

SAFE OPERATING PROCEDURES

FERTILISER SPREADERS

BAF225-C & BAF425-C



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AN IMPORTANT MESSAGE FOR OWNERS & OPERATORS OF LS SPRAYERS

Safety is our primary concern in the design, manufacture, sale and use of BA Fertiliser Spreaders. BA Pumps & Sprayers would like to remind you of the safety rules when operating one of our Fertiliser Spreaders or it's accessories.

Failure to follow these rules can result in severe injury or death. It is essential that everyone involved in the assembly, operation, transport, maintenance and storage of this equipment be properly trained in safety.

- Read this entire instruction manual together with the installation procedures before attempting to install or operate the sprayer.
- Prior to spreader usage, all users and operators must have read and fully understood the contents of this operator's manual.
- Never allow inadequately trained personnel to attach or operate the spreader.
- Be warned of the dangers of loading your vehicle in excess of its towing capacity.
- It is important to understand that any loads or attachments will alter the stability or handling characteristics of that vehicle.
- Spreaders or other equipment must be filled only to a level where the gross weight is within the towing limit of the vehicle.
- Never exceed the towing limit capacity of the vehicle.
- All vehicle tyres should be inflated to manufacturers recommended operating pressures.
- Please note that fitting the fertiliser spreader and accessories to the vehicle may exceed the tractor's maximum load capacity. Do not exceed the manufacturer's guidelines.

Please note that 1 litre of water is 1 kilogram

- Fertiliser spreaders should be securely attached to your vehicle.
- Reduce speed when towing implements and allow greater distance for braking.
- Never allow anyone to ride on your fertiliser spreader or other equipment.
- Always follow the instructions in the owner's vehicle manual for pulling a fertiliser spreader or carrying implements.
- Proper maintenance of your vehicle in line with manufacturer's recommended maintenance procedures is essential. (eg: Brakes and Suspension)
- All users of the vehicle must be trained and competent in not only operating the vehicle, but also operating the vehicle when the spreader is being used.
- Before applying chemicals, read the SDS (safety data sheet) and label of the chemical manufacturer or supplier for personal protective equipment and operate as recommended.

- The safety of all chemicals used in agriculture is under the jurisdiction of a government agency, ie NZ Ministry for the Environment. Further local government laws may apply.
- BA recommend that fertiliser spreaders are used on a suitable ATV, 4-wheel, or 3-wheel motor cycle providing the vehicle manufacturers guidelines are fully observed.
- This spreader is designed and manufactured solely for the purpose of applying fertiliser to pasture. Under no circumstances may it be used for any other purpose.
- Before carrying out any maintenance work wash the spreader thoroughly. Remove all chemicals that may contaminate you or the machine.

NOTE – **DO NOT** loan your spreader to anyone without providing full operator safety and operating training

Throughout this manual, there are safety warnings and operational tips. Please thoroughly read this entire manual for your safety.

Please note that you will not be able to travel the same speed/slopes/hills on your vehicle once your spreader is attached and filled.

WARNING!

- 1. DO NOT EXCEED 20 KPH**
- 2. CLUTCH MUST BE ENGAGED AND DISENGAGED WITH TOW VEHICLE STATIONARY**
- 3. GREASE ALL GREASE POINTS EVERY 8 HOURS**
- 4. WASH SPREADER AFTER EVERY USE**

BA Pumps & Sprayers Warranty Policy

All products

Private Domestic Use	12 months
Private and Commercial Agriculture	12 months
Agricultural Contractors	6 months
All Non-Agricultural Applications	3 months

The warranty period begins on the date the product is delivered to the first retail purchaser.

BA Pumps & Sprayers warrants the owner that it will repair or replace without charge parts found defective or malfunctioning in accordance with the warranty limitation and adjustment schedule below.

- BA Pumps & Sprayers (Company) hereby warrants to the original purchaser (Owner) of this machine against faulty material and workmanship for a period as described above after delivery according to the conditions outlined.
- This Warranty does not extend to any part or parts of the machine not manufactured by the said Company. These parts being covered by the Warranty of the makers.
- This Warranty does not extend to defects due to parts damaged by the neglect, misuse or negligence of the purchaser or any damage caused as a result of incorrect installation of the machine or to normal wear.
- This Warranty does not extend to any damage to tanks due to the chemicals being used or left in tanks when not in use.
- In the event of a defect occurring within the said period as stated above, the purchaser must not attempt to correct or remedy such defect either by modification of, adjustment or alteration to any part or parts of the machine.
- This Warranty will stop by right if the product is used in a manner not up to the manufacturer's directions or for bad maintenance.
- In the event of any defect being disclosed to BA Pumps & Sprayers within the specified period, BA Pumps & Sprayers, after due examination and on being satisfied that such defect is due to faulty material or workmanship undertakes to repair or replace such defective part or parts free of charge.
- Freight and labour costs in relation to any replacement under this warranty are the responsibility of the purchaser.
- In no event shall BA Pumps & Sprayers be liable for downtime expenses, loss of chemicals, loss of machine use or other incidental, consequential or special damages.
- This warranty is subject to the following conditions, which must be conformed to by the purchaser.

