularly and boom clean periodically

- 1) Select your fresh water source and the pump you wish to use.
- 2) Drain the Main tank to remove any residuals by opening the manual drain valve or (If optioned) press and hold the button for 3 seconds to activate the remote electric drain valve.
- 3) Close the drain valve once empty.
- 4) Switch pump to spray mode and switch to flush mode on your controller .
- 5) Switch all sections to ON, on your controller and activate master switch.
- 6) Open the flush taps at the ends of each section on the wings for 2-3mins to flush the lines.
- 7) Close the flush taps again and leave the fresh water flush through the jets for another 2-3mins.
- 8) Turn OFF your master switch.
- 9) Remove the mesh screens completely from your all your Filters and repeat steps 4-7, to flush the filter bodies and don't re-fit the mesh screens until the rest of the boom has been flushed.
- 10) With the master switch OFF and all your section valves OFF, open the dump valve and control valve to flush those lines back to main tank for 1-2mins.
- 11) Switch pump to Fill mode and turn relevant taps to fill Main tank to flush that fill line for 1-2mins.
- 12) Switch pump to Spray mode, switch pressure manifold tap to run Granule inductor only, this will flush fresh water through that bottom hose up into the main tank. Ensure the Granny pots drain tap is closed. Ref. Granule Inductor section.
- 13) Drain the main tank again, follow step 2.
- 14) With the drain valve still open Turn on the Main Tank Rinse until the liquid runs clear.
- 15) Close the drain valve.
- 16) Flush your spray lines and jets again by repeating steps 4-8 until liquid runs clear.
- 17) Repeat steps above for both pumps if required.
- 18) Clean all the Filter MESH SCREENS thoroughly and re-fit.

SCUD System:

Flush the system with fresh water regularly and boom clean periodically

- 1) Connect and engage the Micromatic Male coupler with the Female rinser. Refer to Pg.39-40 for more de-tailed instructions.
- 2) Rinse line back to main tank for 1-2mins.
- 3) Rinse line to Scud tanks for 1-2mins.
- 4) Fill scud tank to around half way with fresh water.
- 5) Drain the scud tank again to flush the suction lines.
- 6) Run the Scud tank Rinser for 1-2mins and drain the residual once finished.

Boom cleaner can be added through the suction probe at the Pressure manifold or through the granule inductor: **Note.** When adding boom cleaning agent, follow the instructions on the label and procedures outlined by the cleaning agent manufacturer.

Once boom clean has been added, repeat the flushing procedure, as above.

“Ensure spray residues and rinsing solution are disposed of in accordance with local shire and state laws.”

TROUBLE SHOOTING

PRESSURE PROBLEMS:

Most pressure problems whether it is high pressure or low pressure will be caused by blocked filters.

Check Filters

- 1) Shut down and isolate filters by closing appropriate taps.
- 2) Check for damage and clean filters

Pressure Low

- 1) Determine where pressure problem is by checking the manual pressure gauges on front of sprayer.
- 2) If getting a low pressure reading this means there is a problem on the pump side of the pressure take offs which are located in the command center under section valves (Black tubes).

Pressure High

If high pressure reading high, this means there is a problem between the pressure take offs and the jets.

Check that controller has been programmed correctly and that calibration settings have not been altered.

Inconsistent pressures across boom sections will be caused by one of the following: Blocked jets, blocked thimble filters, broken T body, broken jet or split hose.

Ensure all taps are correctly positioned.

Intermittent or no pressure reading on computer.

Check flow meter.

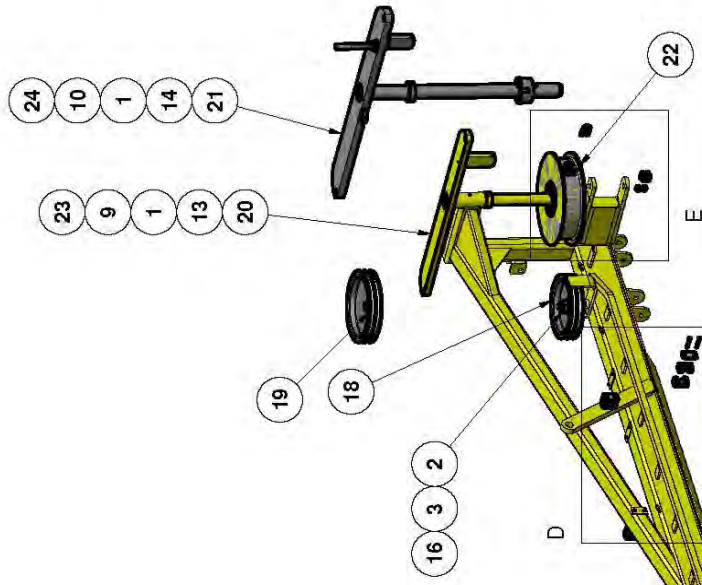
- Turn off the taps below the Control, Dump & Prop valves in the Command center, to isolate the manifold.
- Turn off the liquid feed from the pump side @ (Pressure filters).
- Remove flow meter and service.
- Check for any obstructions where the turbine spins.
- Blow on the turbine to get it spinning: The Turbine should spin quickly and quietly for around 20-30 seconds. A worn turbine will sound rattily and loose speed very quickly, stopping in 5-10 seconds.
- Replace the turbine if worn.

If the turbine isn't worn or has been recently replaced it's possible the sensor is faulty, so if the issue persists after accessing the turbine.

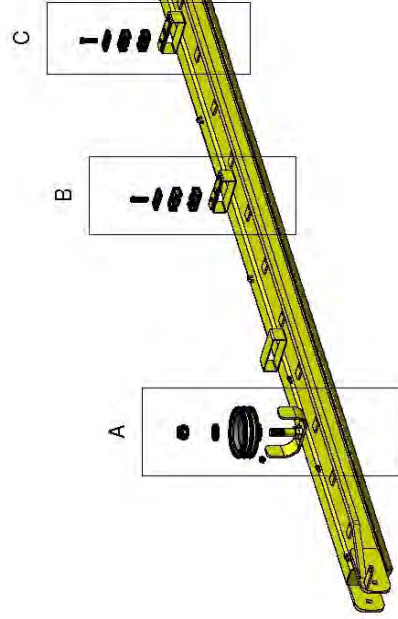
- Check that the wires, plugs and pins have a good connection and check for damage or corrosion.
- If all the above is ok, replace the sensor.

