



Lely USA, Inc.
Industrial Broadcast Spreaders

1-888-245-4684
Fax: 800-752-8249 or 641-621-7735

www.lelyusa.com

OPERATOR'S MANUAL

W/WR/WFR/WGR

Wheel Driven Single Disc Broadcaster

MODEL AND SERIAL NUMBER OF YOUR MACHINE

The serial number plate is fitted to the chassis beam at the front of the spreader. In case of correspondence and ordering of spare parts, kindly state the complete serial number of your spreader. **Complete the blanks below with this information to reference when calling.**

MODEL NO. _____

SERIAL NO. _____

DATE PURCHASED _____



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PREFACE

****You MUST read this manual fully prior to starting work.****

Thank you for your decision to purchase a **Lely Industrial Broadcast Spreader**. The spreader has been designed and built to do the very best job possible under many application circumstances.

This Operator's Manual is meant for personnel that are operating the spreader and are responsible for its daily maintenance. Following it carefully can greatly increase the performance and life of the spreader.

The Dealer is required to confirm that an Operator's Manual is with the spreader. Upon retail sale the Dealer shall review the Operator's Manual and instruct the customer on **SAFE** operation and proper maintenance of the spreader.

Your Dealer is authorized to service the spreader and is required to stock wear parts. If they are unable to help please go to our web site and find the next closest dealer to you.
www.lelyusa.com, LOCATOR or feel free to contact Lely at 888-245-4684.



Instructions for YOUR SAFETY and/or that of others are marked in the margin by a warning triangle with exclamation mark. These instructions should be observed with particular CARE & ATTENTION.



Instructions which may lead to serious machine damage in case of non-compliance or incorrect use are marked in the margin by an exclamation mark.

The machine described in this manual may contain components which do not form part of the standard equipment but are available as optional extras. This is not made clear in all cases, because standard specifications may differ from country to country.

Furthermore, machines and optional extras may be adjusted to specific regional conditions while they are also subject to continuing research and innovation. For this reason, the specifications of your machine may not be exactly like the pictures in this manual.

Known Worldwide For Accuracy & Dependability



SAFETY INSTRUCTIONS

LELY

NEVER service spreader while in operation. Stop engine and moving parts before attempting to service, adjust, clean or lubricate the spreader.

A careful operator is the best operator. Most accidents can and will be avoided by observing all precautions. Read and observe the following precautions before operating this Spreader. It will help PREVENT ACCIDENTS. Spreaders should be operated **only** by those who have read the Owners Manual, and are thus qualified to do so.

- Use the spreader only for the purpose for which it was designed.
- Do not exceed 9 mph when operating or towing machine.
- Follow all prevailing safety regulations, including those laid down in this manual displayed on the spreader decals.
- The spreader should be operated by authorized persons only.
- Keep hands and feet **CLEAR** of unit while in operation.
- Be alert, **OBSERVE** and **OBEY** all safety/warning decals.
- Make sure that ALL safety guards and protective devices are in place.
- Do **NOT** wear loose clothing when operating the Power Take-Off or when near any moving parts.
- Release the pressure in hydraulic systems before starting work on them and before coupling/uncoupling hydraulic hoses.
- Keep other persons **CLEAR** of the danger zone or spread area while the spreader is in operation. Be sure that people are kept **WELL AWAY** from the spreader. This is especially important when working along roads and near or on fields that are accessible to the public.
- Always use a tractor with a cab.
- Clear the field of objects that could be thrown up by the spreader.
- Observe the prevailing legislation for public road transport of the spreader.
- Use flashing lights or safety signs, when required.
- Use protective clothing, gloves, and safety glasses where required.
- If any liquid or granular chemicals are to be used in combination with this equipment, carefully read and follow all instructions and directions set forth by the manufacturer as stated on the label of the material.
- Clean the safety decals regularly so that they can be read at all times.
- Do not stand or ride on the spreader.
- Use genuine parts only.



CAUTION: STOP THE PTO AND EJECTOR DISC BEFORE LEAVING THE TRACTOR OR VEHICLE TO CHANGE ANY



**SETTINGS OR FILLING THE SPREADER.
EXPLANATION OF SAFETY DECALS ATTACHED
TO THE SPREADER.**

- Carefully **read operator's manual** before handling the machine. Observe instructions and **safety rules** when operating.
- Attention! Moving parts.
Stay clear of rotating machine parts.



WARNING

- **NEVER** go near spreader during operation.



CAUTION: STOP THE PTO AND EJECTOR DISC BEFORE LEAVING THE TRACTOR OR VEHICLE TO CHANGE ANY SETTINGS OR FILLING THE SPREADER.

- **Danger** from flying objects. Keep a sufficient, **safe distance** from the machine as long as the tractor motor is running.





BE ALERT! YOUR SAFETY IS INVOLVED! **LIMITED WARRANTY CONDITIONS**

Lely USA, Inc. (hereinafter "Company") warrants all Lely single disc broadcast spreaders (hereinafter "Spreader") for a period of two (2) years from the date delivered to the original purchaser against defective materials and/or workmanship. Any part or parts of the Spreader that in the Company's judgment shows evidence of such defects, will be repaired or replaced as the Company elects, without charge for parts or labor if the defect appears within the stated time.

Warranty **shall NOT apply if spreader has not been properly registered.

The **CUSTOMER is SOLELY** responsible for completing the 'Lely Customer Warranty Card' located on the cover of this manual. No postage is required.

A. Unapproved Service & Modification*

All obligations of the Company under this warranty shall be terminated if:

1. Proper service and operation instructions as outlined in the Operator's Manual' are not followed.
*Warranty **SHALL NOT** apply if operating instructions set forth in the manual have not been fully or correctly followed.
2. Equipment is modified or altered in any way not specifically approved by the Company.
*Warranty **SHALL NOT** apply to spreaders that have been 'altered' or 'modified' in any way.
3. Serial number plate has been altered, defaced or removed.
4. Ownership is transferred from the original purchaser to any subsequent owner.

B. Accidents & Normal Maintenance

This warranty covers defective material and workmanship. It does not cover depreciation or damage caused by normal wear, accident, improper maintenance, improper protection, or improper use. The cost of normal maintenance and normal replacement of service items such as grease, oil, tires, tubes, spoons, tines, hoses, etc., shall be paid by the purchaser. Any items considered for warranty, but not manufactured by the Company, will be forwarded by Lely to the original manufacturer for their warranty determination.

C. Warranty Service

To obtain warranty service, the purchaser **MUST** contact their LOCAL authorized Lely Dealer. At the Company's request such parts are to be returned 'prepaid' to Lely USA for



inspection and final warranty determination.

D. No Representation or Implied Warranty

Neither the Company, nor any company affiliated with Lely, makes any warranties, representation, or promises, expressed or implied, as to the quality or performance of its products other than those set forth above and does not make any implied warranty of merchantability or fitness.

E. Remedies Exclusion

The only remedies the purchaser has in conjunction with the breach, or performance of any warranty on any spreader manufactured by the Company are those set forth above.

F. General

1. The Company reserves the right to make improvements or changes in its equipment at any time without obligation to the Company to install such improvements or changes on equipment previously manufactured by the Company.
2. Neither the Dealer nor the Company personnel have authority to make any representations or promises on behalf of the Company or to modify the terms of limitations in this warranty in any way.
3. This warranty gives you specific legal rights, and you may

LELY

also have other rights, which vary from state to state.

1 INTRODUCTION

The LELY fertilizer spreader model WFR/WGR (fig. 1) is unrivaled because of its outstanding accuracy of spread, forced flow of fertilizer and the unique Lely spreading pattern, tailing off towards the edges.

The Lely ejector disc is the hub of the unique LELY spreading mechanism. Due to the special shape of the ejector disc with the long spoons made of stainless steel in conjunction with the feed assembly, a unique spreading mechanism is achieved.

The rotating bottom plate carries the fertilizer in a rotating movement, as a result of which fertilizer material is pushed from the centre to the outer edge. Due to the forced and consistent feed of fertilizer, blockage of the outlets is almost eliminated.

The major characteristics of LELY fertilizer spreaders are: a simple yet rugged construction, reliability, easy control and an excellent spreading pattern.

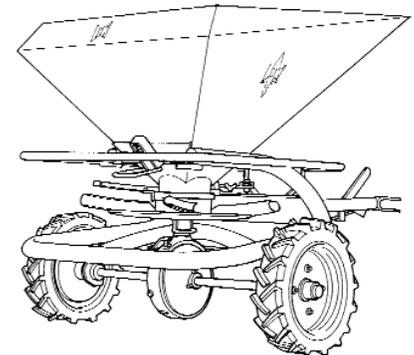
The ample overlap of the slanting spreading pattern ensures an effective link-up with the preceding pass.

Fertilizer is forced towards the gates of the feed ring by the rotating ejector disc, actually the bottom of the hopper. This forced movement of fertilizer ensures a constant flow towards the ejector disc.

The application of granular fertilizers, turf seeds and grains are within the machine's capability. When fitted with an agitator, the models WFR/WGR can also be used for spreading powdery fertilizers, slags, lime or salt/sand.



Fertilizer grains may be ejected at high speeds. Keep this in mind when you are spreading over soft crops or near public areas.



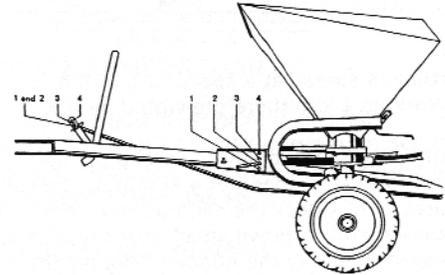
1

2 START UP

2.1 Coupling behind the tractor

The spreader is to be coupled behind the tractor (or truck) in such a way that the ejector disc is in a horizontal position.

This can be obtained by giving the drawbar the appropriate angle, i.e. position 1, 2, or 3. The gear lever rod must be placed in the corresponding position (fig. 2).

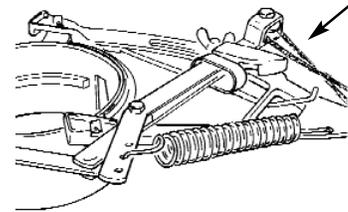


2

- If the machine is equipped with a mechanical control of the feed mechanism; place the control string in the tractor/truck cabin (fig. 3).
- If the machine is fitted with a hydraulic control of the feed mechanism, connect the hydraulic hose to a single acting tractor spool valve (fig. 4).

2.2 Hopper removal

The hopper can be removed from the frame by lifting the latch lever at the rear of the machine and unhooking the bracket. Before taking the hopper off the frame, it must be lifted slightly at the rear.