CONDITIONS OF WARRANTY

1. The warranty is NOT transferable.
2. The purchaser must complete the Warranty Registration Form on our website upon completion of starting the machine. The form must be completed within 14 days of delivery of the unit. Only when this is completed and returned, can BA Pumps & Sprayers fulfil all obligations. The form can be found at: www.bertolini.co.nz/warranty-registration
3. 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.

BA Pumps & Sprayers Warranty Policy

- **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 ensure 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 BA Pumps & Sprayers 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, flow meters, clutches, pivot pins, paint, 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, fans 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, 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 sprayer or attachments. Written approval must be obtained from BA Pumps & Sprayers for any such items to maintain the warranty.
- **Removal and Installation:** The time taken to remove and re-install a warranted part or component into other brands of sprayers will not be covered by the BA Pumps & Sprayers Warranty. Only parts and labour directly attributable to the repair of the sprayer is covered.
- **Clean-up Time:** BA Pumps & Sprayers does 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 Costs:** Warranty does not cover transportation or insurance costs for sprayers or other equipment needing repair or replacement of warranted components. Nor does it cover any freight or insurance costs in obtaining new parts or returning old parts to BA Pumps & Sprayers for inspection purposes.
- **Travel Time:** Travel time required for warranty repairs is the responsibility of the Owner.
- **Diagnostic Time:** Warranty does not cover the time required to diagnose a warranty 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. BA Pumps & Sprayers expects that their Agents are well trained and proficient to handle any warranty repairs. Since BA Pumps & Sprayers is not in control of these responsibilities, we elect not to cover diagnostic time.
- **Non-Genuine Repairs:** Use of parts other than genuine parts for repair of warranted parts will automatically negate any guarantee. Warranted components must be replaced with genuine BA Pumps & Sprayers repair parts.
- **Unauthorised Repairs:** Repairs by an unauthorised agent will automatically forfeit any warranty. Warranty repairs must be carried out by an authorised BA Pumps & Sprayers dealer only.
- **Disclaimer:** The contents of this manual are published and given in good faith. However, neither BA Pumps & Sprayers nor any of its associates or directors or employees give any warranty of accuracy nor accept any responsibility in law. No reader should act on the basis of any matter contained in this manual without considering and taking appropriate advice based upon their particular circumstance. BA Pumps & Sprayers.
- **Due to continuous product development, BA Pumps & Sprayers reserves the right to change specifications and design without notice**

To the Owner of this Sprayer

Congratulations on the purchase of your new Pro-Spread.

Pro-Spread fertilisers spreaders have been designed and manufactured with the discerning farmer in mind. Having regard for the ever-increasing costs of farm machinery today, BA Pumps & Sprayers provides long-term durability by using the finest materials in the construction of the Pro-Spread product.

This booklet deals with the assembly, calibration, use and maintenance of your trailed spreader. Read this thoroughly before attempting to use your spreader. If you are still not sure of any aspect, ask the dealer who supplied the machine to explain any unclear points.

Model Specifications

BAF225-C

Type: Gear drive with clutch

Capacity: 225 liters. Approximately 4 x 40kg bags of urea

Height: 1.27m

Width: 1.64m

Wheel: 20x10x8

Lid: Standard

BAF425-C

Type: Gear drive with clutch

Capacity: 425 liters. Approximately 8 x 40kg bags of urea

Height: 1.44m

Width: 1.64m

Wheel: 20x10x8

Lid: Standard

Ordering Spare Parts

Always use the BA Pumps & Sprayers part number and description as given in the parts manual. Please include the quantity per part number and the model number

Installation

Right hand/Left hand

Reference in this manual to right hand and left hand is taken by viewing the machine from behind and in the direction of travel.

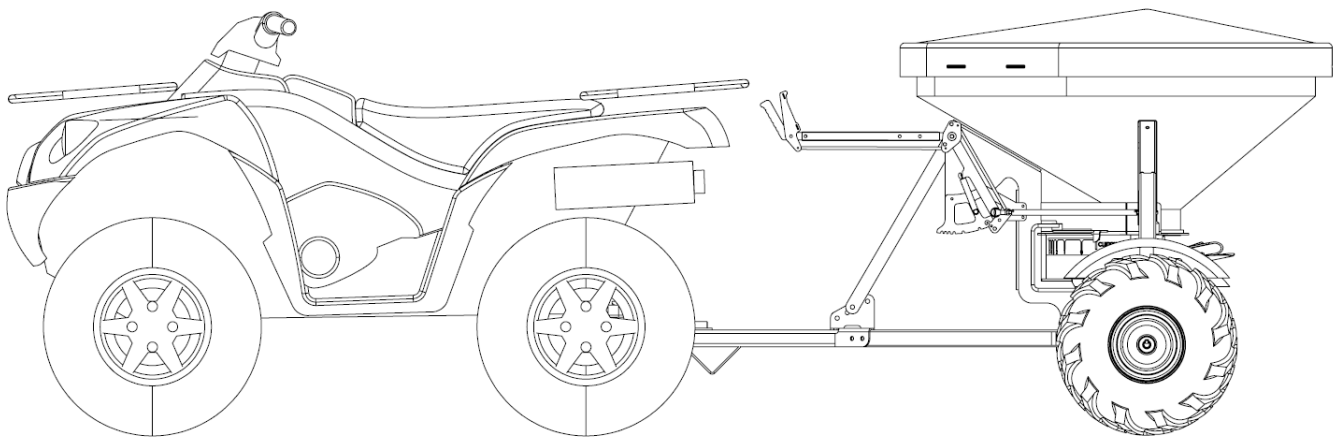
Taking Delivery

Carefully check for any damage which may have occurred during transit, and if necessary, ensure that a claim is lodged with the common carrier concerned prior to accepting delivery. With respect to shortages, lodge a claim in the same manner and notify the local reseller.