QUANTITIES SHOWN ARE PER WING

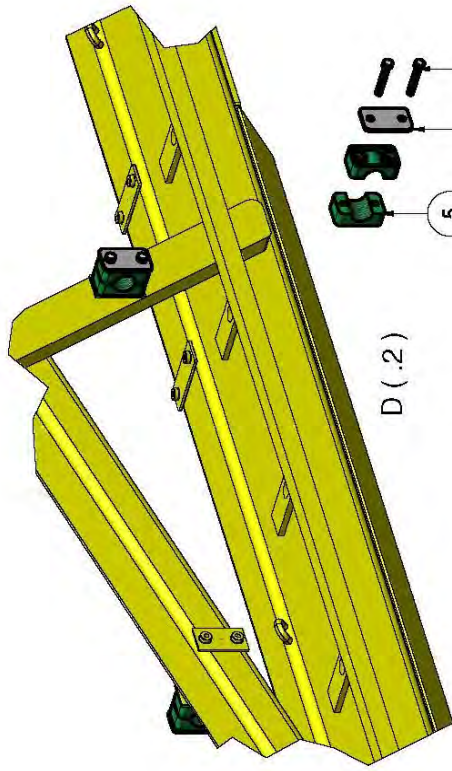
ITEM	STOCK NUMBER	QTY	DESCRIPTION	NOTES	MODEL REFERENCE
1		1	GRUB SCREW - 3/8"UNC x 3/8"		
2		2	NUT, NYLOC - 1"UNC		
3		2	WASHER, FLAT - 1"		
4		2	WIRE ROPE CLAMP - 10mm S/S	TRIM 7mm OFF SADDLE PINS	
5	A3 22C	6	D22 SINGLE CLAMP SHELL [GP3]		
6	AD2 1818C	AS REQ	D18 DOUBLE CLAMP SHELL [GP2]		
7	ADPS3 INOX	AS REQ	ADPINS COVER PLATE		
8	APS3 INOX	3	APINS COVER PLATE		
9	KANT2517-1.500	1	TAPER HUB [2517] - 1.1/2"		36 MTRS AND SMALLER 40 MTRS AND BIGGER
10	KANT2517-45	1	TAPER HUB [2517] - 45mm		
11	M6-SS-GP3	6	BOLT, CLAMP - M6x1.00 x 40, S/S		
12	M8-SS-GP3	AS REQ	BOLT, CLAMP - M8x1.25 x 45, S/S		
13	PP-5-00-04-09	1	RETAINER [SMALL TREE]	D+T 3/8"UNC	36 MTRS AND SMALLER 40 MTRS AND BIGGER
14	PP-5-00-05-09	1	RETAINER [LARGE TREE]	D+T 3/8"UNC	
15	PP-5-00-08-V1	4	V-BLOCK [RF]		
16	Y12029	2	GREASE NIPPLE [00] - 1/8"BSP		
17	150mm ROPE SHEAVE	1	SHEAVE - 2Rx 150mm	6"	
18	200mm ROPE SHEAVE	1	SHEAVE - 2Rx 200mm	8"	36 MTRS AND SMALLER
19	225mm ROPE SHEAVE	1	SHEAVE - 2Rx 225mm	9"	40 MTRS AND BIGGER
20	5-00-04-RF	1	FOLD TREE, RH [SMALL]	L/HAND = 5-00-04-LF	36 MTRS AND SMALLER
21	5-00-05-RF	1	FOLD TREE, RH [LARGE]	L/HAND = 5-00-05-LF	40 MTRS AND BIGGER
22	5-01-05-00	1	DRUM, ROPE FOLD		
23	ATK105P	1	KEYSTEEL - 9.53 mm x 9.53 mm		36 MTRS AND SMALLER
24	ATK604P	1	KEYSTEEL - 9.00 mm x 14.00 mm		40 MTRS AND BIGGER



SEE B
SEE C



SERIAL #		TEL: 0890 647 199 FAX: 0890 647 191 EMAIL: parts@sonicboomsprays.com.au WEB: sonicboomsprays.com.au	
DRN	GR Loader	25/06/2012	
CHK			
MACHINING TOLERANCE		FAB TOLERANCE	
0 = ±0.5		0 = ±1	
0.0 = ±0.05		0.0 = ±0.5	
0.00 = ±0.01		0.0 = ±0.5	
ALL DIMS IN mm UNLESS NOTED OTHERWISE. SEE DRAWING OFFICE FOR PRECISIONS.			
PARTS LISTS :		ROPE FOLD HARDWARE	
SHEET	REV #	PART #	BOM-RF HARDWARE
1 / 2			

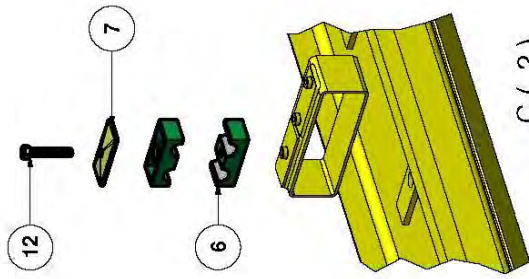


D (.2)

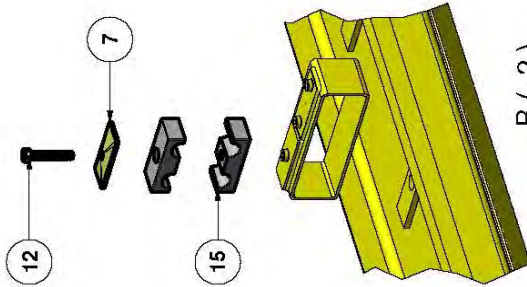


TRIM THESE PIN FACES
DOWN APPROX. 7mm

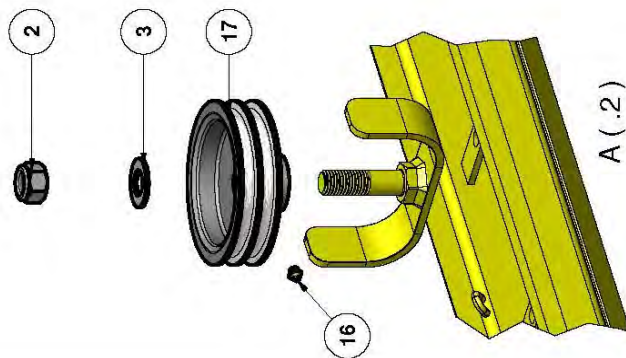
F (1)



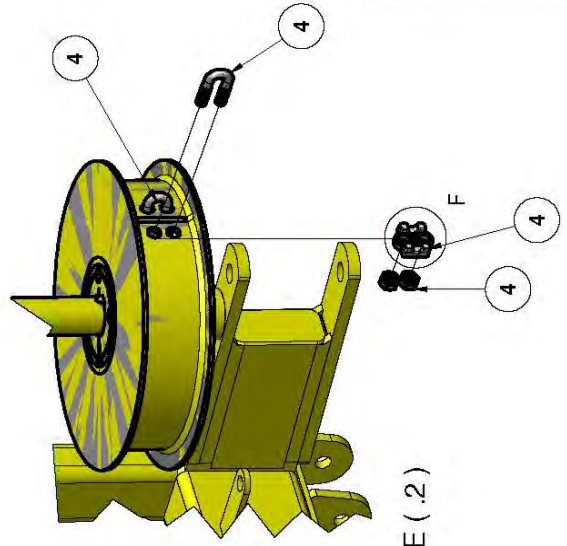
C (.2)



B (.2)



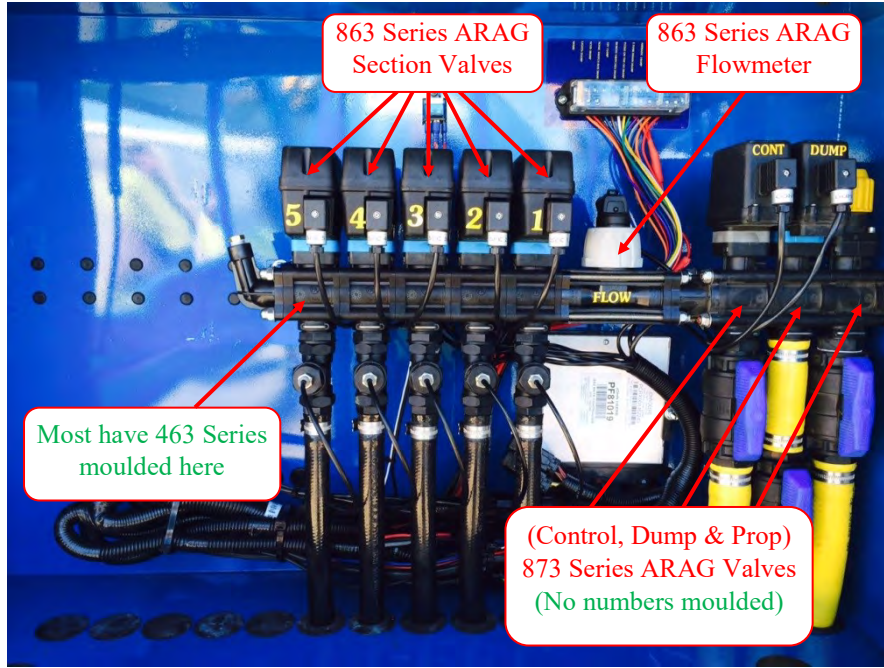
A (.2)