3

2.3 Operation

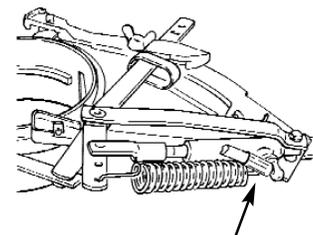


Do not exceed 9 mph when operating or towing machine.

A guide for calibration with application and sowing rates is located on page 12.

For accurate spreading, we recommend:

- Double overlap will ensure even distribution (see 5.2).
- Maintaining correct distance between passes.
- Having the spread pattern centralized behind the machine.
- Spreading in the rounds instead of back and forth.



4

2.4 Cleaning

Easy cleaning of the machine can be done by removing the hopper.

To remove the hopper, the arm or fork of the feeding must be taken out of its hole and rotated away. Then release the hopper latch, and by slightly lifting the rear of the hopper, tilt it backwards. After this, the feeding can be taken off.

3 TRANSPORT



Do not exceed 9 mph when operating or towing machine.

- Apply all lighting and warning signals that are required by law.



- For transport on public roads care should be taken that the front axle pressure is sufficient (fit front weights, if necessary) and that the maximum rear axle pressure is not exceeded.

Transportation is easier to control when the hopper is empty. It is therefore recommended to fill the hopper after arrival in the area to be worked. This also eliminates compacting of fertilizer that may occur during transport.

4 MACHINE ADJUSTMENTS

4.1 Output rates

The output rate is determined by the feeding assembly, the working width, and forward speed. The correct position of the calibration scale on the feeding assembly can be determined by means of calibration charts.

They are based on a speed of 4.5 mph. You can spread at a higher speed, but then the working width must be adapted to the greater overall spreading width. The quantity spread per acre could be slightly less.

The quantities listed in the calibration guides are approximate. Due to variable factors, grain coarseness or fineness, density, or specific gravity of the fertilizer, or humidity, etc., the effective output may differ from the value listed in the guide.

It is therefore advisable to check the output. The spreading tables indicate average values only.

For more information on output rates, it is recommended to consult the Calibration Guide for LELY fertilizer spreaders WFR/WGR at the end of this section.



4.1.1 Working width

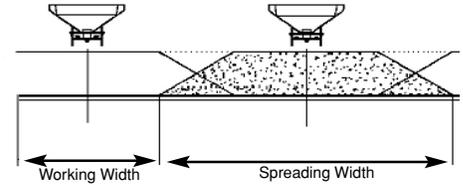
An effective overlap of spreading patterns is obtained if the working width is about 3/4 or .77 of the spreading width (fig. 5).

For most types of granular fertilizer the spreading width is approx. 52 ft (16 m) at a speed of 4.5 mph. At a faster speed the working width will change. At the same time the centralized pattern can change. The pattern needs to be centralized the same distance to the left as it is to the right, measured from the center of the spreader.

The correct working width is then $.77 \times 52 \text{ ft (16m)} = 40 \text{ ft (12m)}$.

Granular fertilizer spread at 5 mph gives a spreading width of 66 ft. Working width would be $3/4$ or $.77 \times 66 = 50 \text{ ft}$.

At a speed of 5 mph the quantity spread per acre is about 10% less than indicated for 4.5 mph. The calibration guide gives average figures only.



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4.1.2 Setting of output rates

Fertilizer outputs per acre depend upon: working width, forward speed, type of fertilizer, and the position of the stop on the calibration scale.

Stop positions for output rates required can be established by consulting the calibration guide (p. 12). The quantities listed in the output charts are approximate. Size, shape, mix, and weight of the fertilizer grains may vary according to the fertilizer brand and/or production batch.

It is therefore recommended to check the output rate according to "4.1.3 Check of output rate" included in this manual.

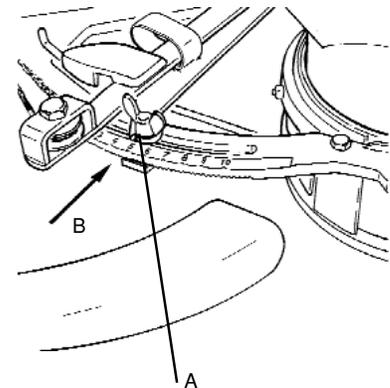
Example 1:

- Fertilizer: X = large grain or granular
- Required output rate: 330 lb/acre
- Working width = 40 ft (12 m)
- Forward speed = 4.5 mph

The calibration guide for large/granular fertilizers indicates that position 7 of the calibration stop (fig. 6) gives an output of 302 lb/acre, while an output of 364 lb/acre is obtained at setting 8.



CAUTION: STOP THE PTO AND EJECTOR DISC BEFORE LEAVING THE TRACTOR OR VEHICLE TO CHANGE ANY SETTINGS OR FILLING THE SPREADER.



6



An intermediate position will have to be used.
The output difference between positions 7 and 8 is $302 - 364 = 62$ lb/acre. Each consecutive intermediate position accounts for an increase in output of approx. $1/4$ or $.25 \times 62$ lb/acre.

POSITION	Intermediate Positions			POSITION
7	A	B	C	8
302	317.5	333	348.5	364

The second intermediate position B gives the closest approximation of the output required.

It is possible to operate at a speed and working width other than the one listed in the output rate charts.

When operating at another working width than the one listed in the chart, do not fail to carry out a check of the output rate (see section 4.1.3).



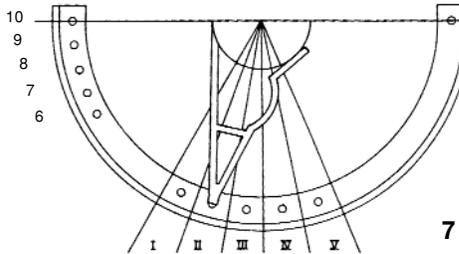
CALIBRATION GUIDE

based on a tractor speed of 4 1/2 miles per hour

Position of calibration scale	LARGE GRAINS (mixed fertilizers, granulars, super-phosphate) Position of feeding arm Sector I or II Working Width 39 ft.	SMALL GRAINS (Prills etc.) Position of feeding arm Sector I or II Working width 39 ft.	POTASH 40% Position of feeding arm Sector III Working width 20 ft.	SLAGS + 6% water Position of feeding arm Sector IV Working width 16 ft.
1	9	20	-	27
2	21	30	-	79
3	54	77	36	145
4	91	144	70	224
5	136	224	105	300
6	203	336	139	376
7	302	439	205	517
8	364	531	273	642
9	394	573	371	667
10	415	597	413	679

CALIBRATION GUIDE

based on a working width of 20 feet (6 m)
and a tractor speed of 4 1/2 miles
(7 km) per hour



Holes 6-10 are used for side spreading and is referred to in section 4.4.

Position of calibration scale	LARGE GRAINS Sector II Working width 20 ft (6 m)	SMALL GRAINS Sector II Working width 20 ft (6 m)
1	18	40
2	42	60
3	108	154
4	182	288
5	272	448
6	406	672
7	604	878
8	728	1062
9	788	1146
10	830	1194



4.1.3 Checking output rate

Check the calibration stop recommended in the Calibration Guide by filling the hopper with a known small quantity of fertilizer and measuring distance covered to empty the hopper.

Multiply the quantity of fertilizer spread by the Distance Chart (below) by the number of yards run (this number is predetermined by the working width previously determined i.e. 39 ft = 372 yards).

Divide by the distance actually covered.

The answer will be the quantity of fertilizer actually spread per acre.

Distance Chart

Width of Spread	Yards Run Per Acre
18 ft.	806 yards
21 ft.	691 yards
24 ft.	605 yards
27 ft.	538 yards
30 ft.	484 yards
33 ft.	440 yards
36 ft.	403 yards
39 ft.	372 yards
42 ft.	346 yards
45 ft.	323 yards
48 ft.	303 yards
50 ft.	290 yards

$$\frac{\text{actual applied} \times \text{yards run}}{\text{distance actually covered}} = \text{quantity actually spread in lbs/acre}$$

Example:

- Rate required = 300 lbs/acre
- Speed = 4.5 mph
- Calibration stop = 7
- Working width = 39 ft
- Actual applied = 110 lbs.
- Actual distance covered = 142 yards

$$\frac{110 \times 372}{142} = 288 \text{ lbs/acre}$$

In order to obtain the output required, the feed assembly should be adjusted to slightly higher than 7 position.

REMARKS

If tractor wheel slip occurs, the quantity spread per acre will increase.

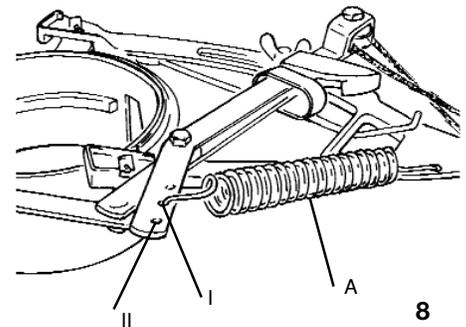
The correct calibration and correct distribution pattern are only obtained when fertilizer reaches the ejector disc through the three gates of the feeding. Any multi-sized/ density material and leakage must be adjusted for. The feeding gates should not be altered in any way.

! The Agitator (2320104600) should NOT be used when spreading granular fertilizer.

4.2 Control

4.2.1 Mechanical control

The feed assembly can be closed and opened by pulling the control rope to the point of locking and pulling again to unlock spreading mechanism. The spring A (fig. 8) opens the gates (position I is the standard position) after the spreading mechanism is unlocked.



If a fertilizer that causes friction on the feeding is applied, the tension spring (A) may be moved to the outer hole (II) of the lever (fig 8).

4.2.2 Hydraulic control

A feed assembly that is actuated by a hydraulic control is closed and opened by briefly pressurizing and depressurizing the ram.

Each time the ram is actuated, the feed assembly is either locked or unlocked.

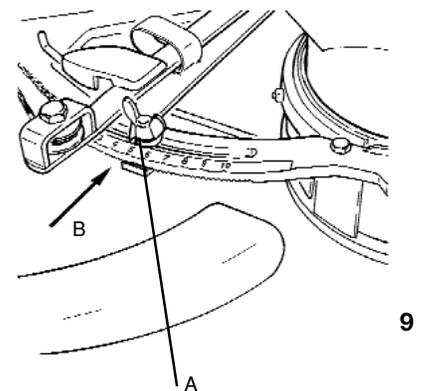
After unlocking, the spring A (fig. 8) opens the gates.

4.2.3 Calibration scale

The degree of gate opening and, hence, the output rate is determined by the position of the indicator on the calibration scale (fig. 9).