Attaching your spreader to the ATV

It is important to attach the spreader to the tow ball on your ATV, 4-wheel, or 3-wheel motor cycle.

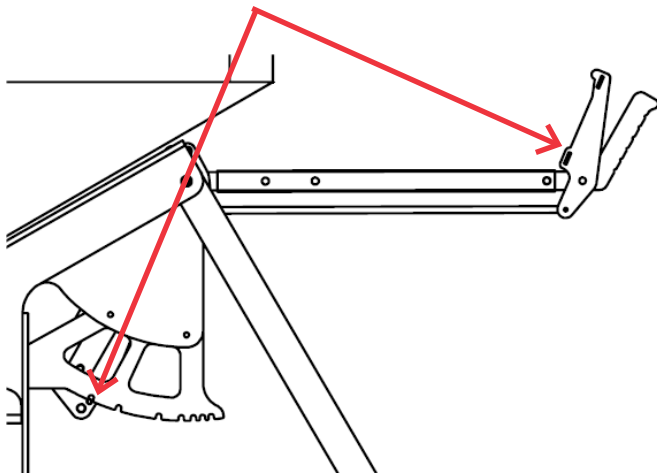
There is provision to “level up” the spreader drawbar so that the hopper is perpendicular. It should be slightly tilted forward so that weight is loading the drawbar, but not too far forward that the fertilisers will spill out.



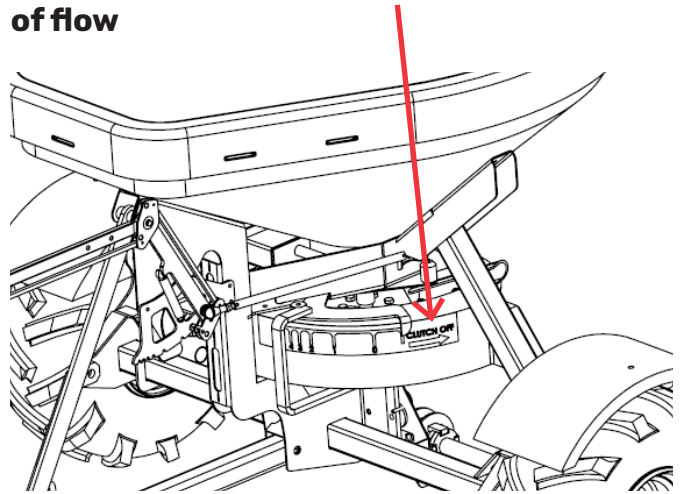
Making Adjustments to Correct Spreading Rate

The aperture opening on the Pro-Spread is controlled by the handle. This handle also engages the clutch to drive the spinner.

Flow control handle for adjusting flow



Flow control sticker for right calibration of flow



Handle in closed position with clutch disengaged

From the spreading chart select the desired aperture opening to suit the desired rate of dispensing for fertiliser or seed being spread.

- Aperture opening is indicated on the deflector shield, this coincides with the notches on the selector plate.
- 0 = clutch engaged aperture closed.
- 1-5 = positions 1 to 5 from spreading chart.
- To operate squeeze handle and move to the desired position, then release handle to lock aperture.

IMPORTANT: Clutch engagement / disengaging **MUST** be done whilst stationary.

Other Peculiarities of Spreading

The sowing graphs in this book have been gained by careful calculations from accurate measurements using samples of seeds and fertilisers. Changes in temperature and relative humidity in the atmosphere may cause variation in the flow characteristics of fertilisers, which means that the sowing densities of seeds, even of the same varieties, will slightly differ. Variations in speed of the ATV and inaccuracies in the speedometer will also cause the spreading rate to differ slightly from the sowing graphs. The correct speed for the ATV is 15 kph.

Operation of Clutch

To engage the clutch the lever is moved to the "0" notch which sets the clutch to engage as soon as you move forward. Further movement of the lever opens the aperture to the required settings.

To disengage the clutch move the lever to the opposite end of its travel. Clutch must be engaged/disengaged while towing vehicle is stationary.

Grain

Many farmers have found that by using the Pro-Spread instead of their combined grain and fertiliser drills, they are getting better results at a fraction of the cost. Roll the land before spreading, when broadcasting grain, and then after spreading, cultivate the seed to the required depth. ie: 50mm to 75mm. If the ground is too soft when broadcasting grain or seed, wheel marks will show in the growing crops. This means that it will be difficult to keep the seed at an even depth.

Grass Seeds

The rate of spread is affected considerably by the horns or hairs on the ends of Italian Rye-grass. Most of the Italian varieties are usually very horny, although some samples are de-horned and sow very freely. When separating mixtures it must be noted that grass seeds must not be sown at a greater width than 12 feet.

