GEARMORE INC.

SPREADER

Operation Manual For Model S503VB

February 2005

Form: S503VBspreader.pm7

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WELCOME / INTRODUCTION

We would like to thank you for purchasing an OMB/Gearmore product and we assure you that you have made a good choice, as now you have a very high quality machine. Please follow all instructions contained in this manual for a long and trustworthy machine life.

LIABILITY OF THE PRODUCT -

Our products are built according to Europeans Community regulations (CE rules).
Each machine comes with instructions, spare parts manual and CE Certificate of Conformity.

GENERAL TERMS AND WARRANTY CONDITIONS -

All OMB/Gearmore products have a standard twelve-month warranty from date of delivery, which is validated by invoice or receipt. This warranty shall cover defective parts (upon prior consent of an authorized technician). This warranty will not cover defects due to:

- normal wear and tear of the components
- misuse or use in contradiction with instructions
- neglect of cleaning and maintenance work
- deteriorations due to misuse or improper movement of the machine
- use of spare parts which are not produced by O.M.B. s.r.l.
- repairs or service by unauthorized personnel
- modifications without O.M.B.'s prior written consent
- defects due to carrier's improper movements

All goods (machines, accessories, spare parts) always travel at receiver's risk.
O.M.B. s.r.l. has no obligation to compensate for unsuccessful or insufficient harvest due to a faulty spreader. For the verification of a possible defect, the dealer or the customer must send, at his/her own expense, the parts he/she wants to be replaced under warranty. In case of complaint for defective parts under warranty, O.M.B.'s decision is definitive and irrevocable, and the customer commits himself/herself to accept it without conditions. O.M.B. s.r.l. reserves the right to modify its machines at any time and without notice in advance, and it is not held to modify machines previously sold or already in use.

For any dispute, CUNEO is the only official place of jurisdiction

SPECIFICATIONS

TECHNICAL FEATURES -

MODEL:	273VB	403VB	503VB
Hopper Capacity (Lt.):	200	300	360
Spreading Width:	Up to 12 mt.	Up to 12 mt.	Up to 12 mt.
Third Point Linkage:	ISO 730/I	ISO 730/I	ISO 730/I
Linkage Categories:	1st	1st	1st
Width (mt.):	1.00	1.15	1.20
Height (mt.):	0.95	1.05	1.10
Tare Weight (kg.):	49	54	57
Load Weight (max. kg.):	500	500	500

STANDARD OUTFIT & ATTACHMENTS	273VB	403VB	503VB
Vibro System:	S	S	S
Filter Grid:	S	S	S
Opening and Closure Remote Control:	S	S	S
Deflector to Limit the Spreading Width:	O	O	O
Side Conveyors for Vineyards and Orchards:	O	O	O
Deep Localizers for 273VB, 403VB, 503VB:	O	O	O
Twin Deep Localizer for 273VB, 403VB, 503VB:	O	O	O
Additional Filtering Grid:	O	O	O
S = Standard O = Optional			

REGISTRATION PLATE

Every machine is equipped with a serial number plate which shows:

A) Manufacturer's data

B) Year of production of the machine

C) Model number, which must be quoted for spare parts or explanations

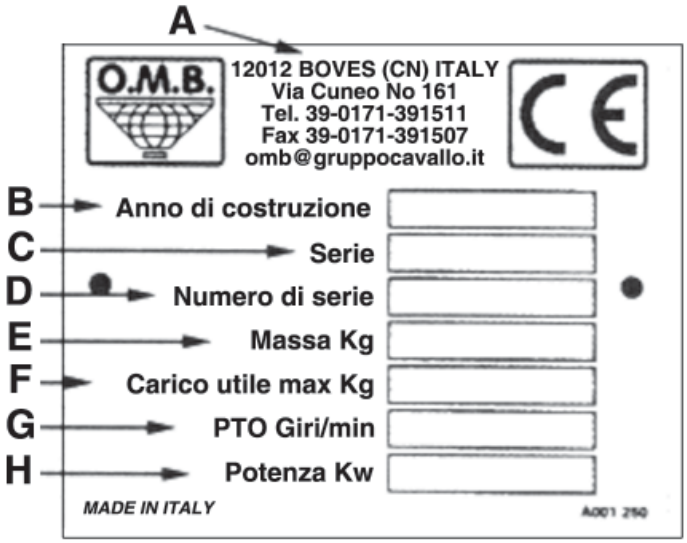
D) Machine serial number

E) Indicates the tare weight of the machine

F) Indicates the maximum load allowed

G) Indicates the speed of the power take-off for standard use

H) Indicates the power absorbed by the machine



Date of Purchase: _____

Model: _____

Serial Number: _____

SAFETY INFORMATION

This machine must only be used and maintained by those who are aware of the dangers. This instruction manual must be read and followed by all personnel using, setting up or servicing the machine.