Indicator settings are possible from 0 up to and including 10 by adjusting the stop A. In between the positions on the calibration scale there are three intermediate positions.

When locking the stop, make sure that the teeth B are meshed into the underside of the scale.

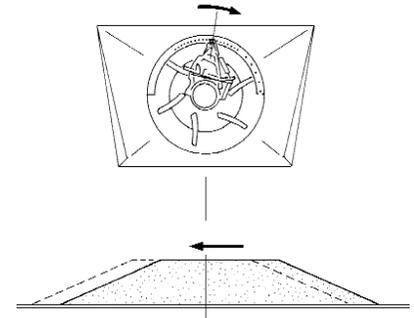


4.3 Fork/arm position

The position of the spreading pattern behind the spreader is determined by the position of the feeding assembly (fork/arm position) When the fork is turned clockwise, the spreading pattern will move to the left, when viewed in the direction of travel or from behind the tractor (fig. 10).

By adjusting the fork, a symmetrical pattern behind the tractor can be ensured.

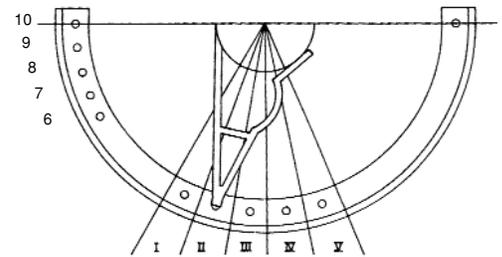
A general rule of thumb is: the coarser the material to be spread, the higher the fork setting (fig. 10 & 11).



10

Material	Fork setting
Lime, slags	1-3 III-V
Lime nitrate 40%	2-4 IV-II
Granulars	3-5 III-V
Cereals/rice	4-5 II-I

The correct position of the feeding assembly should be determined by experiment. The spreading pattern should be centrally located behind the broadcaster. Place the fork in one of the positions listed above by way of guideline. If, for example, the spreading pattern deviates to the right, this can be corrected by moving the fork of the feeding one hole to the left.



11

When starting the spreading operation, check for equal application on the left and right side. Adjust if necessary. Positions 6 – 10 are used for side or headland spreading. For further details please refer to "4.4.1 Adjustment for side/headland spreading".

Differences in size and weight of various fertilizers, grains or seeds may cause the spreading pattern to not be centrally behind the broadcaster.



4.4 Side/Headland spreading

4.4.1 Adjustment

The fork of the feeding assembly should be set in position 6 – 10 (fig. 12). Move it in a clockwise direction to a suitable hole in the sideplate to obtain side delivery.

Select position 6 – 8 for powdery fertilizers.
 Select position 7 – 9 for coarsely granulated fertilizers.
 Select position 8 – 10 for the remaining materials.

Spreading takes place from the tractor wheel track towards the side area. The side/headland spreading pass should be carried out at a distance from the side of $\frac{2}{3}$ (.67) full field working width.

Check correct position of spreading pattern, on the left side behind the spreader (fig. 13). Adjust, if necessary by means of a different fork/arm hole position.

The fertilizer or other material has to remain just within the side area desired. If necessary, adjust your speed in order to ensure that the spreading pattern just reaches the edge of the turf or field. 4.5 mph is recommended speed for proper application rate.

The output rate for side/headland spreading should be 40% of the quantity required during regular turf or field application. Subsequent passes or runs are then carried out in the normal manner with the full feed rate and the feeding set to spread centrally (fig 14).

Example:

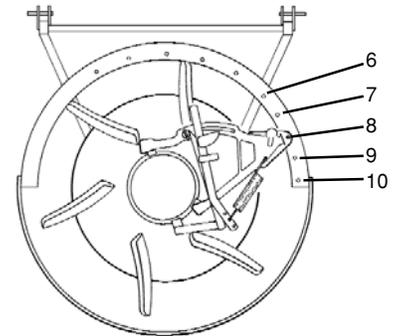
- Output required (small grain) = 560 lb/acre
- Forward speed = 4.5 mph
- Working width = 39 ft
- Calibration setting = 7

The tractor wheel track for the side/headland pass is situated at $\frac{2}{3}$ (.67) of the 39 ft working width = 26 ft from the side. The output rate has to be adjusted at 40% of 560 lb/acre = 224 lb/acre.

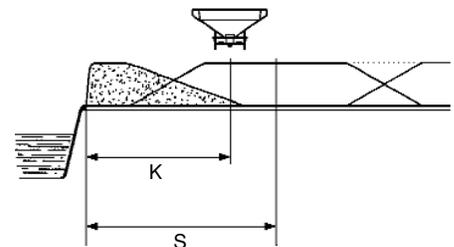
From the chart for small granular it can be inferred that the Calibration stop should be adjusted to position 5.



CAUTION: STOP THE ENGINE AND EJECTOR DISC BEFORE LEAVING THE TRACTOR OR VEHICLE TO CHANGE ANY SETTINGS OR FILLING THE SPREADER.

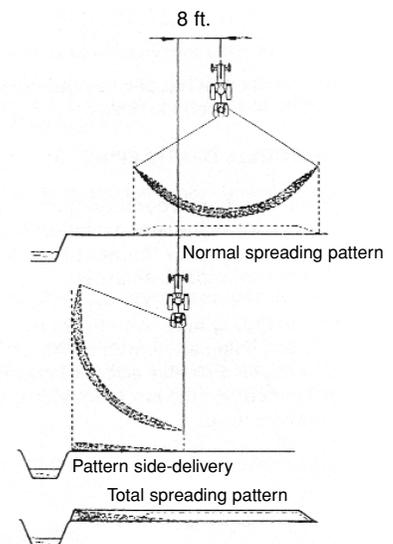


12



K = side/headland spreading
 S = first pass full field

13



14



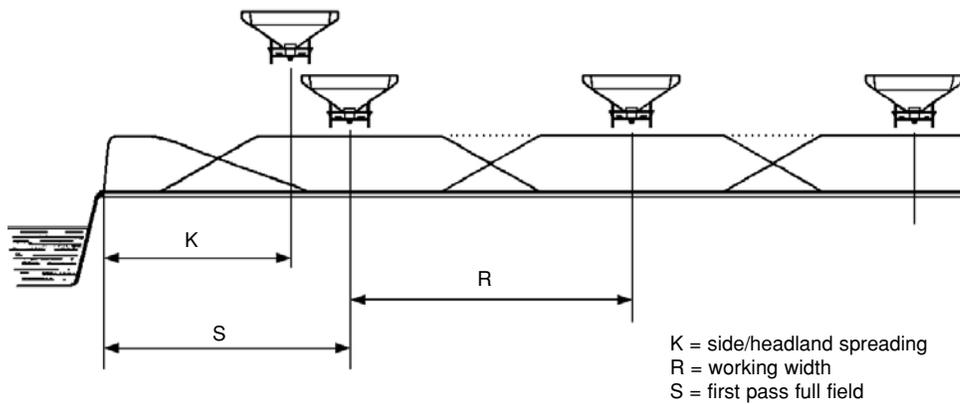
5 Operating the machine

- Fertilizer granular may attain high speeds leading to injuries and damage of soft crops.
- **High Speed Fertilizer:** do not allow people or animals to approach a spreader in operation with a radius of at least 100 ft (30 m). Reduce the spreading width for spreading over soft crop!
- ! • Stop the tractor engine before exiting. Do not allow anyone to come near the machine while the disc is still rotating.
- ! • First carry out the check and maintenance duties if the spreader is new. For more details refer to "6 Maintenance".



At user's choice, side/headland or full spreading may be carried out first (fig.15).

Listed in the survey below you find, for a number of working widths, the distance between the plot separation and tractor/vehicle wheel track, both for side spreading and full field operation.



15

Working Width	Distance from plot side (ft)	
	Headland Spreading	First Pass
R	$K = .67 \times R$	S
16	10.5	14
20	13	17
40	26	34.5
50	33	42.5



5.1 Full field operation

It is up to you to start with side/headland spreading or with a full field operation.

For full field spreading circular passes are preferred to driving up and down (fig. 16). When driving circular passes, spreading differences will be compensated by the next run or adjoining spreading pattern.

When driving up and down on turf applications, spreading differences are increased. It is important to know your Working Width and ensure proper overlap to compensate for the greater deviation that occurs using this method.

5.2 Double overlap

If a particularly accurate spreading pattern is required, double overlap spreading can be carried out.

Half the normal working width is then used.

Carry out spreading all over the plot by driving up and down (fig. 17).

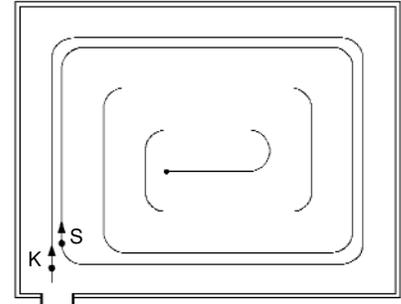
As spreading is effectively carried out twice, the feed assembly has to be set at half the output required.

Example:

- Output required = 430lb/acre
- Normal working width = 40 ft (12 m)
- When applying double overlap: drive up and down with a 20 ft (6 m) distance between the passes.
- Set feeding assembly at an output of 215 lb/acre.

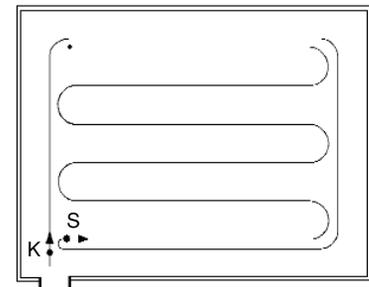
Sometimes it is desirable to double the quantity spread per acre. Use a working width 1/2 the normal working width and following the above Double Overlap pattern. Do not adjust feeding output.

Spreading round and round is preferable to spreading up and down when it comes to accurate distribution.



K = headland spreading
S = first pass full field

16



K = headland spreading
S = full field spreading

17



5.3 Check of spreading width

An effective link-up of spreading patterns is obtained if the working width is 3/4 (.77) of the spreading width (fig. 18).

If there is a substantial difference, the following checks should be carried out:

- the working width was measured correctly.
- damage or wear and tear of spinner discs, spoons or feed device.
- the drive was fully engaged.
- the correct Calibration Guide was used.

There may also be differences (grain shape, size, and weight) between the fertilizer applied and the material used during spreading tests for establishing the Calibration Guide (information could be from another quality or brand).

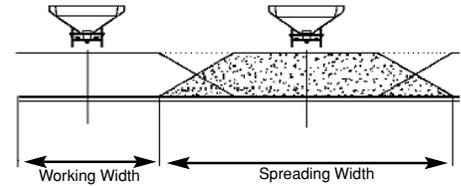
5.4 Check of output rate

The quantities listed in the output charts are approximate. Size, shape and weight of the granular may vary according to the fertilizer brand and/or production batch. The effective output may also be affected by other circumstances (for example, air humidity).