Small Seeds

The Pro-Spread can easily sow seeds such as rape and choumoullier. To sow small seeds, the method is usually to mix them with a quantity of fertiliser and then to calculate the setting. Use the spreading chart for fertiliser to calculate the settings required.

Speed of the ATV

The ATV should be driven at a constant speed, in a gear that does not need changing throughout the field.

Double Sowing

The system of double sowing helps compensate for inaccurate driving and variations in speed. With all grain and granular fertilisers, the extremity of the spread should just reach the previous wheel mark.

Spreading Width

The width of spread may be taken from the sowing chart for the material being sown. The "bout width" is the distance between the centre of the tractor and the centre of its last wheel mark. There will be very little visible difference in the crop if there is a slight variation of bout widths.

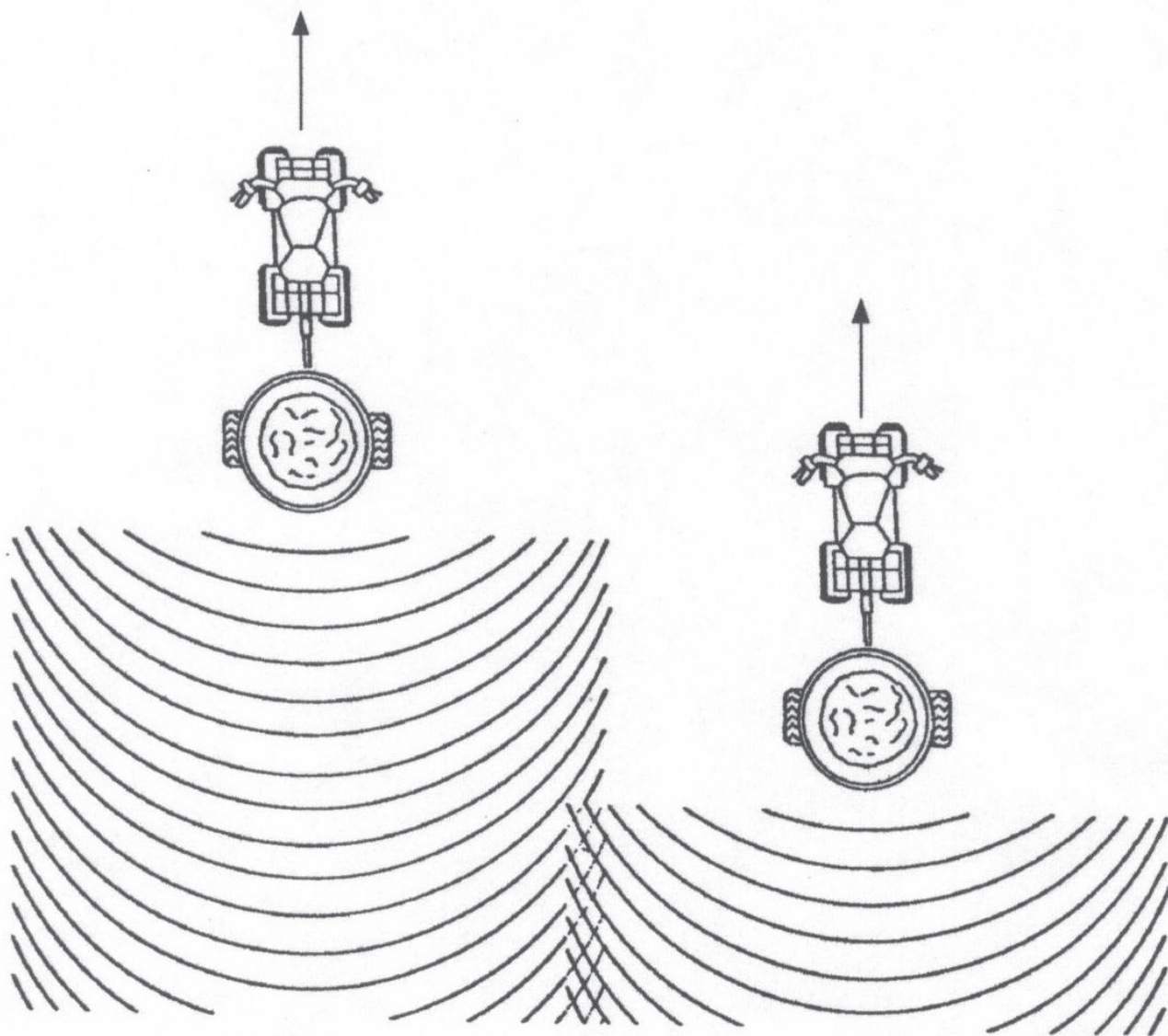
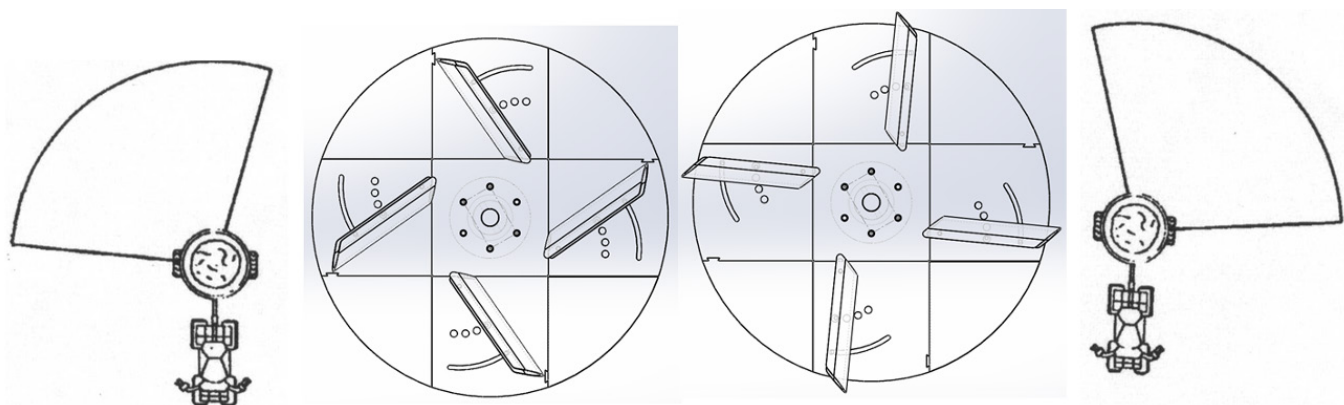