E (.2)

SERIAL #		25/06/2012	
DRW	GR Loader		
CHK			
MACHINING TOLERANCE		FAB. TOLERANCE	
0.0 = ±0.5		0 = ±1	
0.0 = ±0.65		0.0 = ±0.5	
0.00 = ±0.01		0.0 = ±0.5	
ALL DIMS IN mm UNLESS NOTED. DO NOT SCALE DO NOT MODIFY DRAWING SEE DRAFTING OFFICE FOR REVISIONS			
=SONIC=		PARTS LISTS :	
BOOMSPPRAYS		ROPE FOLD HARDWARE	
NAREMBEEN W.A.		REV #	
		PART #	
		BOM-RF HARDWARE	
		SHEET 2 / 2	

BOOM SECTIONS & VALVE BANK INFO



FLOW METER:

Model: ARAG {WOLF}
Flow rate: 10-200 L/MIN
Fitment: ARAG 463 flanges

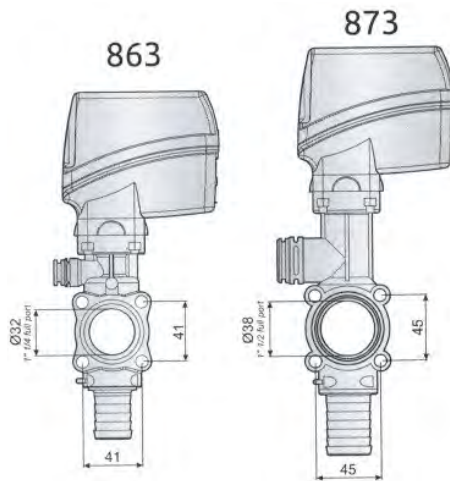


Associated parts:
FLOWMETER - FEEDING CABLE {WOLF}
FLOWMETER - PADDLE ONLY {WOLF}
FLOWMETER - SENSOR ONLY {WOLF}

PACKARD PLUG

FEMALE

MALE



863 Series SECTION Valve
1.1/4" Through Port
(Spring on plunger)
3 Pin [Blue Band]

873 Series CONTROL Valve
1.1/2" Through Port
(Angle on plunger S/S)
3 Pin [Grey Band]

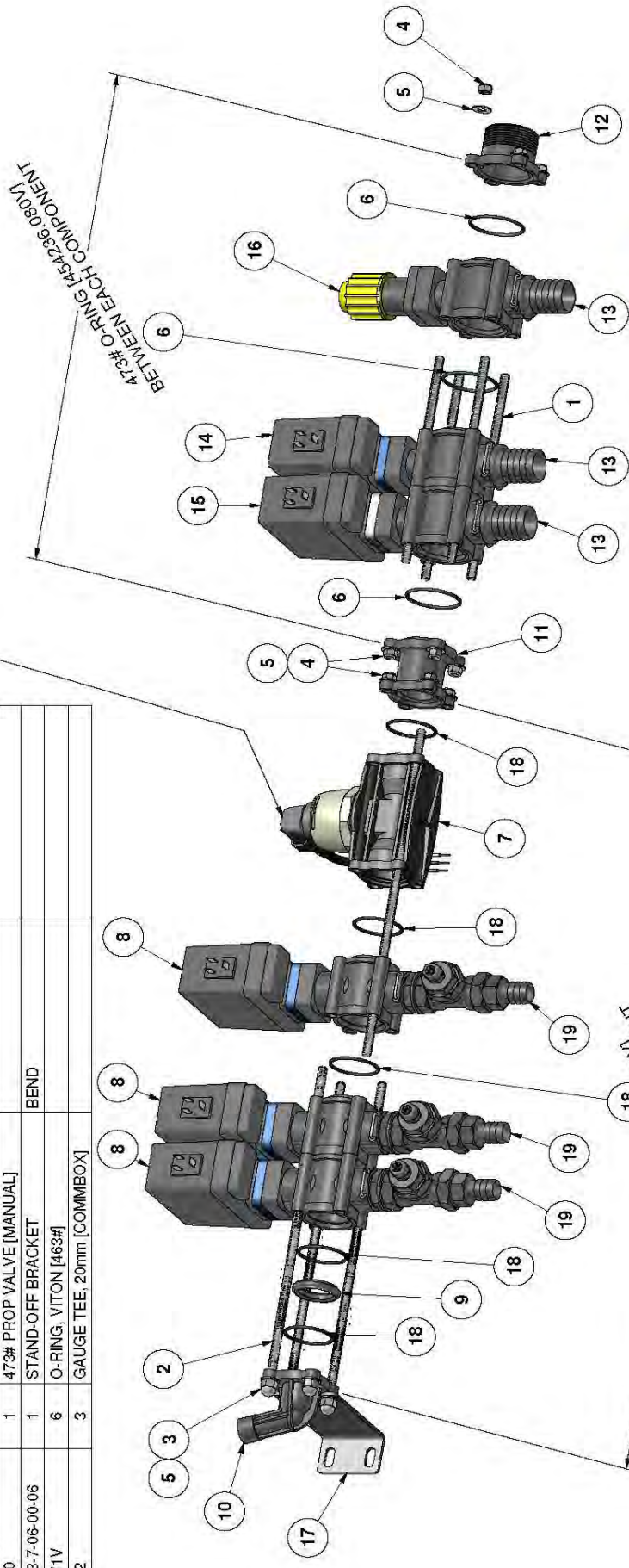
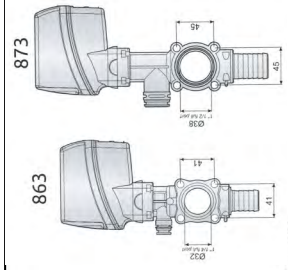
873 Series DUMP Valve
1.1/2" Through Port
(White plunger)
3 Pin [Blue Band]

ITEM	STOCK NUMBER	QTY	DESCRIPTION	NOTES	MODEL REFERENCE
1		4	ALLTHREAD- M8x1.25 @ 205 mm		ALL MODELS
2		4	ALLTHREAD- M8x1.25 @ 325 mm	154mm + 57mm/SECTION	3-SECTION BOOM
3		4	NUT, DOME - M8x1.25 SS		
4		12	NUT, NYLOC [08] - M 8x1.25		
5		16	WASHER, FLAT [08]- 5/16"		
6	454236.080V	4	O-RING, VITON [473#]		
7	462 64A0	1	FLOW METER [10-200 LPM]		
8	463001ST	3	463# SECTION VALVE		
9	463011.135	1	463# M-M ADAPTER		
10	463011N.130	1	ADAPTER, PRESS. GAUGE		
11	473000.010	1	473#M-463#F ADAPTER		
12	473000.160	1	1-1/2"BSP-M x 473# ARAG-F		
13	473001.A32	3	473# 32mm HOSETAIL		
14	473001T	1	473# SECTION VALVE		
15	473020.6S	1	473# PROP VALVE [ELEC]		
16	473070	1	473# PROP VALVE [MANUAL]		
17	BND03-7-06-00-06	1	STAND-OFF BRACKET	BEND	
18	G10071V	6	O-RING, VITON [463#]		
19	SB1052	3	GAUGE TEE, 20mm [COMMBOX]		

SEE DRAWING 'ARAG FLOWMETER' FOR MORE DETAIL
 PLUG GENDER IS SPECIFIC TO CONTROLLER-
 PLEASE SPECIFY WHEN REPLACING SENSOR