It is therefore recommended to check the rate of output. Or else the following procedure can be applied.

- Put a weighed-out quantity of fertilizer in the hopper.
- This quantity should cover a distance of at least 300 ft (91 m).
- Empty the hopper by operating at 4.5 mph forward speed.
- Measure the distance of the fertilizer application.
- Weigh the remainder of fertilizer in the hopper, (if hopper has not been emptied).
- Determine the output of fertilizer per acre by means of the formula below:

$$\frac{43,560 \times \text{output (lb)}}{\text{working width (ft)} \times \text{length covered (ft)}} = \text{lb/acre}$$



Example

Fertilizer spreader filled with 150 lbs fertilizer.

Working width = 40 ft (12 m)

Distance covered = 500 ft (154 m)

Balance of fertilizer = 52 lbs

$$\text{Output} = \frac{43,560 \times (150 - 52)}{40 \times 50} = 213 \text{ lb/acre}$$

If the effective output differs very much from the value listed in the calibration guide, this may be due to any of the following causes:

- large difference between the fertilizer applied and the material for which the chart is applicable;
- incorrect adjustment of the calibration stop on the feeding assembly;
- non-compliance with the forward speed on which the output rate adjustment is based;
- clogging of feed openings (example – lumps or clods in the fertilizer).

5.5 Powdery fertilizers

It is recommended to use the mass feeding.

For spreading powdery fertilizers (lime): the broadcaster should be angled to the rear. As a result the material will not throw as far and reduces air born material. You should not spread powders over a forward speed of 4.5 mph. (fig 19).

The use of an agitator base - A (fig. 20) should effect a regular flow of powdery fertilizer. If an agitator is used, the hopper should not be filled until spreading is actually started. This can increase your application rate by 10%.

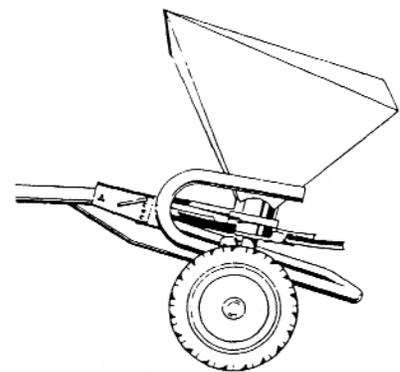
Never run the spreader with a completely empty hopper. Refill when agitator becomes noisy. Put rubber hose at end of tines to reduce wear and noise.

Agitator – The spreader models WFR & WGR can be fitted with an agitator B (fig. 20) if the flow of fertilizer/lime is not running smoothly.

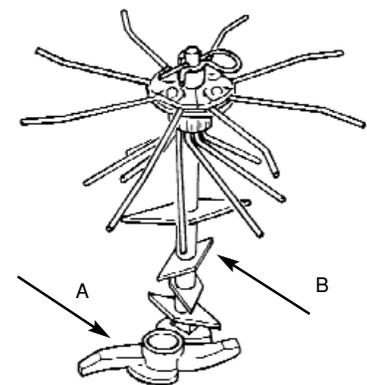
Also use with damp or lumpy materials to ensure a uniform feed.



NEVER spread granular fertilizer with an agitator.



19



20



5.6 Slags

Slags can be spread effectively if they are mixed with 6% water (6 quarts of water for 220 lbs of slags) prior to spreading. Start spreading immediately after the hopper has been filled with mixture. Satisfactory results can be obtained by adding a few pints of water into the hopper with each bag of slags. The agitator will then produce a mixture. Make sure that it does not reach the walls of the hopper. The sides must be kept dry.

An agitator ensures a smooth flow towards the feed openings.

In addition to the above, see "5.5. Powdery fertilizers" for the application of slag.

5.7 Seeds

Lely spreaders can also be used for the application of seeds. For spreading small seeds, a special small seed feeding is available.

The Calibration Table for Cereals & Seed provides output for various types.

NOTE: Certain types of material (e.g. very fine fertilizers, turf or rice) may force their way to the spinner disc through the space between the hopper neck and the feeding assembly. This type of spillage can be avoided by fitting a length of self adhesive foam insulation on the hopper neck above the feeding.

Broadcasting Cereals & Seeds – The Lely fertilizer spreader is also suitable for broadcasting all kinds of seeds without modification or using the small seed feeding per the following chart.

CALIBRATION TABLE FOR CEREALS AND SEEDS

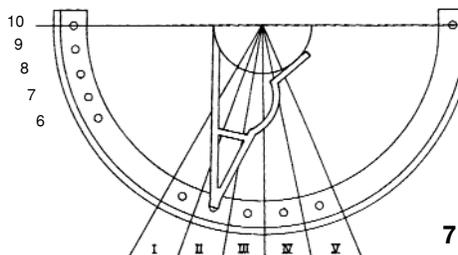
Sort of Seed	type of feeding	swinging arm setting *	control setting	width of effective spread in feet	amount of seed sown in lbs/acre
Alfalfa	S	I	4	23	13
Alsike clover	S	I	3	23	10
Barley	F	I	4	46	64
Blue grass	S	II	10	10	30
Blue grass	F	V	3	10	30
Brome grass	F	III	5	13	17
Buckwheat	F	II	4	36	58
Sugar, Cane or Sorghum	F	II	3	40	13
Corn	F	I	3	46	11
Flax	F	II	2 1/2	26	33
Ladino clover	S	I	1	20	7
Millet	S	IX	7	30	36
Oats	F	II	5	40	74
Orchard grass	F	IV	3 1/2	10	20
Pasture mixture	F	IV	3	13	18
Rape	S	IX	3	30	6
Red clover	S	I	3 1/2	23	10
Red/Creeping Fescue	F	IV	5	16	30
Red top	S	V	4	10	11
Rice	F	II	4	46	64
Rye	F	I	4 1/2	42	84
Rye grass	F	III	3	16	19
Soy beans	F	X	5	52	80
Sudan grass	S	II	2 1/2	30	22
Timothy	F	II	4	16	15
Vetch	F	I	3	40	38
Wheat	F	I	6	46	120

S = small seed feedings for sowing small seeds

F = standard type feedings as for fertilizer

* = for these setting see below

Note: When using a very small quantity of seed, it is recommended that potash or sand be mixed with the seed.



Holes 6-10 are used for side spreading and is referred to in section 4.4.

6 MAINTENANCE



Proper machine servicing is necessary to maintain reliable and safe working conditions.

6.1 Maintenance after operation

All parts should be thoroughly cleaned after each days use and oiled prior to storage. Regular maintenance means a longer life.

- Clear the hopper of fertilizer residue, if any.
- After jet-cleaning the machine thoroughly, allow rotation of the spinner discs to ensure that the water is swept away.



Take care that nobody is in the danger zone!

- Grease the machine with a rust preventive.
- Check the condition of the spinner discs and spoons. Damaged or worn spinner discs and/or spoons may affect the spreading pattern. Replace if worn.

When fitting spoons, tighten the bolts with a torque of 11 ft-lb as a maximum.

- Check the oil level of the gear drive.
 - When the machine/gearbox is kept in a horizontal position, the oil level should be exactly up to the bottom side of the hole for the filling plug.
- If an agitator is used, it should be cleaned daily upon completion of the operation. Remove the agitator from its shaft and grease it.
- Check the oil level in the gearbox frequently. For more information, please refer to "6.3 Change of oil".
- Check the machine for damage and flaws.
- Check the functioning and adjustment of the feeding assembly.

6.2 Intermittent maintenance

Intermittent maintenance has to be carried out:

- at the start of the spreading season;
- before prolonged storage of the machine;
- when the machine is used extensively during the season;
- to prolong the lifetime of the machine.
- Clean the machine thoroughly immediately after use and lubricate it with oil or some other rust preventive. For proper cleaning of the feed assembly, the hopper can be tilted. For this purpose, the fork of the feed assembly should be turned to a section without holes.

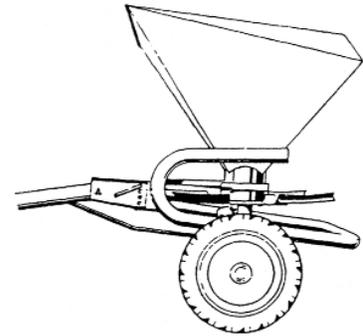
WFR/WGR: disengage the hopper latch. The hopper can now be lifted from the chassis in its entirety.

LEY

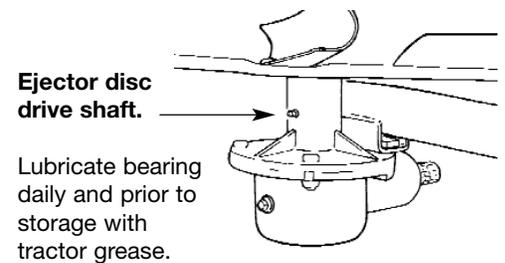
6.3 Change of oil / Lubrication

Check the oil levels of the drive.

- The oil in the gearbox should be changed every 2 years or if the machine is used intensively every year. The oil content of the gearbox is approx. 1.5 pint (.75 qt).
- When the machine/gearbox is kept in a horizontal position, the oil level should be exactly up to the bottom side of the hole for the filling plug (fig. 21).
- For changing/filling, SAE 80W90 (non foam, non detergent) gear oil should be used or another type of oil meeting the specification.
- Lubricate bearing daily and prior to storage with tractor grease.



21



6.4 Safety Decals

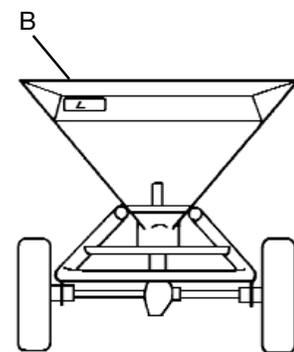
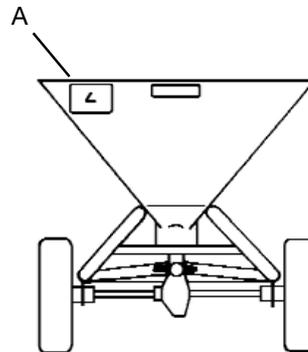
Check the presence and condition of all safety decals (fig 22).



A



B



22

Supplement A

CONDENSED INSTRUCTIONS

Study the instruction manual carefully before operating spreader.