Figure 4: The extreme edges of the spreading area should overlap on successive bouts.

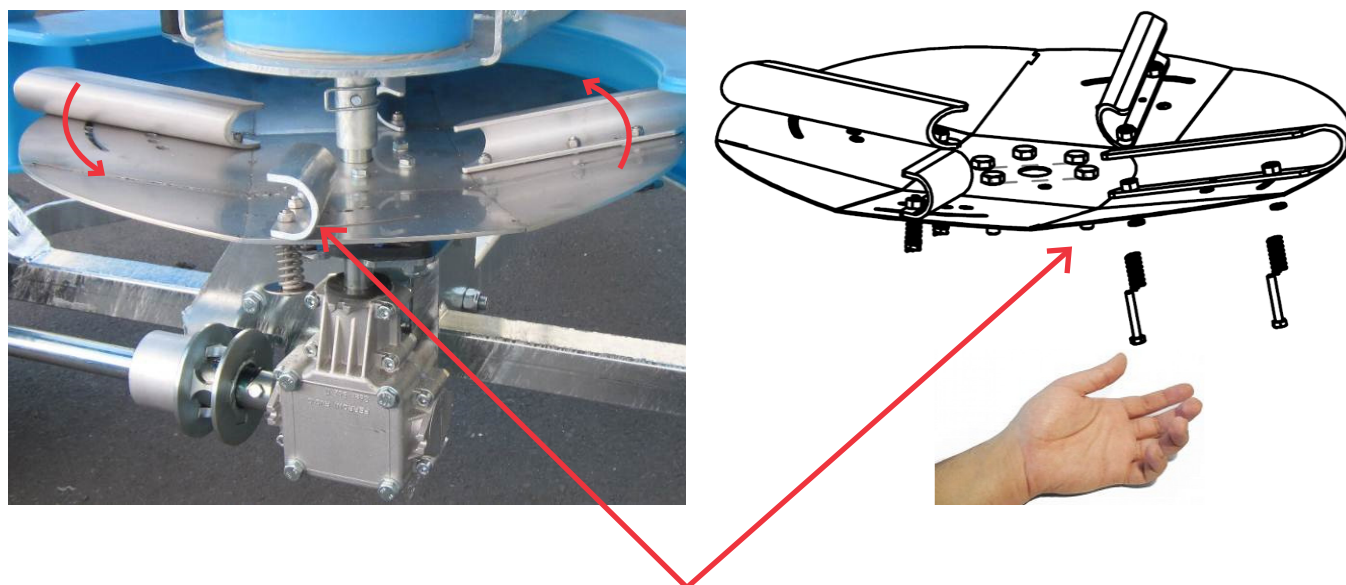
Repositioning the Spinning Disc Fins for an even spread

Adjust the fins as shown in figure 5 below to compensate for spreading irregularities.



Adjusting Fins for an even spread

Correct spreading is achieved when the spreader distributes fertilisers evenly at a density gradually decreasing from the Centre towards the sides giving a more or less symmetrical distribution. At times, however, due to the nature of the terrain to be spread, differences in fertilisers weight and of the various grains and seeds can cause some small variations in spreading symmetry. The disc system is specifically designed so that, starting from the Centre of the hopper, broadcasting distance and quantity spread are the same on each side of the ATV, and in an even pattern, as described above. To improve the evenness of the cover, the extreme edges of the spreading area should overlap on successive bouts.