473# O-RING [454236.080V]
 BETWEEN EACH COMPONENT

463# O-RING [G10071V]
 BETWEEN EACH COMPONENT

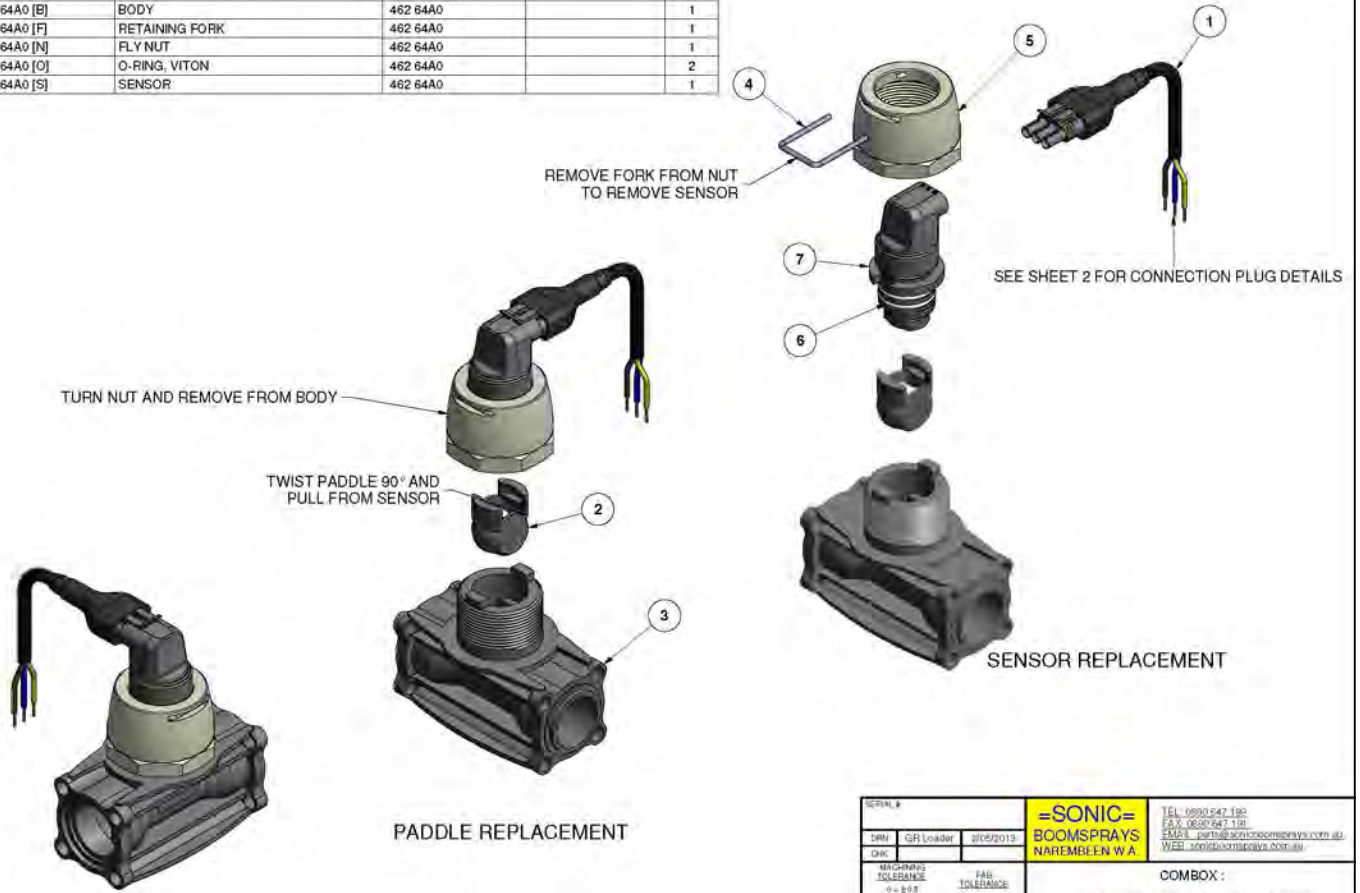


SERIAL #		=SONIC=	
DRN	GR Loader	28/05/2009	BOOMSPRAYS
CHK			NAREMBEEN W.A.
MACHINING TOLERANCE		FAB TOLERANCE	
0 = ±0.5		0 = ±1	
0.0 = ±0.05		0.0 = ±0.5	
0.00 = ±0.01		0.0 = ±0.5	
ALL DIMS IN mm U.O.N. DO NOT SCALE DO NOT MODIFY DRAWING SEE DRAFTING OFFICE FOR REVISIONS			
SHEET	REV #	PART #	MANIFOLD - VALVE BANK [ARAG]
1/1	1		

PLUMBING :

VALVE BANK, T/PULL [β SECTION]

ITEM	PART NUMBER	DESCRIPTION	STOCK NUMBER	NOTES	QTY
1	462 1AA10000.100	SENSOR LEAD	462 1AA10000.100		1
2	462 6000.500	PADDLE	462 6000.500		1
3	462 64A0 [E]	BODY	462 64A0		1
4	462 64A0 [F]	RETAINING FORK	462 64A0		1
5	462 64A0 [N]	FLY NUT	462 64A0		1
6	462 64A0 [O]	O-RING, VITON	462 64A0		2
7	462 64A0 [S]	SENSOR	462 64A0		1