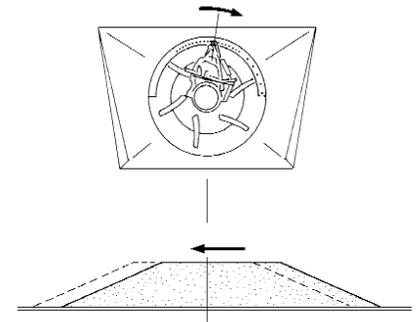
- Select the required working width, forward speed and output/acre. Consult the calibration guide for the corresponding adjustment of the feeding assembly.

When working at a width not listed in the table, the "setting value" should be used.

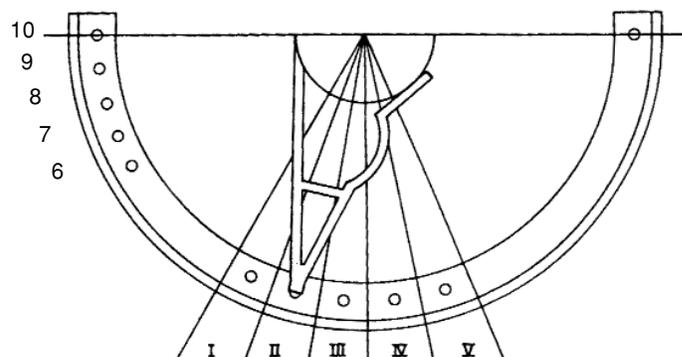
When working with a double overlap: adjust at half the output rate required.

For side/headland spreading: adjust at 40% of the required (full field) output.

- For the application of powdery fertilizers, tilt spreader backwards away from tractor.
- The position of the feeding assembly (fork position) in respect to the machine determines the position of the spreading pattern behind the spreader (fig. 23).
- Move the arm/fork to a hole that centralizes your spread pattern.
- By moving the fork position clockwise, the spreading pattern will move to the left seen from the direction of travel.
- For side/headland spreading move clockwise to the 5 far side holes (fig 24).
- A general rule of thumb is: the coarser the fertilizer material, the higher the position number of the fork.



23



24



Supplement B

OPTIONS

Feeding assemblies

The spreader is supplied with a remote control Standard feeding assembly, controlled from the tractor cab by means of a rope.

A Standard Hydraulic feeding assembly is available as an option. It lets the operator open and close the feeding using a switch connected to the tractor's hydraulic system.

If fine seeds need to be spread, a Small Seed Feeding assembly can be used. This device has small output openings.

For the application of large quantities per acre, a Mass feeding assembly is available. For sand/salt applications it can be fitted this feeding and sand/salt ejector disc featuring short spoons. When fitted with these attachments, the machine can spread sand and/or salt on snow or frost covered parking lots, sidewalks or roads.

Mesh Grid Screens

Screens are available for all WFR & WGR spreaders. The screen prohibits solid masses of material from entering the feeding area. Blockage of the feeding assembly or an irregular flow of fertilizer is avoided.

Agitators

In the spreader models H and L1250, an agitator can be fitted on the bottom disc to promote the flow of powdery fertilizer. Also use for the application of slags, lime or sand. Never use an agitator with granular fertilizer.

Supplement C



CONDENSED APPLICATION RATES

	<p>CONDENSED OPERATING INSTRUCTIONS ** STANDARD FEEDRING** FOR COMPLETE INFORMATION SEE YOUR OPERATORS MANUAL</p>	<p>INSTRUCCIONES DE FUNCIONAMIENTO RESUMIDAS **ALIMENTACIÓN NORMAL** EL MANUAL DEL USUARIO CONTIENE LA INFORMACIÓN COMPLETA.</p>																																								
<ul style="list-style-type: none"> • CHECK OIL LEVEL IN GEARBOX (SAE 90) • POSITION MACHINE AT CORRECT HEIGHT BEFORE COUPLING P.T.O. SHAFT (EJECTOR DISC ± 20 INCHES OR 50 CM ABOVE GROUND) 		<ul style="list-style-type: none"> • REVISE EL NIVEL DE ACEITE EN LA CAJA DE ENGRANAJES (SAE90) • COLOQUE LA MÁQUINA A LA ALTURA CORRECTA ANTES DE ACOPLAR EL EJE DE TOMA DE POTENCIA (DISCO EYECTOR ± 50 cm o 20 pulg. SOBRE EL SUELO) 																																								
<p>BASIC CALIBRATION (Central spreading) LBS/Acre Spreading width = 52 ft. Working Width = 40 ft.</p>		<p>CALIBRACIÓN BÁSICA (Distribución central) libras/acre Ancho de distribución = 16 m Ancho de trabajo = 12 m</p>																																								
<p>DANGER: Maximum PTO speed is 540 R.P.M. Operate in range between 425 & 540 R.P.M. PELIGRO: La máxima velocidad de la toma de potencia es 540 rpm. Haga funcionar el equipo entre 425 y 540 rpm</p>																																										
<p>Forward MPH Speed Velocidad de avance (millas/h)</p>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:33%; text-align: center;">3</td><td style="width:33%; text-align: center;">5</td><td style="width:33%; text-align: center;">9</td></tr> </table>	3	5	9	<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:33%; text-align: center;">3</td><td style="width:33%; text-align: center;">5</td><td style="width:33%; text-align: center;">9</td></tr> </table>	3	5	9	<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:33%; text-align: center;">3</td><td style="width:33%; text-align: center;">5</td><td style="width:33%; text-align: center;">9</td></tr> </table>	3	5	9	<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:33%; text-align: center;">3</td><td style="width:33%; text-align: center;">5</td><td style="width:33%; text-align: center;">9</td></tr> </table>	3	5	9																										
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<p>Position of calibration scale. Posición de la escala de calibración</p>	<p>Granulars (Large) Granulares (grandes) Coarse (Gruesos)</p> <p>Position Feeding 10 – 15 Coloque el anillo de alimentación en 10 – 15 Quantity in lbs/acre Cantidad en libras/acre</p>	<p>Granulars (Small) Granulares (pequeños) Fine (Finos)</p> <p>Position Feeding 10 – 15 Coloque el anillo de alimentación en 10 – 15 Quantity in lbs/acre</p>	<p>Potash non-granular Potasa no granular Spread = 26', Work = 20' Position Feeding 7 – 9 Quantity in lbs/acre</p>	<p>Lime and slags Cal y escorias Spread = 21', Work = 16' Position Feeding 4 – 6 Quantity in lbs/acre</p>																																						
<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:33%;">3</td><td style="width:33%;">70</td><td style="width:33%;">45</td><td style="width:33%;">23</td></tr> <tr><td>6</td><td>258</td><td>155</td><td>86</td></tr> <tr><td>9</td><td>506</td><td>303</td><td>169</td></tr> </table>	3	70	45	23	6	258	155	86	9	506	303	169	<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:33%;">100</td><td style="width:33%;">60</td><td style="width:33%;">33</td></tr> <tr><td>423</td><td>254</td><td>141</td></tr> <tr><td>735</td><td>441</td><td>245</td></tr> </table>	100	60	33	423	254	141	735	441	245	<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:33%;">45</td><td style="width:33%;">27</td><td style="width:33%;">15</td></tr> <tr><td>178</td><td>107</td><td>59</td></tr> <tr><td>464</td><td>280</td><td>155</td></tr> </table>	45	27	15	178	107	59	464	280	155	<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:33%;">187</td><td style="width:33%;">112</td><td style="width:33%;">62</td></tr> <tr><td>482</td><td>289</td><td>161</td></tr> <tr><td>857</td><td>514</td><td>286</td></tr> </table>	187	112	62	482	289	161	857	514	286
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482	289	161																																								
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<p>NOTE:</p> <ol style="list-style-type: none"> 1. USE THE AGITATOR FOR WET AND LUMPY MATERIALS ONLY. MIX SLAGS WITH SOME WATER PRIOR TO SPREADING. 2. THE SECTIONS I-V HAVE 3 ADJUSTMENT HOLES EACH IN ORDER TO OBTAIN A SPREADING PATTERN AS REGULAR AS POSSIBLE OR CENTRAL. 3. QUANTITIES LISTED ARE APPROXIMATE. EFFECTIVE OUTPUT MAY DIFFER. 4. FOR COMPLETE INFORMATION SEE YOUR OPERATORS MANUAL. 	<p>NOTA:</p> <ol style="list-style-type: none"> 1. UTILICE EL AGITADOR ÚNICAMENTE PARA MATERIALES MOJADOS Y GRUMOSOS. MEZCLE LAS ESCORIAS CON ALGO DE AGUA ANTES DE ESPARCIRLAS. 2. LAS SECCIONES I-V TIENEN CADA UNA 3 ORIFICIOS DE AJUSTE A FIN DE LOGRAR UN PATRÓN DE DISTRIBUCIÓN TAN REGULAR O CENTRAL COMO SEA POSIBLE. 3. LAS CANTIDADES QUE APARECEN SON APROXIMADAS. LA SALIDA REAL PODRÍA SER DIFERENTE. 4. EL MANUAL DEL USUARIO CONTIENE LA INFORMACIÓN COMPLETA.
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Calibration Scale
Escala De Calibración

Central Spreading
Distribución Central

V
IV ----- lime & slags (cal y escorias)
III ----- potash 40% (potasa)
II } grains/large (granos/grandes)
I } granulars/small/fine (pequeños/finos)

Side Spreading
Distribución Lateral

Grains/Rice
Granos/Arroz

<p>CAUTION: STOP THE PTO AND EJECTOR DISC BEFORE LEAVING THE TRACTOR OR VEHICLE TO CHANGE ANY SETTINGS OR FILLING THE SPREADER. KEEP CLEAR OF MOVING PARTS.</p>	<p>¡PRECAUCIÓN! PARA EL PTO DISCO DE EJECTOR ANTES SOUIR EL TRACTOR O VEHICULO DECAMBIAR CUALQUIER ESCENARIOS O LLENAR EL ESPARCIDOR. MANTENGASE ALEJADO DE LAS PIEZAS MOVILES.</p>
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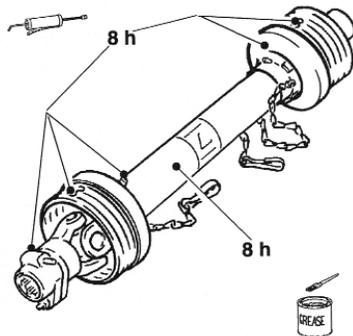


Supplement D

Technical Details

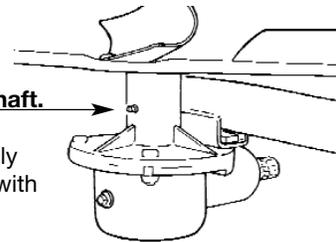
Weight	431 lb (196 kg)
Hopper Capacity: Standard Hopper	Up to 800 lb (363 kg)
Gearbox Ratio	1:4.3
Oil capacity of Gearbox	1.5 pint (.75 qt)
Type of Oil	80W-90 (non foam, non detergent)
Gearbox Maintenance	Change oil every 1-2 years depending on intensity of use
Grease Nipples	7
Tires: WGR Tires: WFR	4.00 x 12 ground grip 18x9.5x8 flotation
Pressure	30 psi

All details are without engagement and may be altered without prior notice.