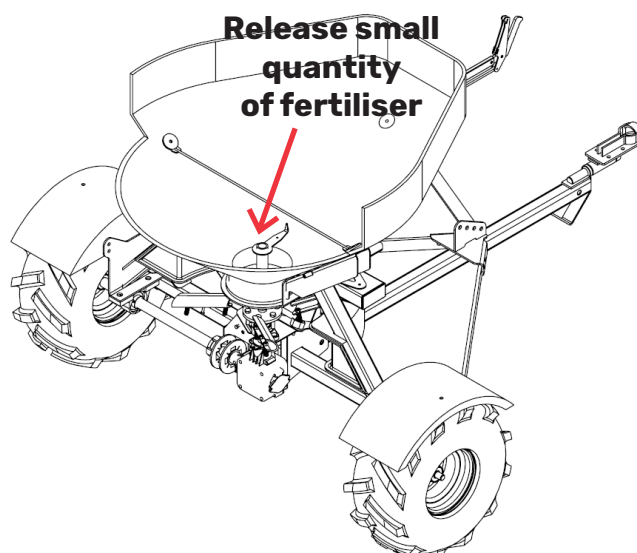


To adjust spreader fins, raise spring loaded fins to new position.

Spreading Difficulties

With some types of fertilisers, transportation of the spreader for long distances before engaging the clutch may cause fertilisers to settle and totally immobilize the agitator. This in turn will cause the tyre to skid.

To overcome this problem it is necessary to ease the density of the fertiliser around the agitator. To do this, simply open the aperture vent slightly and let out a small quantity of fertiliser. The clutch can then be engaged to commence spreading.



Maintenance

Right Angles Gearbox

If the right-angles gearbox has an oil plug, it has been prefilled with oil at the factory. To find the right level it is usual to turn the spreader onto its side. The oil level is determined by filling the oil to the plug level. Use **ONLY** 75W90 or 85W90 gear oil and change the gearbox oil after the first 30 hours of use and then every 50 hours.

Removal of Hopper

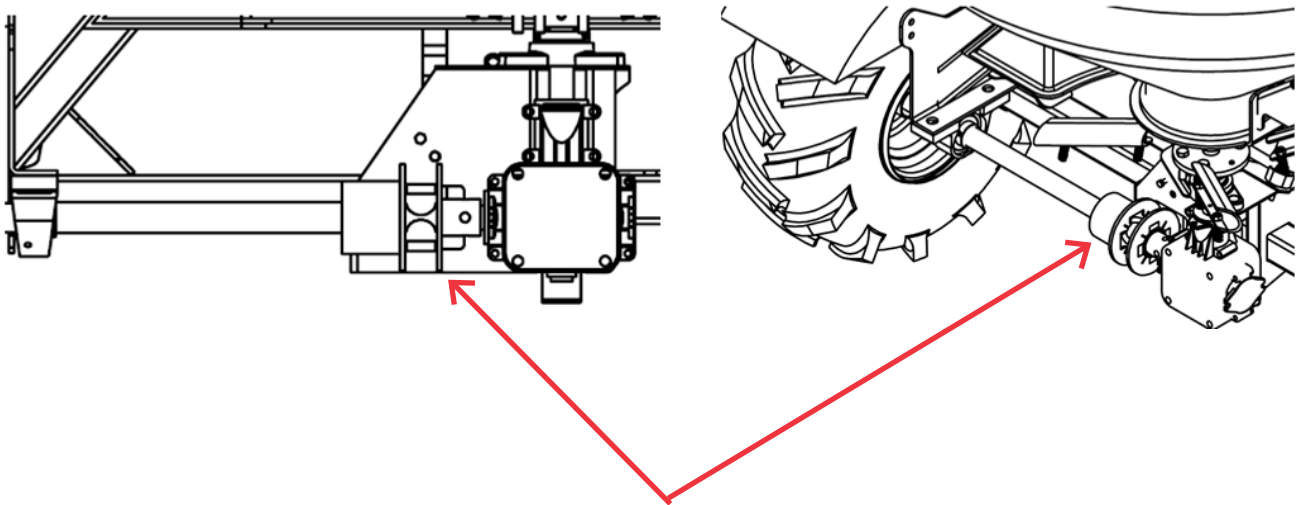
Hopper removal is achieved by “undoing” the 6 coach bolts that secure the hopper. When replacing the hopper please clean both surfaces and apply an appropriate sealer (must be polythene compatible) to the hopper rim.

Wheel Bearings

Bearings on the wheel assembly will need to be packed with grease from time to time.

Lubrication of Clutch

It is important to grease clutch after every 8 hours of use or more frequently under adverse conditions. Greasing this locality ensures that any fertiliser that may be dispersed here will be ejected. Greasing ensures that fertiliser will not penetrate the bush shaft.



Grease Clutch Assembly when clutch is fully engaged

Cleaning after use

The entire machine should be high pressure washed with water, particularly the aperture at the base of the hopper. Any fertiliser left in there will lead to corrosion and rapid degeneration of the machine. After cleaning the spinning disc, ensure there is no trace of fertiliser left caked on the surface. Having washed the machine thoroughly, that is, by removing all fertilisers particles, it is necessary to leave the machine to. Then using a paint brush or spray can, cover all the moving parts with a liberal dressing of oil, and grease the clutch assembly and wheel bearing grease nipples.