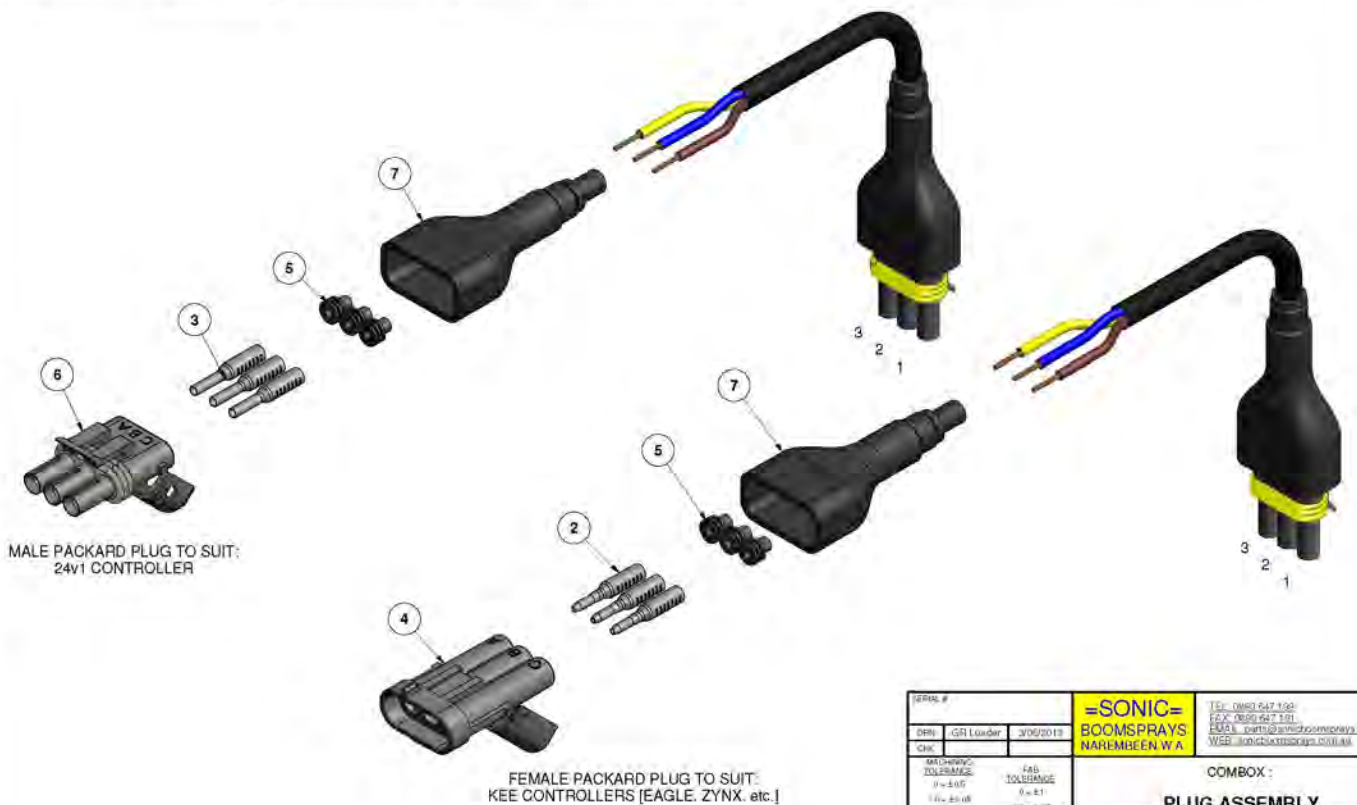
PADDLE REPLACEMENT

SERIAL #		=SONIC=		TEL: 0890 547 190
DRW: GH Loader	3/05/2013	BOOMSPRAYS		FAX: 0820 647 131
CHK:		NAREMBEEN WA		EMAIL: parts@sonic-boomsprays.com.au
MATERIALS TOLERANCE	FAB TOLERANCE	COMBOX :		
0 ± 0.05	0 ± 0.1	FLOW METER [10-200 LPM]		
0.05 ± 0.05	0.05 ± 0.05	PART #		
ALL DIMS IN mm UNLESS OTHERWISE SPECIFIED		DO NOT SCALE		462 64A0
NET WEIGHT: 0.0000000000000000		SHEET 1/2		REV # 0

ITEM	PART NUMBER	DESCRIPTION	STOCK NUMBER	NOTES	QTY
1	462 1AA10000.100	SENSOR LEAD	462 1AA10000.100		2
2	WP3W-CONPIN3	PACK PLG CONN. PIN [3mm]	WP3W-KIT		3
3	WP3W-CONSCKT3	PACK PLG CONN. SOCKET [3mm]	WP3W-KIT		3
4	WP3W-FCAS	PACKARD PLUG, FEMALE - 3 PIN	WP3W-KIT	c/w PINS AND SEALS	1
5	WP3W-GROMMET	CASING GROMMET SEAL [PACKARD]	WP3W-KIT		1
6	WP3W-MCAS	PACKARD PLUG, MALE - 3 PIN	WP3W-KIT	c/w PINS AND SEALS	1
7	Y703	BOOT [3P PACKARD]	Y703		2

GRN/YLW WIRE [PIN 3] TO PACKARD PIN A
 BLUE WIRE [PIN 1] TO PACKARD PIN B
 BROWN WIRE [PIN 2] TO PACKARD PIN C

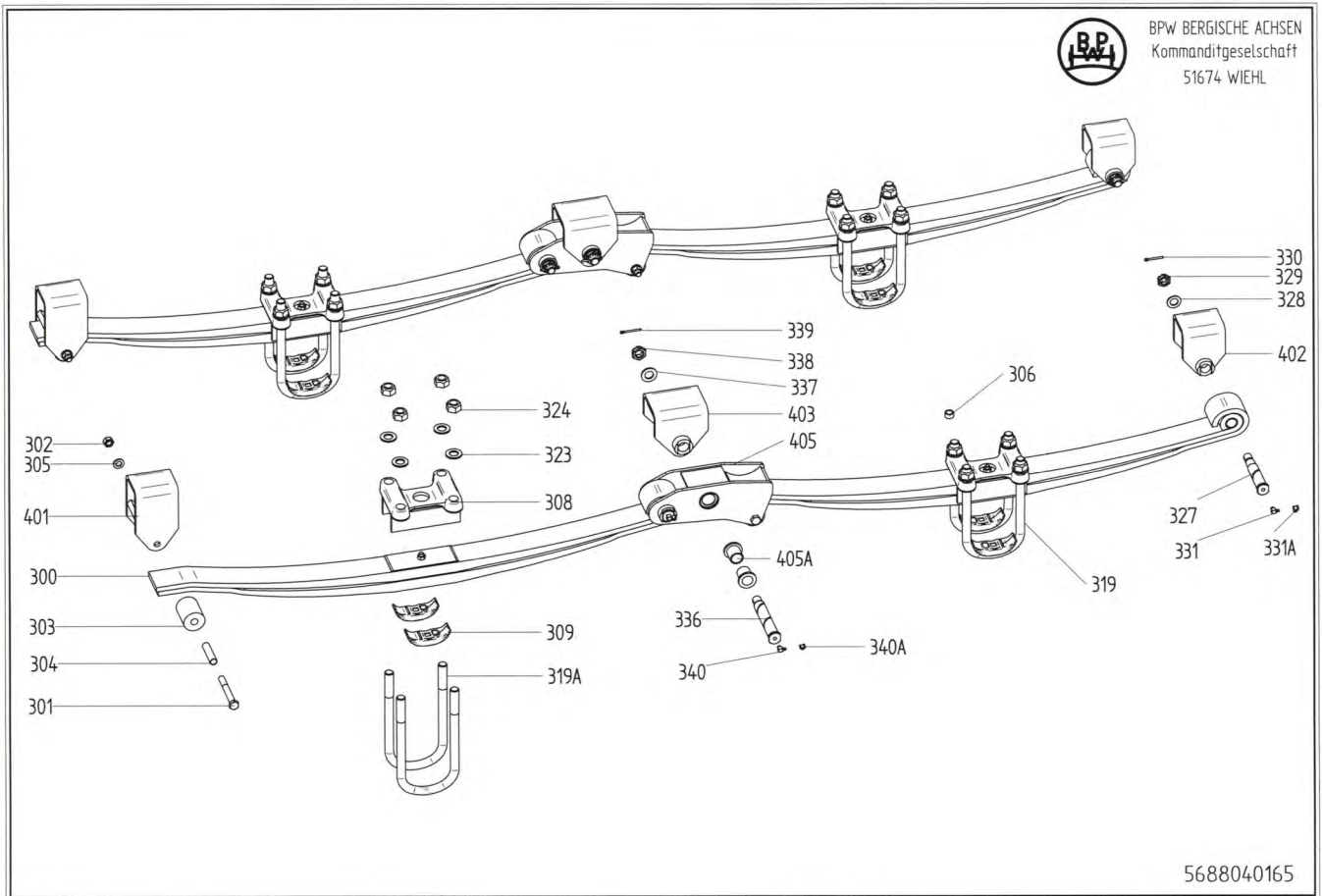
PLEASE ADVISE WHICH CONTROLLER SYSTEM YOU ARE USING
 AND / OR WHICH PLUG IS CURRENTLY ON YOUR FLOW METER



SERIAL #		=SONIC=		TEL: 0890 547 190
DRW: GH Loader	3/05/2013	BOOMSPRAYS		FAX: 0820 647 131
CHK:		NAREMBEEN WA		EMAIL: parts@sonic-boomsprays.com.au
MATERIALS TOLERANCE	FAB TOLERANCE	COMBOX :		
0 ± 0.05	0 ± 0.1	PLUG ASSEMBLY		
0.05 ± 0.05	0.05 ± 0.05	PART #		
ALL DIMS IN mm UNLESS OTHERWISE SPECIFIED		DO NOT SCALE		462 1AA10000.100
NET WEIGHT: 0.0000000000000000		SHEET 2/2		REV # 0