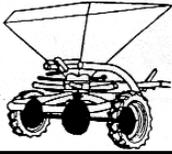
Ejector disc drive shaft.

Lubricate bearing daily
and prior to storage with
tractor grease.



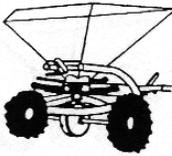


	Type Number	As From Serial Number
W	2.3202.0000.1	ALL
W	2.3202.0001.1	ALL



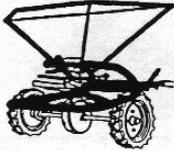
Standard Wheel Drive

2



Ejector disc + wheels

3



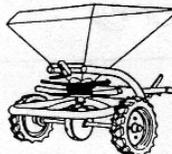
Frame + hopper

4



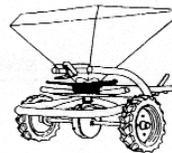
Agitator

5



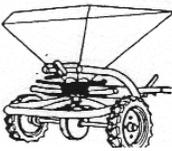
Agitator for powdery fertilizer

6



On/off devices

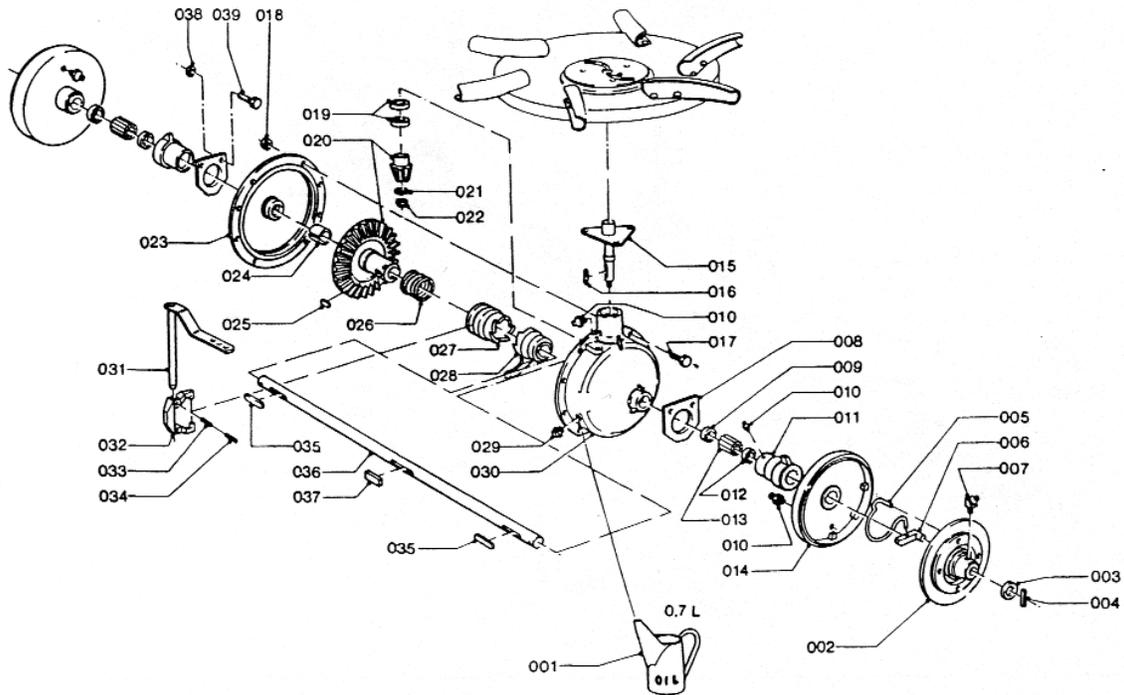
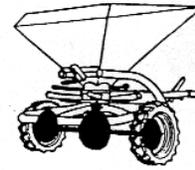
6



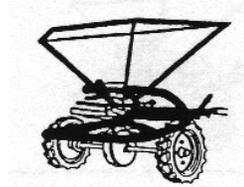
Compost + sand/salt feed system

7

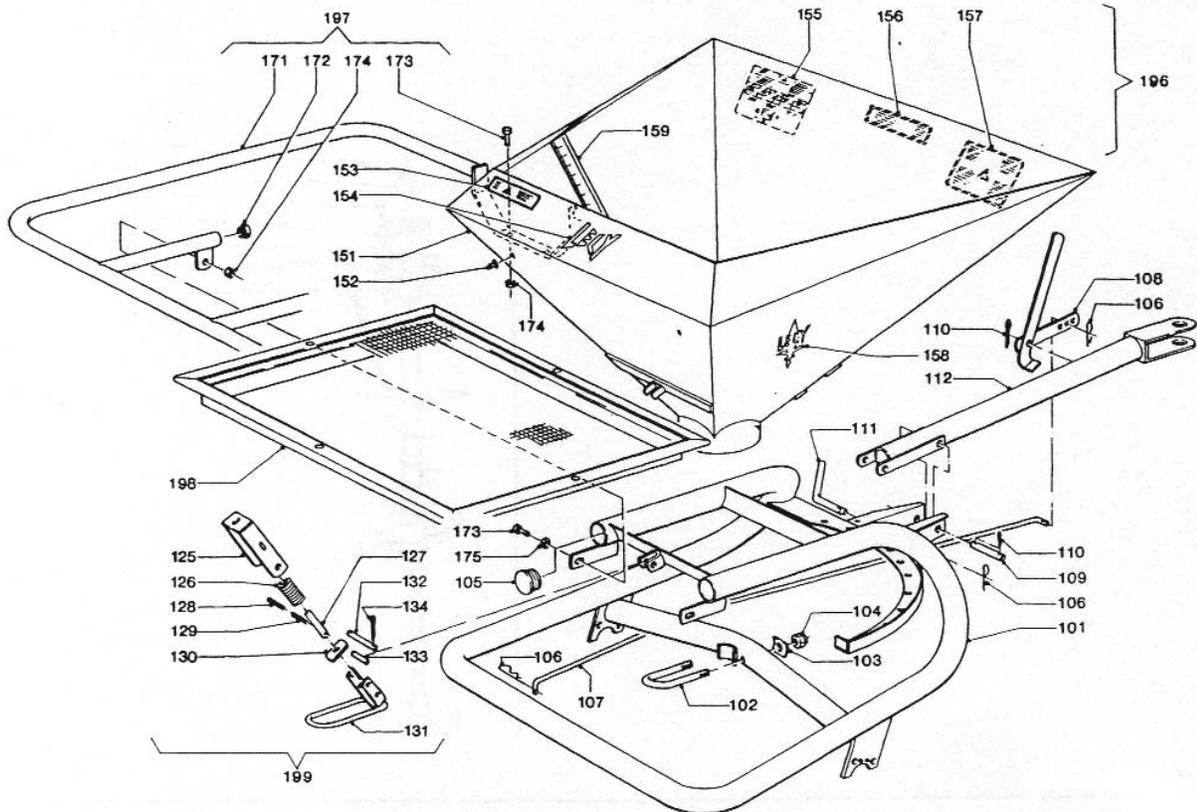
	Type Number	As From Serial Number
W	2.3202.0000.1	ALL



REF.	Part Number	Quantity		REF.	Part Number	Quantity	
001	9.1171.0044.6	(0.7L)	0.7L ESSO GP 80W90	023	2.3202.0042.0	1	
002	2.3202.0092.0	1	[R]	024	9.1077.0001.1	1	EG 35/43x20 DIN 1498
	2.3202.0101.0	1	[L]	025	9.1071.0029.0	1	A14x9x45 DIN 6885
003	9.1048.0026*6	2	37 DIN 1441	026	2.3202.0080.0	1	
004	9.1070.0024*3	2	Ø8x60 DIN 1481	027	2.3202.0081.0	1	
				028	2.3202.0082.0	1	
005	2.3202.0093.0	1	[R]	029	9.1131.0004.6	1	R 3/8"
	2.3202.0102.0	1	[L]	030	2.3202.0041.0	1	
006	2.3202.0091.0	1	[R]	031	2.3202.0060.0	1	
	2.3202.0100.0	1	[L]	032	2.3202.0059.0	1	
007	9.1068.0002*4	2	BR 1/8" 45° DIN 71412				
				033	9.1070.0017*3	2	Ø6x30 DIN 1481
008	2.3202.0111.0	2		034	9.1070.0035*0	2	Ø3.5x32 DIN 1481
009	9.1042.0008.1	2	35x42x04 G	035	9.1071.0011.3	2	A8x7x40 DIN 6885
010	9.1068.0001*3	5	AR 1/8" DIN 71412	036	2.3202.0020.0	1	
011	2.3202.0110.0	2		037	2.3202.0021.0	1	
012	9.1042.0010.3	2	35x47x07 AA				
				038	9.1029.0008*0	4	M12 DIN 934-8
013	9.1007.0002.2	2	3547-53 ROW/S	039	9.1113.0049*6	4	M12x25 DIN 933-8.8
014	2.3202.0090.0	2		-	2.3202.0010.0	1	Standard wheel drive (1:4,3)
015	2.3202.0030.0	1					
016	9.1071.0004.3	1	A6x6x40 DIN 6885				
017	9.1113.0124*4	8	M6x25 DIN 933-8.8				
018	9.1029.0002.1	8	M6 DIN 934-8				
019	9.1001.0084.6	2	6205-Z-C3				
020	2.3202.0067.0	1	[T+T]				
021	9.1048.0012*6	1	A13 DIN 125				
022	9.1030.0013*4	1	M12 DIN 985-8				

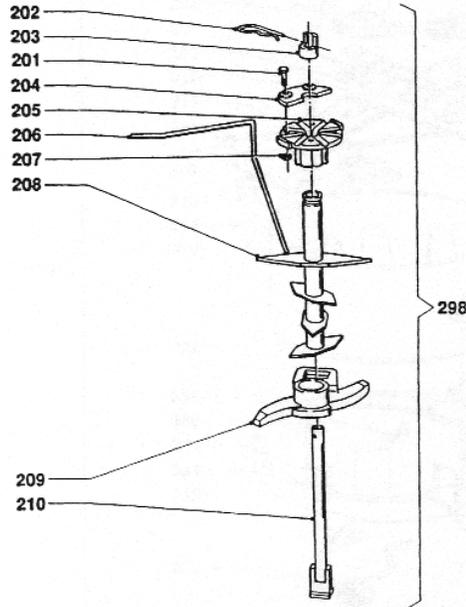
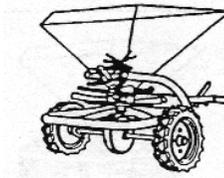