Fertilisers Spreading Guide

PRODUCT	UREA	UREA	SUPER 10	SUPER 10	CAUSMAG	CAUSMAG
SPEED	10KPH	15KPH	10KPH	15KPH	10KPH	15KPH
SPREADING WIDTH	11 MTR	14 MTR	11 MTR	14 MTR	3 MTR	3 MTR
SETTING	KG/HA	KG/HA	KG/HA	KG/HA	KG/HA	KG/HA
1	73	35.8	115	56	120	80
2	117	57.3	172	84	180	120
3	156	76.5	230	112	240	160
4	165	80.9	288	140	300	200
5	243	119	348	170	360	240

PRODUCT	RYEGRASS	RYEGRASS
SPEED	10KPH	15KPH
SPREADING WIDTH	4 MTR	6 MTR
SETTING	KG/HA	KG/HA
1		
2		
3		
4		
5		

WARNING!

- 1. DO NOT EXCEED 20 KPH**
- 2. CLUTCH MUST BE ENGAGED AND DISENGAGED WITH TOW VEHICLE STATIONARY**
- 3. GREASE ALL GREASE POINTS EVERY 8 HOURS**
- 4. WASH SPREADER AFTER EVERY USE**

CHEMICAL APPLICATION

CAUTION!

As no control can be exercised over the use of the equipment or over weather, plant or soil conditions, or over the storage, handling, mixing, use or application of chemicals, BA Pumps & Sprayers will not accept any liability for loss or damage (consequential or otherwise) arising directly or indirectly from the use of this equipment.

Chemical Advice

BA Pumps & Sprayers or their agents cannot make recommendations or give advice as to the use of chemicals and cannot accept responsibility for any damage, injury or other consequence for disregarding this warning notice. Refer to the SDS (safety data sheet) that came with your chemical. This sheet holds all the information users need for their protection and should be read carefully before application. Contact your chemical supplier for further advice.

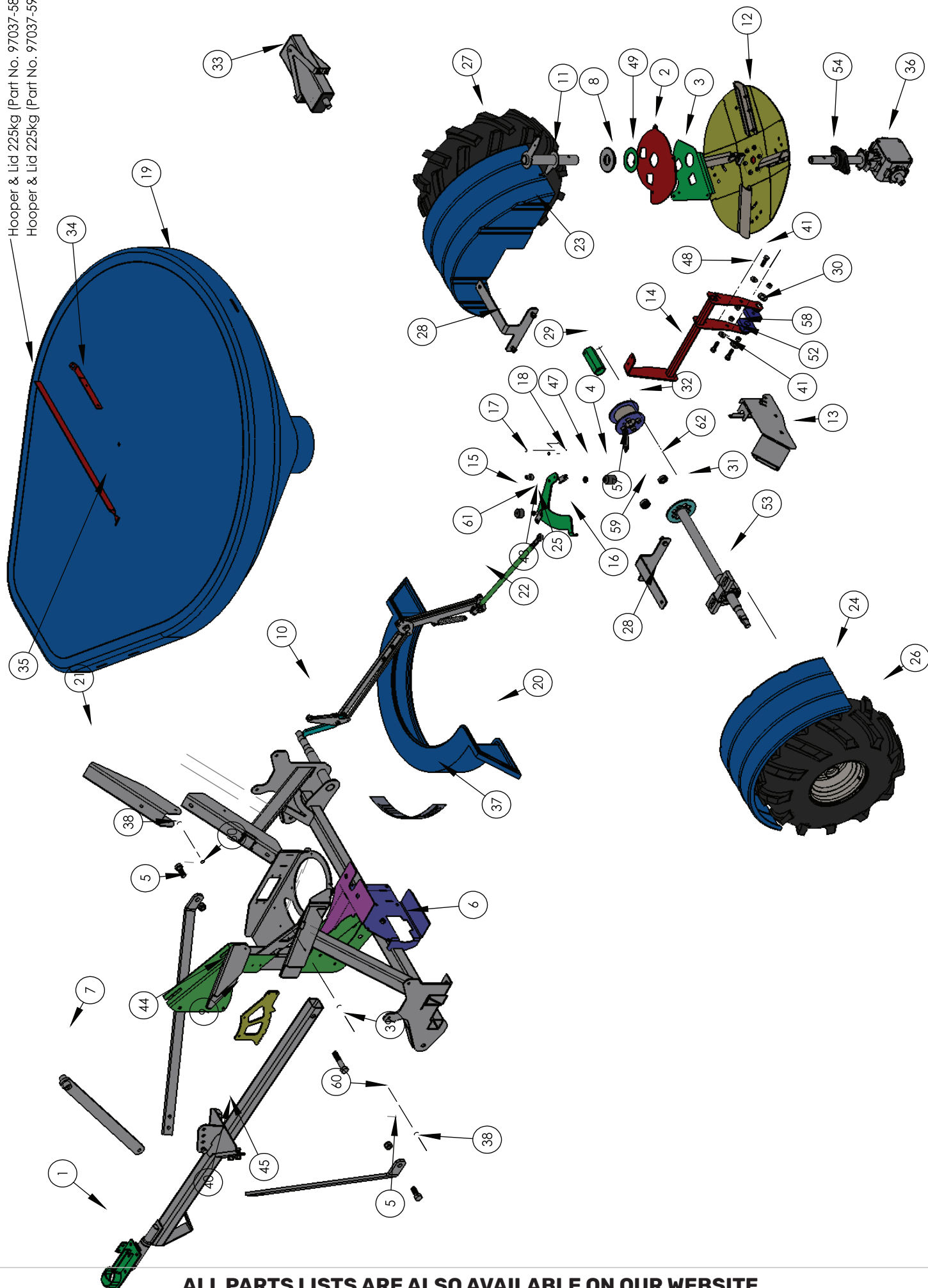
Care of Protective Clothing

Protective clothing should be properly cared for. Rinse heavily contaminated clothes in the open before washing in the laundry. Wash and dry these clothes every day and keep them separate from other washing.