AXLE & HUB INFORMATION

7000L models are equipped with the BPW Transpec Tandem rear steering suspension



5688040166_uk.txt

SPARE PARTS LIST

56.88.04.0166

06.11.12

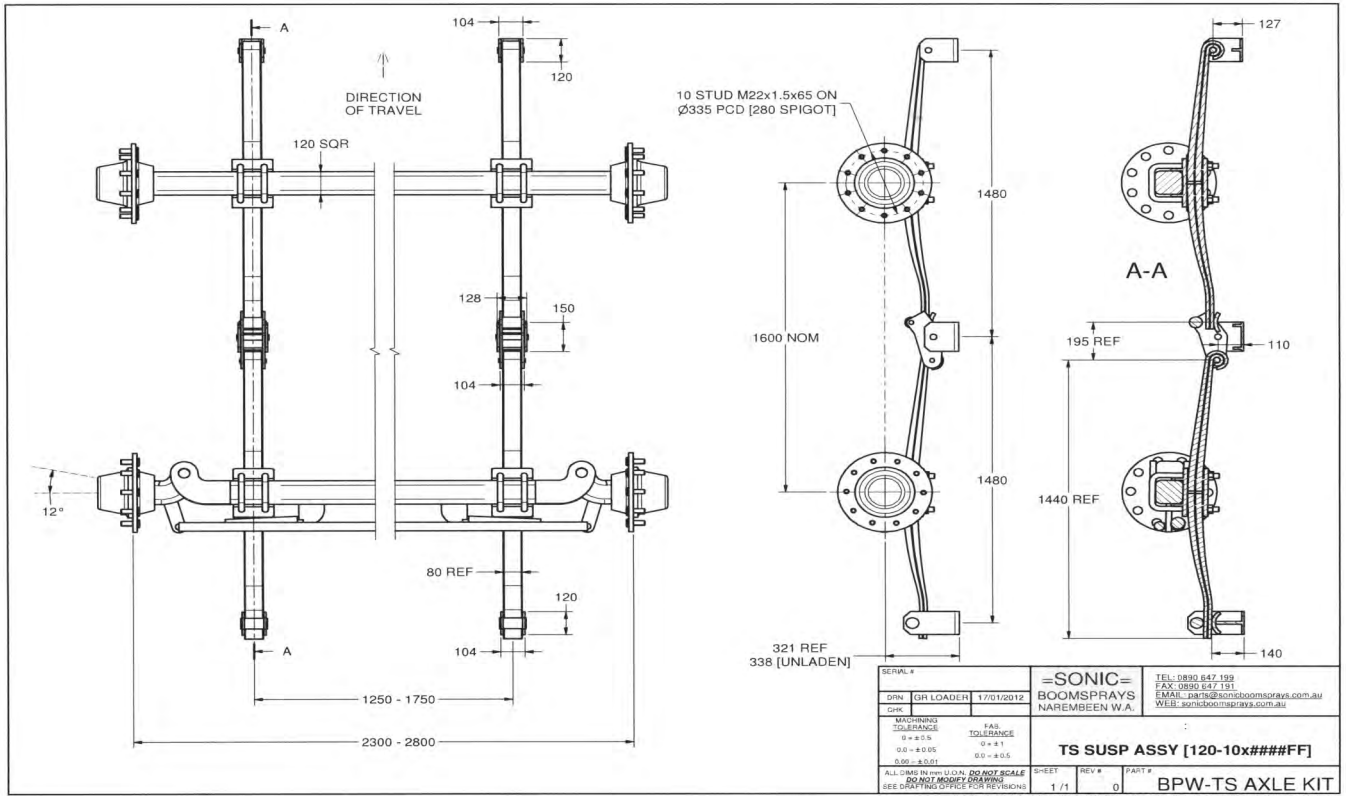
BPW AGRAR SUSPENSION GSVBLA 2/11010-1
 TRACK 2800 FM 1750
 LINEAR DIMENSION 1600 MM
 WITH PARABOLIC SPRINGS 80 MM
 WEIGHT OF SUSPENSION 17000 KG

VIEW NO.: 5688040165

ITEM	PART	MEASUREMENT	SERIAL-NO	PER UNIT
001	AXLE	11010-1 SP2300	55.88.001.106	1
002	AXLE	11010-1 SP2300	36.88.001.121	1
300	LEAF SPRING	4.5 2VB1360	05.082.50.41.0	4
301	HEXAGON SCREW	M 16x130/DIN931	02.5022.40.82	4
302	HEXAGON NUT	VM16/DIN980	02.5220.23.85	4
303	RUBBER ROLL	20/60x80	02.1205.13.00	4
304	TUBE	20x1,5x82	03.301.58.94.0	4
305	SPRING WASHER	17 DIN128	02.5401.17.04	4
306	SLEEVE	23,5/17,5 13	03.201.50.51.0	2
308	SPRING SHOE	FB080 H=60	05.144.11.16.0	4
309	SEGMENT	VK120	03.345.23.02.1	8
319	U-BOLT	M24x290x152 R90/R45	03.138.41.17.4	4
319A	U-BOLT	M24x320x152 R90/R45	03.138.41.08.4	4
323	WASHER	25/125	02.5401.25.07	16
324	LOCK NUT	VM24/980	02.5220.74.12	16
327	THREAD BOLT	D28 L=105	03.178.51.04.0	4
328	WASHER	23/DIN125	02.5401.23.04	4
329	CASTLE NUT	M22x1,5 DIN937	02.5207.22.04	4
330	SPLIT PIN	5x40/ISO1234	02.6201.54.01	4
331	GREASE NIPPLE	C M10x1/DIN71412	02.6802.09.50	4
336	THREAD BOLT	D30 L=160 M24x1,5	03.178.50.24.0	4
337	WASHER	25/DIN125	02.5401.25.07	4
338	CASTLE NUT	M24x1,5 DIN125	02.5207.25.04	4
339	SPLIT PIN	5x45 ISO1234	02.6201.55.01	4
340	GREASE NIPPLE	C M10x1/DIN71412	02.6802.09.50	4
401	SPRING SHOE		05.144.13.71.0	2
402	SPRING SHOE		05.144.13.63.0	2
403	TRUNNION BLOCK		05.225.34.89.0	2
405	EQUALIZING BEAM	LT	05.291.22.72.0	1
405A	EQUALIZING BEAM	RE	05.291.22.73.0	1

AXLE & HUB INFORMATION

7000L models are equipped with the BPW Transpec Tandem rear steering suspension



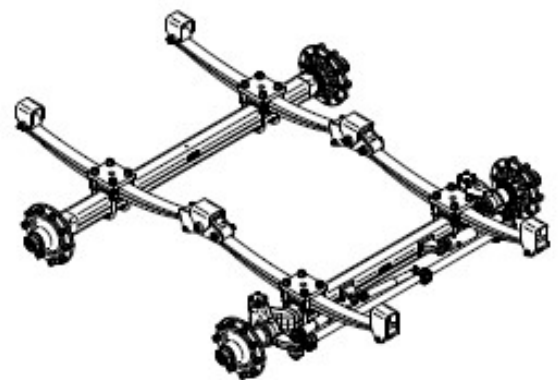
REV 1

BPW Hubs
Contents Diagram for Wheel Bearing and Seal Kit
 For correct installation instructions refer to installation instructions number INS-05

Kit Item Number 0980102720TSSC
Description: 9 tonne, ECO, Grease Hub
Kit includes item numbers: 421 - 424, 428, 430, 431, 440, 441, 445, 447 & 448
 Kit includes components to repair one hub
 For relevant part numbers refer to the spare parts manuals available from BPW Transpec