	Type Number	As From Serial Number
W	2.3202.0000.1	ALL
W	2.3202.0001.1	ALL



REF.	Part Number	Quantity		REF.	Part Number	Quantity		
101	2.3202.0150.0	1		151	2.3201.0120.0	1		
102	2.3202.0254.0	1		152	9.1105.0006.6	2		
103	2.3202.0252.0	2		153	9.1170.0052.1	1		
104	9.1030.0013*4	2	M12 DIN 985-8	154	9.1170.0003.1	1	"LELY"	
105	2.3201.0200.0	2		155	9.1170.0081.2	1	"INSTR."	W"
106	9.1124.0003*5	3	Ø4	156	9.1170.0069.4	1		
107	2.3202.0253.0	1		157	9.1170.0124.3	1		
108	2.3202.0240.0	1	L= 340 mm	158	9.1170.0051.0	2	"LELY"	
	3.3202.0220.0	(1)	L= 440 mm	159	9.1170.0149.0	1	"300 L"	W & H
109	3.3202.0250.0	1		1712.3202.0130.0		1		
110	9.1072.0004*2	3	4x30 DIN 94	1729.1108.0085.6		2	Ø32	
111	2.3202.0251.0	1		1739.1113.0187*4		4	M10x30 DIN 933-8.8	
112	2.3202.0200.0	1		1749.1030.0022.6		4	M10 DIN 985-8	
125	2.3205.0018.0	1		1759.1048.0059*4		2	A10,5 DIN 125	
126	2.3205.0014.0	1		1962.3205.1999.0		1	= REF. 153-158	W & H
127	2.3205.0013.0	1		1972.3202.0120.0		1		
128	9.1070.0015*1	1	Ø5x60 DIN 1481	1982.3201.2000.0		1	W & H & L1250	
129	9.1070.0024*3	1	Ø8x60 DIN 1481				Screen	
130	2.3205.0015.0	1		1992.3205.0010.0		1	= REF. 125-134	
131	2.3205.0011.0	1					Hopper latch	
132	2.3205.0017.0	1						
133	2.3205.0016.0	1						
134	9.1072.0004*2	2	4x30 DIN 94					

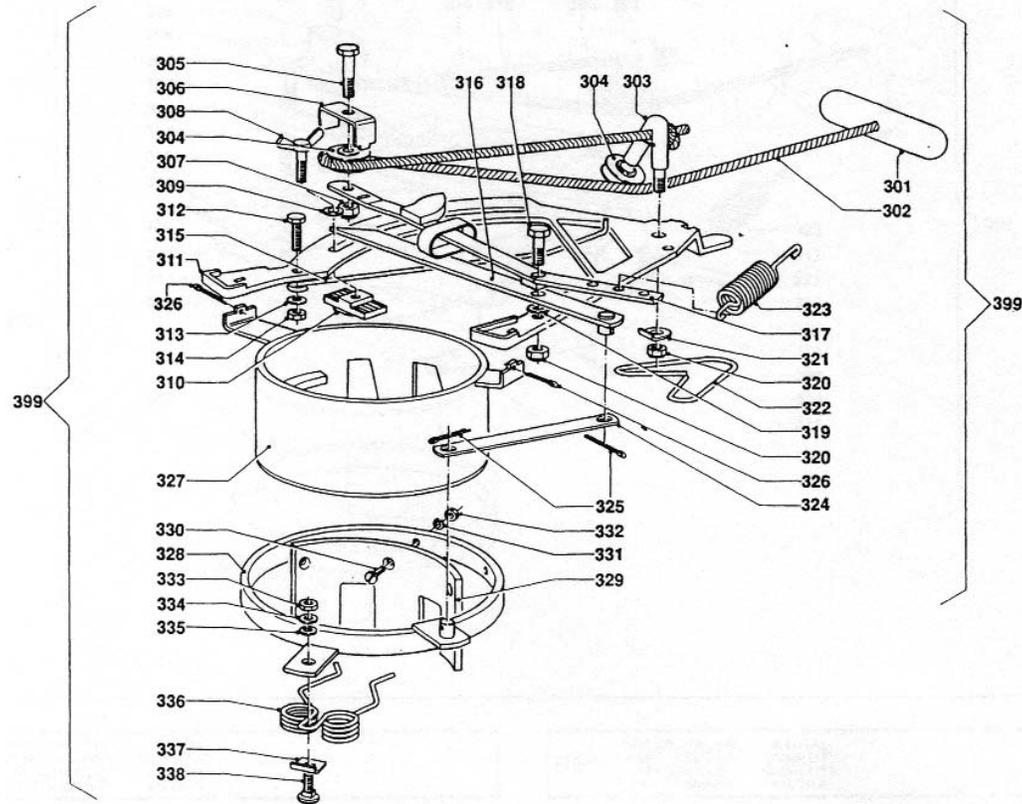
	Type Number	As From Serial Number
W	2.3202.0000.1	ALL
W	2.3202.0001.1	ALL



REF.	Part Number	Quantity		REF.	Part Number	Quantity	
201	9.1113.0124*4	4	M6x25 DIN 933-8.8	202	9.1124.0001*3	1	Ø5
202	9.1124.0001*3	1	Ø5	203	2.3201.0468.0	1	
203	2.3201.0468.0	1		204	2.3201.0490.0	2	
204	2.3201.0490.0	2		205	2.3201.0491.0	1	
205	2.3201.0491.0	1		206	2.3201.0492.0	8	
206	2.3201.0492.0	8		207	9.1029.0002*1	4	M6 DIN 934-8
207	9.1029.0002*1	4	M6 DIN 934-8	208	2.3201.0480.0	1	
208	2.3201.0480.0	1		209	2.3201.0469.0	1	
209	2.3201.0469.0	1		210	2.3201.0470.0	1	
210	2.3201.0470.0	1					
298	2.3201.0460.0	1	=REF. 201 - 210 Agitator				

	Type Number	As From Serial Number
W	2.3202.0000.1	ALL
W	2.3202.0001.1	ALL

STANDARD FEEDRING

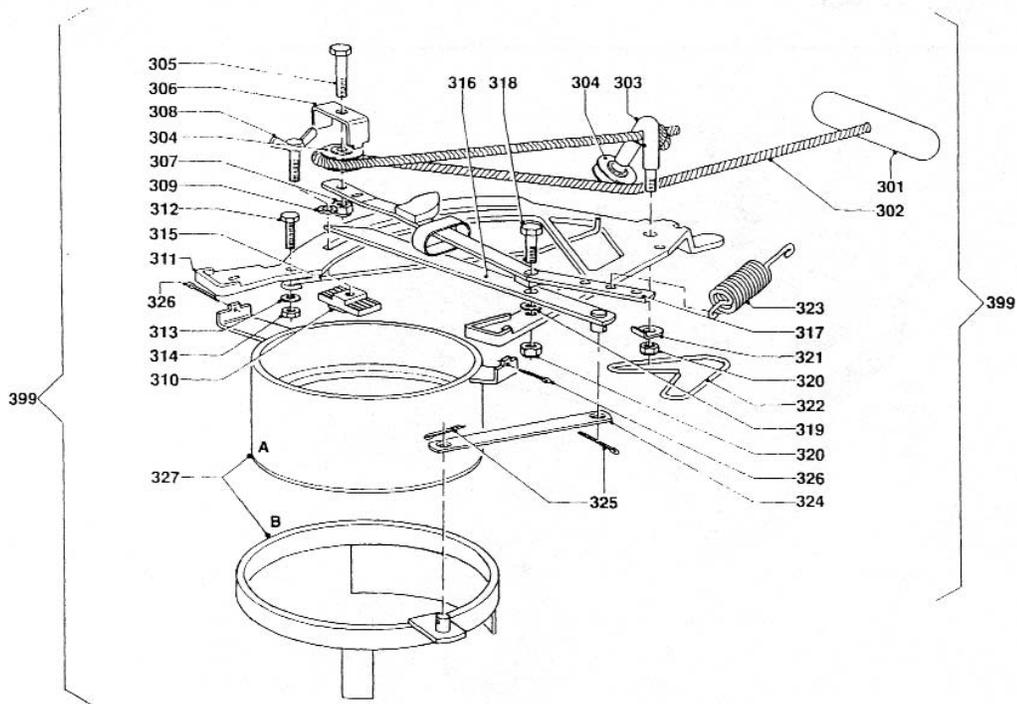


REF.	Part Number	Quantity		REF.	Part Number	Quantity	
301	2.3201.0328.0	1		326	9.1072.0003.1	2	4x20 DIN 94
302	1.1655.0658.0	1	2750 mm (1 m - 9.1163.0004.2)	327	2.3201.0270.0	1	
303	2.3201.0380.0	1		328	2.3201.0300.0	1	
304	2.3201.0326.0	2		329	2.3201.0299.0	1	
305	9.1113.0054.4	1	M12x45 DIN 931-8.8	330	9.1060.0010.6	3	AM6x20 DIN 127
306	2.3201.0341.0	1		331	9.1121.0008.6	3	A6 DIN 127
307	9.1030.0013.4	1	M12 DIN 985-8	332	9.1029.0002.1	3	M6 DIN 94-8
308	9.1062.0005.6	1	M10x30xDIN 316-G-4.6	333	9.1029.0005.4	1	M10 DIN 934-9
309	9.1048.0009.3	1	A11.5 DIN 7989	334	9.1048.0007.1	1	10.5 DIN 125
310	2.3201.0324.0	1		335	9.1121.0004.2	1	A10 DIN 127
311	2.3201.0320.0	1		336	2.3201.0260.0	1	
312	9.1113.0014.6	1	M8x20 DIN 933-8.8	337	2.3201.0261.0	1	
313	9.1048.0004.5	1	A8.4 DIN 125	338	9.1058.0013.4	1	M10x30 DIN 603
314	9.1029.0004.3	1	M8 DIN 934-8	399	2.3201.0250.0	1	=REF 301-338 (Standard) On/Off Device
315	2.3201.0323.0	1					
316	2.3201.0370.0	1					
317	2.3201.0350.0	1					
318	9.1113.0033.4	1	M10x45 DIN 931-8.8				
319	9.1048.0007.1	1	10 DIN 125				
320	9.1030.004.2	2	M10 DIN 985-8				
321	2.3201.0370.0	1					
322	2.3201.0321.0	1					
323	2.3201.0322.0	1					
324	2.3201.0327.0	1					
325	9.1072.004.2	2	4x30 DIN 94				