Respirators need special care. Clean the respirator after use with soapy water then rinse and allow to dry completely before storing in a clean plastic bag. Replace canisters in respirator after eight hours use. Never store used canisters with the respirator.

The minimum requirements for personal safety are that the operator avoids inhalation and does not allow chemicals or spray mixture to contaminate the eyes or skin.

Hooper & Lid 225kg (Part No. 97037-58)
 Hooper & Lid 225kg (Part No. 97037-59)



ALL PARTS LISTS ARE ALSO AVAILABLE ON OUR WEBSITE

ITEM NO.	Drawing Number	DESCRIPTION	QTY.
33	BAFEAK	ACTUATOR KIT12V BAF225-425	1
34	97037-101	425 brace sm	1
35	97037-102	425 brace lg	1
36	1631-1	Gearbox BAF225-425	1
37	97037-72	Flow Control Sticker	1
38	1147	BOLT M16X40 ZP HT	2
39	1739	BOLT M16X80 ZP HT	1
40	2448	BOLT M12 X 30 & NUT ZP B/N	5
41	1096	BOLT M10X35 ZP HT B/N	3
42	1143	BOLT M10X25 COACH & NUT GALV	4
43	4095	SCREW M8 X 35 CSK SKT ZP	1
44	2433	BOLT M6 X 20 S/S 304	2
45	1120	WASHER SPRING M12 ZP	5
46	1117	SPRING WASHER M6 ZP	2
47	1123	WASHER FLATM8x21x1.6 ZP	2
48	1127	Washer M10x3	2
49	97037-98	Temp spacer washer	1
50	1725-1	CUT KEY STEEL	1
51	1113	NUT M6 NYLOC ZP	2
52	1129	Washer 5/8"	5
53	1668	BRG & HOUSING 30mm AXLE	1
54	4060	BRG 25mm & FLANGE HOUSING	1
55	4073	ROD END EYE 8mm F	1
56	1688	ROD END 8MM (BL8D)	1
57	2624	SPRING HBG 120 X 17 X 90	1
58	2544	NUT M10 ZP	4
59	4235	Oil Seal 32x15x7	1
60	1160	NYLOC M16 NUT ZP	3
61	1114	NUT M8 NYLOC ZP	1
62	6002	Bearing	2
63	3056	LYNCH PIN (AGI)38mm	1

ITEM NO.	Drawing Number	DESCRIPTION	QTY.
1	97037-01	Draw bar assm	1
2	97037-87	Base Disc	1
3	97037-86	New Aperture Disc	1
4	97037-55	Push rod pedestal	1
5	97037-05	Draw bar brace	2
6	97037-100	Chassis assm	1
7	97037-06	Draw bar strut assm	1
8	97037-37	Agitator bush	1
9	97037-54	Notch plate	1
10	97037-43	Handle assembly	1
11	97037-34	Agitator assm	1
12	97037-41-B	Disc-folded assm	1
13	97037-89	Clutch Leg Welded Assm	1
14	97037-81	Clutch Lever Assm	1
15	97037-56	Clutch lever boss	1
16	97037-29	Indicator folding	1
17	97037-63	Pedestal	1
18	97037-30	Twin washer profile	1
19	97037-59	Hooper & Lid 425kg	1
20	97037-57	Disc guard moulding	1
21	97037-73	Clip on channel 425 Hooper	2
22	97037-32	Push rod assembly	1
23	4169	BAF 225-425 Mudguard	1
24	4169	BAF 225-425 Mudguard	1
25	97037-70	Adjustment plate	1
26	4051	WHEEL ASSY- TRAX -20X10 KEYED	1
27	4052	WHEEL ASSY- TRAX -20X10 BRG	1
28	97037-42	Mud guard bracket ex 9566	2
29	97037-96	Clutch hex	1
30	97037-88	Slider Block	2
31	97037-90	Drive Axle Assm	1
32	97037-93	Slider Assm	1

ALL PARTS LISTS ARE ALSO AVAILABLE ON OUR WEBSITE

Thank you for choosing a BA Pumps & Sprayers Product!

BA Pumps & Sprayers is a New Zealand family owned and operated business. We are proud to be members of Buy NZ Made and strive to offer as many New Zealand made products as possible.

We specialise in supplying the latest spraying and pressure cleaning technology along with a comprehensive range of parts and accessories to our clients. This is achieved from our close business relationship with many overseas suppliers such as Idromeccanica Bertolini for the latest pump technology and TeeJet® for the best in spray application technology.

All our products are supported by a comprehensive dealer network throughout New Zealand. We would like to thank you for choosing BA Pumps & Sprayers products and trust that our product and service will surpass your expectations.

You might also like our DM range of spray units designed for deckmount spraying!