TRANSPEC For technical information phone 1300 651 652

Contents Diagram Number CDO980102720TSSC - 01/2012

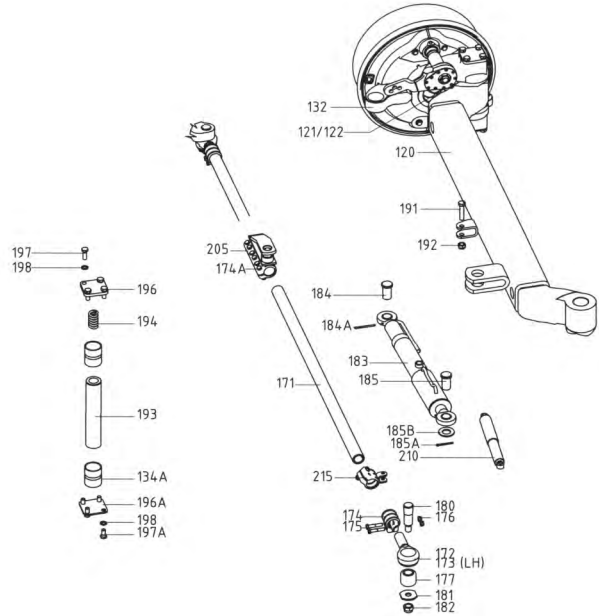
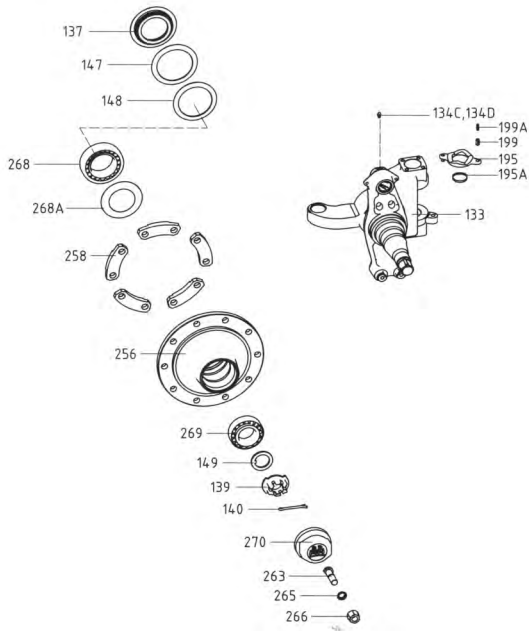


AXLE & HUB INFORMATION

7000L models are equipped with the BPW Transpec Tandem rear steering suspension



BPW Bergische Achsen Kommanditgesellschaft
D-51656 Wiehl, Postfach 1280



Bremse: Ohne

Anhängerachse, Baureihe: GS-LA

Bild Nr.:20.137/7

368800110_E.1X1
SPARE PARTS LIST 36.88.001.110 22.11.06

BPW STEERING AXLES GS LA 11010-1
TRACK 2800 MM, H40350
AXLE STUD 120 mm
WHEEL STUD M22x1,5 WITH WHEEL NUT AND SPRING WASHER
VIEW NO.: 20.137/7

ITEM	PART	MEASUREMENT	SERIAL-NO	PER UNIT
120	STEERING AXLE BEAM	M24X60/6917	05.236.40.42.0	1
131	CYLINDER CAP SCREW	M4X60/9117	02.5033.62.82	2
132	HEXAGON NUT	M24/936	02.5205.31.24	2
133	STEERING PIVOT ASSEMBLY LEFT (EINSCHL.-POS.: 134A, C, D,)		09.414.08.44.0	1
133	STEERING PIVOT ASSEMBLY RIGHT (EINSCHL.-POS.: 134A, C, D,)		09.414.08.45.0	1
134A	BEARING BUSH	55/50x70	03.113.60.28.0	4
134C	GREASE NIPPLE	8 M10x1/71412	02.6802.06.10	4
134D	COVER	6PN 980 0201	02.3505.20.00	4
137	THRUST WASHER	M45X2	02.5681.98.00	2
139	CASTLE NUT	M45X2	02.562.36.16.0	2
140	SPLIT PIN	8X30/150 1/34	02.6201.82.01	2
147	RING	43/61x5,8	05.270.07.67.0	2
148	RING	43/61x5,8	02.5683.62.00	2
149	WASHER	43/61x5,8	03.320.73.13.0	2
170	DRAGLINK (EINSCHL.-POS.: 171-177, 205, 215)		05.246.83.06.0	1
171	TUBE	L2120	03.179.06.26.0	1
172	DRAGLINK	LH	05.353.68.36.0	1
173	DRAGLINK	RH	05.353.68.27.0	1
174	CLAMP	BH	02.3507.25.05	2
175	HEXAGON SCREW	M12x1,5x60 /960	02.5029.35.80	4
176	LOCK NUT	M12x1,5/960	02.5220.15.82	4
177	BUSH	05.113.82.04.0	03.177.04.05.0	2
180	BOLT	03.220.74.05.0	02.5220.74.15	2
181	WASHER	M12x1,5/960	02.4905.37.00	1
182	LOCK NUT	80-45-100/M0-100	03.086.50.32.0	1
183	CYLINDER	6-35 Lx73	02.6201.65.01	1
184	BOLT	6-35 Lx73	03.086.50.32.0	1
184A	SPLIT PIN	6-35 Lx73	02.6201.64.01	1
185	BOLT	6-35 Lx73 50	03.086.50.33.0	1
185A	SPLIT PIN	6-35 Lx73 50	02.6201.65.01	1
191	HEXAGON SCREW	M12x35/933	02.5021.69.87	8
192	LOCK NUT	M12x35/933	02.5220.14.82	2
193	STEERING PIVOT	VM 12/980	03.240.60.05.0	2
194	PRESSURE SPRING	UNIFEN	03.125.50.06.0	2
195	PRESS SWITCH		03.128.05.06.0	2
195A	SEALING RING		02.5685.02.00	2
196	COVER PLATE	607EN	03.115.50.05.0	2
196A	COVER PLATE	UNIFEN	03.115.50.10.0	2
197	HEXAGON SCREW	M12x35/933	02.5025.85.82	8
197A	HEXAGON SCREW	M12x35/933	02.5025.79.82	8
198	LOCK WASHER	A12/128	02.5601.12.90	16
199	ADAPTER SLEEVE	12x28/150 8752	02.6006.95.90	4
199A	ADAPTER SLEEVE	7x28/150 8752	02.6016.01.90	4
205	SUPPORT		05.189.54.73.0	1
210	SHOCK ABSORBER		02.3722.61.00	1
215	SUPPORT		05.189.53.60.0	2
216	HUB		03.271.54.74.0	2
217	WHEEL STUD	M22x1,5x65	05.290.70.04.1	20
265	SPRING WASHER	C22,5/74161	02.5615.22.94	20
		1. oldal		