SMALL SEED FEEDRING



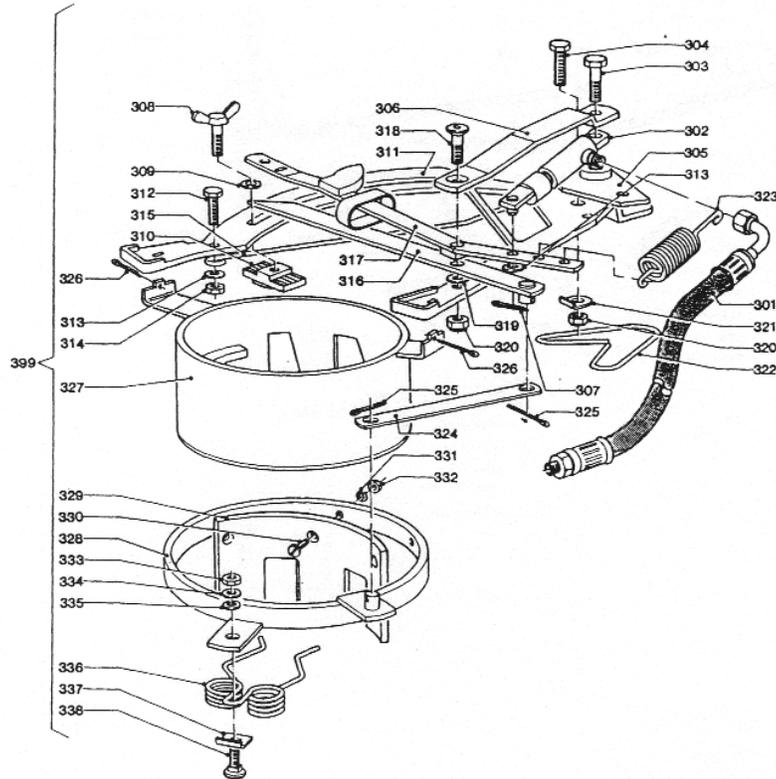
	Type Number	As From Serial Number
W	2.3202.0000.1	ALL
W	2.3202.0001.1	ALL



REF.	Part Number	Quantity		REF.	Part Number	Quantity	
301	2.3201.0328.0	1		399	2.3201.2210.0	1	= REF 301-327
302	1.1655.0658.0	1	2750 mm (1 m = 1163.0004.2)				On/Off Device
303	2.3201.0380.0	1					
304	2.3201.0326.0	2					
305	9.1113.0054.4	1	M12x45 DIN 931-8.8				
306	2.3201.0341.0	1					
307	9.1030.0013.4	1	M12 DIN 985-8				
308	9.1062.0005.6	1	M10x30 DIN 316-G-4.6				
309	9.1048.0009.3	1	A11.5 DIN 7989				
310	2.3201.0324.0	1					
311	2.3201.0320.0	1					
312	9.1113.0014.6	1	M8x20 DIN 933-8.8				
313	9.1048.0004.5	1	A8.4 DIN 125				
314	9.1029.0004.3	1	M8 DIN 934-8				
315	2.3201.0323.0	1					
316	2.3201.0370.0	1					
317	2.3201.0350.0	1					
318	9.1113.0033.4	1	M10x45 DIN 931-8.8				
319	9.1048.0007.1	1	A10.5 DIN 125				
320	9.1030.0004.2	2	M10 DIN 985-8				
321	2.3201.0325.0	1					
322	2.3201.0321.0	1					
323	2.3201.0322.0	1					
324	2.3201.0327.0	1					
325	9.1072.0004.2	2	4x20 DIN 94				
326	9.1072.0003.1	2	4x20 DIN 94				
327	2.3201.2210.1	1	(327 = A+B)				

	Type Number	As From Serial Number
W	2.3202.0000.1	ALL
W	2.3202.0001.1	ALL

STANDARD HYDRAULIC

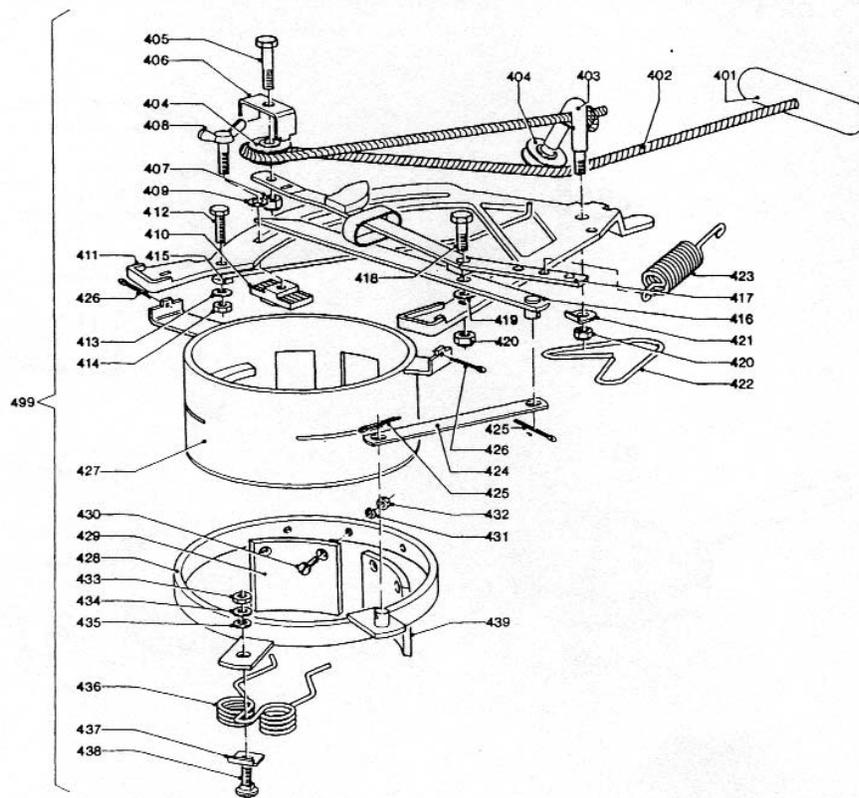


REF.	Part Number	Quantity		REF.	Part Number	Quantity	
301	2.3201.2311.0	1	L= 1810 mm	325	9.1072.0004.2	2	4x30 DIN 94
	4.1016.2120.0	(1)	L= 3050 mm	326	9.1072.0004.1	2	4x30 DIN 94
302	2.3201.2350.0	1		327	2.3201.0270.0	1	
303	9.1113.0149.1	1	M8x35 DIN 931-8.8	328	2.3201.0300.0	1	
304	9.1113.0120.0	1	M10x30 DIN 933-8.8	329	2.3201.02990.0	1	
305	2.3201.2380.0	1		330	9.1060.0010.6	3	M6x20 DIN 63-A
306	2.3201.2410.0	1		331	9.1121.0008.6	3	A6 DIN 127
307	9.1072.0022.6	1	2x12 DIN 94	332	9.10290002.1	3	M6 DIN 934-8
308	9.1062.0005.6	1	M10x30 DIN 316-G-4.6	334	9.1048.0007.1	1	10.5 DIN 125
309	9.1048.0009.3	1	A11.5 DIN 7989	335	9.1121.0004.2	1	A10 DIN 127
310	2.3201.0324.0	1		336	2.3201.0260.0	1	
311	2.3201.0320.0	1		337	2.3201.0261.0	1	
312	9.1113.0014.6	1	M8x20 DIN 933-8.8	338	9.1058.0013.4	1	M10x30 DIN 127
313	9.1048.0004.5	1	A8.4 DIN 125	399	2.3201.2300.0	1	=REF 301-338
314	9.1029.0004.3	1	M8 DIN 934-8				Hydraulic On/Off Device
315	2.3201.0323.0	1					
316	2.3201.0370.0	1					
317	2.3201.0650.0	1					
318	9.1057.0300.5	1	10.5 DIN 125				
319	9.1048.0007.1	1	10.5 DIN 125				
320	9.1030.0004.2	2	M10 DIN 985.8				
321	2.3201.0325.0	1					
322	2.3201.0321.0	1					
323	2.301.0322.0	1					
324	2.3201.0327.0	1					

MASS FEEDRING



	Type Number	As From Serial Number
W	2.3202.0000.1	ALL
W	2.3202.0001.1	ALL



REF.	Part Number	Quantity		REF.	Part Number	Quantity	
401	2.3201.0328.0	1		426	9.1072.0003.1	2	4x20 DIN 94
402	1.1655.0658.0	1	2750 mm (1 m= 9.1163.0004.2)	427	2.3201.2160.0	1	
403	2.3201.0380.0	1		428	2.3201.2180.0	1	
404	2.3201.0326.0	2		429	2.3201.2179.0	1	
405	9.1113.0054.4	1	M12x45 DIN 931-8.8	430	9.1060.0010.6	4	AM6x20 DIN 63-5.8
406	2.3201.0341.0	1		431	9.1121.0008.6	4	A6 DIN 127
407	9.1030.0013.4	1	M12 DIN 985-8	432	9.1029.0002.1	4	M6 DIN 934-8
408	9.1062.0005.6	1	M10x30 DIN 316-G-4.6	433	9.1029.0005.4	1	M10 DIN 934-8
409	9.1048.0009.3	1	A11.5 DIN 7989	434	9.1048.0007.1	1	10.5 DIN 25
410	2.3201.0324.0	1		435	9.1121.0004.2	1	A10 DIN 127
411	2.3201.0320.0	1		436	2.3201.0260.0	1	
412	9.1113.0014.6	1	M8x20 DIN 933-8.8	437	2.3201.0261.0	1	
413	9.1048.0004.5	1	A8.4 DIN 125	438	9.1058.0013.4	1	M10x30 DIN 603
414	9.1029.0004.3	1	M8 DIN 934-8	499	2.3201.2150.0	1	= REF 401-439 On/Off Device for big output
415	2.3201.0323.0	1					
416	2.3201.2190.0	1					
417	2.3201.0350.0	1					
418	9.1113.0132.5	1	M10x50 DIN 931-8.8				
419	9.1048.0007.1	1	10 DIN 125				
420	9.1030.0004.2	2	M10 DIN 985-8				
421	2.3201.0325.0	1					
422	2.3201.0321.0	1					
423	2.3201.0322.0	1					
424	2.3201.2159.0	1					
425	9.1072.0004.2	2	4x30 DIN 94				