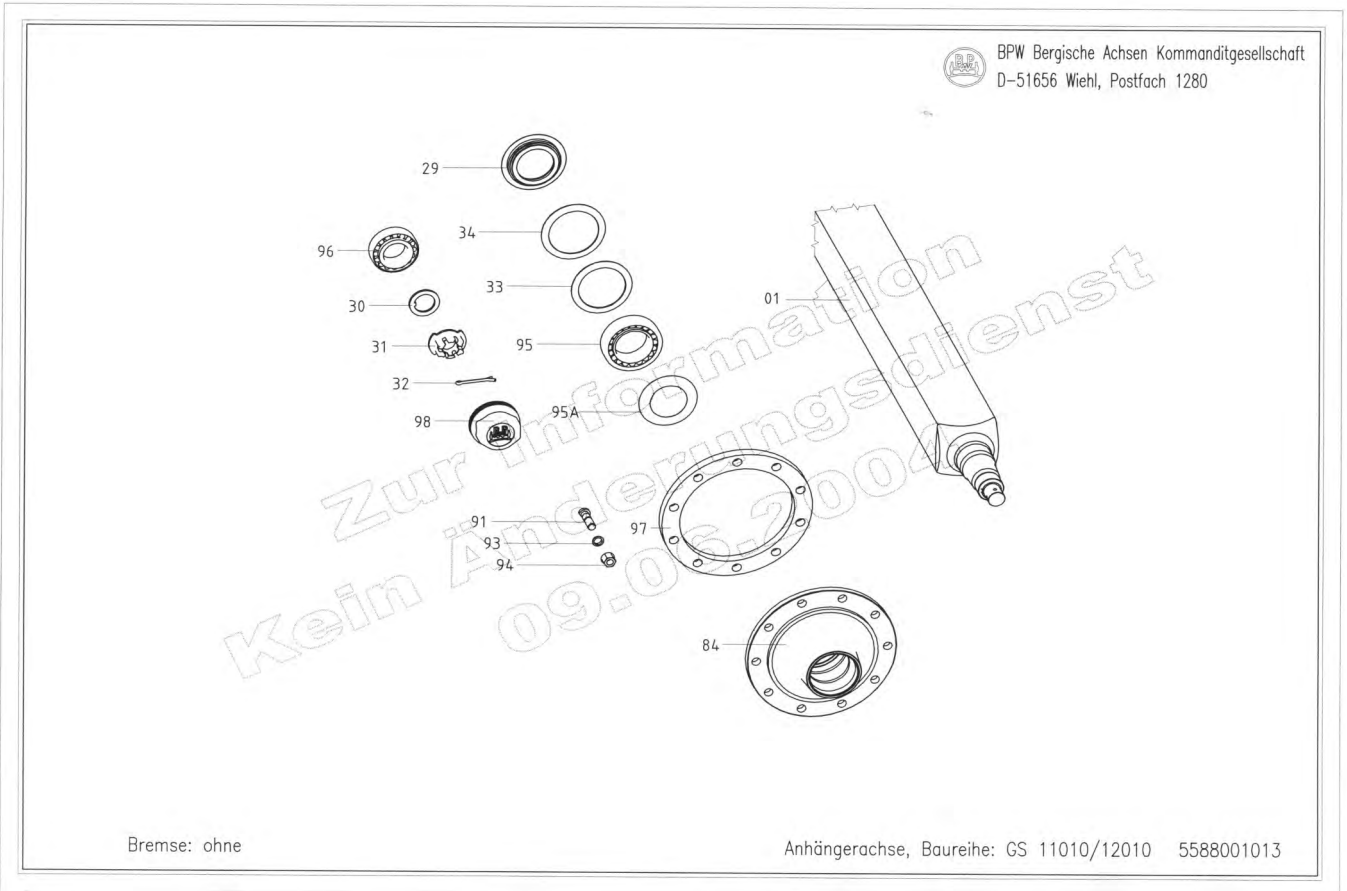
BPW Bergische Achsen Kommanditgesellschaft, Postfach 1280, 51656 Wiehl, Deutschland

368800110_E.1X1
M22x1,5
33116/720
0=129/84x8,5 ECO T
32310/720
BPW 115X2
03.261.50.02.0 20
02.6408.80.00 2
03.010.93.33.0 2
02.6406.50.00 2
03.212.23.09.0 2



AXLE & HUB INFORMATION

5000L models will have BPW Transpec straight axles fitted.



5588001013

SPARE PARTS LIST

55.88.001.013

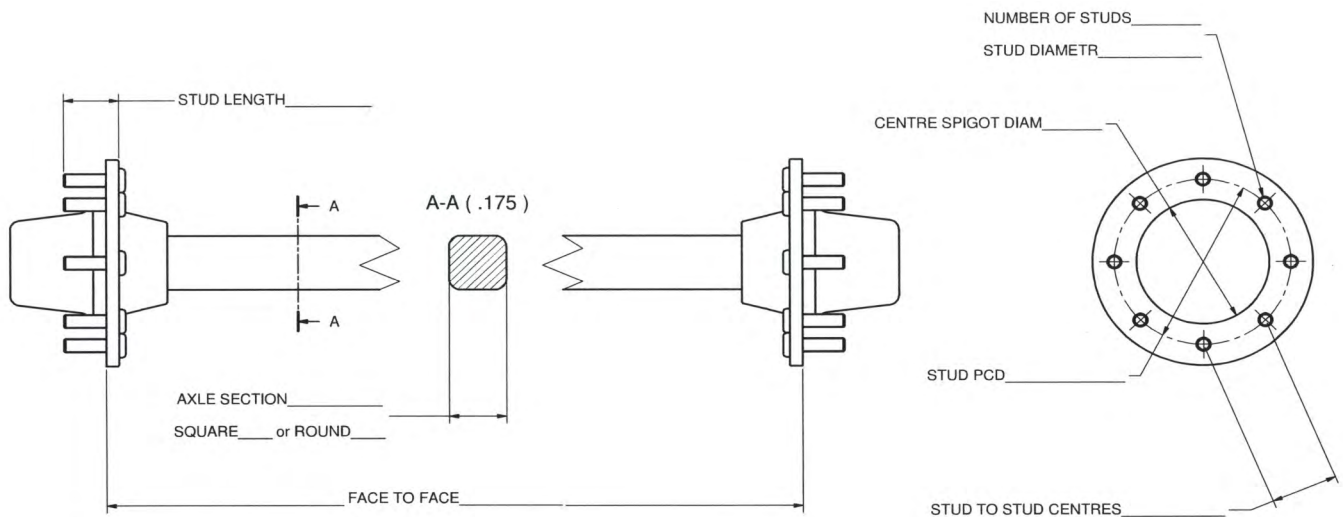
08.06.04

BPW-TRAILER AXLE GS 11010-1
 WITHOUT BRAKES
 TRACK 2300 MM / FM 1250
 AXLE BEAM VK 120
 WHEEL STUD M22X1.5 WITH WHEEL NUT AND SPRING WASHER

VIEW NO.: 5588001013

ITEM	PART	MEASUREMENT	SERIAL-NO	PER UNIT
1	AXLE BEAM		05.530.91.48.0	1
29	THRUST WASHER	33116	05.370.06.48.0	2
30	DISC		03.320.73.13.0	2
31	CASTLE NUT	M42X2	03.262.16.15.0	2
32	SPLIT PIN	8X50/ISO1234	02.6201.82.01	2
33	RING	136/105X2,5	03.310.97.32.0	2
34	RING	142/111/2,5	03.310.97.31.0	2
84	HUB		03.271.54.27.0	2
91	WHEEL STUD	M22X1,5X80	03.296.33.11.1	20
93	SPRING WASHER	C22,5/74361	02.5615.22.94	20
94	NUT	M22X1,5	03.261.50.02.0	20
95	ROLLER BEARING	33116/720	02.6408.80.00	2
95A	DUST COVER		03.010.93.33.0	2
96	ROLLER BEARING	32310/720	02.6406.50.00	2
97	FLANGE	24XD380	03.151.50.18.0	2
98	HUB CAP	BPW 115X2	03.212.23.09.0	2

AXLE & HUB IDENTIFICATION



DUST CAP DETAILS:
SCREW IN 7000L MODELS or PRESS IN 5000L MODELS



CROPLANDS

AUSTRALIA

Croplands Equipment Pty Ltd
ACN 006 450 184

PO Box 2441
Dry Creek
50 Cavan Road
Dry Creek SA 5094
Australia

Freecall: 1800 999 162
Freefax: 1800 623 778
Email: sales@croplands.com.au
Website: www.croplands.com.au

NEW ZEALAND

Croplands Equipment Ltd
PO Box 2004,
Stortford Lodge, Hastings 4120

Location:
1422 Omahu Road,
Hastings 4120
New Zealand

Freecall: 0800 106 898
Freefax: 0800 117 711
Email: sales@croplands.co.nz
Website: www.croplands.co.nz

Your nearest Croplands Dealer can be found
in the dealer section on the Croplands website