FIG. 1

Please inform all users of these safety regulations. (***Fig. 1***)

All the pictograms (symbols, warnings, and recommendations), applied to the machine, are meant for your safety and must be replaced if damaged or missing. This machine must be used for its intended purpose **only**. Any other use will void O.M.B.'s liability.

Before any use or maintenance operation, disconnect the power take-off, turn off the tractor engine and the hydraulic control, if installed, then wait until all moving gears have come to a complete stop. (***Fig. 2 - 3***)

FIG. 2

FIG. 3

Never remove or exclude any protection device. All worn and damaged parts, safety covers, and casings must be replaced periodically.

- ❑ After assembling your machine, fix it with the special clips. (***Fig. 4***)
- ❑ Avoid any rotation of the cardan, fixing it with the special chain. (***Fig.5***)
- ❑ **DO NOT** tow anything with your machine. (***Fig. 6***)
- ❑ It is absolutely forbidden to load any object above the hopper maximum capacity and overall dimensions.

FIG. 4

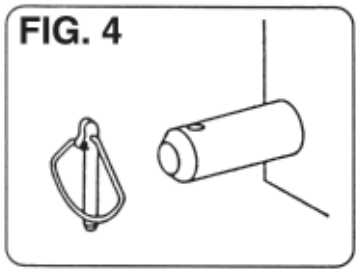


FIG. 5

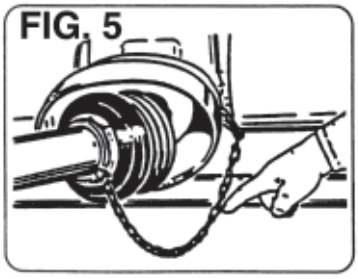
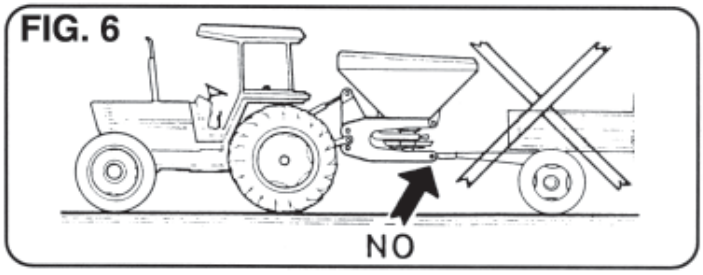


FIG. 6



SAFETY INFORMATION

It is absolutely necessary to empty the hopper before lowering the spreader to the ground.

O.M.B.'s spare parts and attachments have been studied and designed only for our machines. Please be aware that non-original spare parts and attachments are uncontrolled and unapproved. The use of such equipment disclaims the manufacturer's responsibility and invalidates the guarantee. Assembly and/or use of non-original spare parts, due to their different technical features, can modify the performance of your machine.

GENERAL SAFETY REGULATIONS AND ACCIDENT PREVENTION -

WARNING: The machine can be operated only on the spreading location and after checking that no person, animal or other is in its proximity and its entire range (*Fig. 3/b*). Do not allow anyone to stay on the machine during transport or while working (*Fig. 3/c*).

FIG. 3/b

FIG. 3/c

Always disconnect the power take-off when on a road. Before taking the machine onto any road, attach the relative "heavy load" reflective warning plate. When driving on a road, always respect your country's highway code. Furthermore respect all safety regulations: technical, those concerning accident prevention and regarding road transport.

PREPARATION FOR USE

Check the cardan length by carrying out the following instructions:

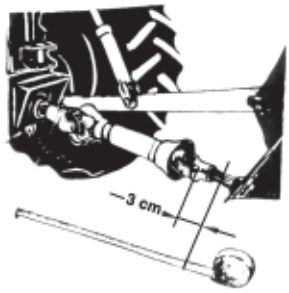
A) Assemble the spreader on tractor. (***Fig. 8***)

B) By using a hydraulic lifting unit, position the power take-off shaft on both tractor and spreader on the same horizontal axis. In this position, insert the cardan onto the two shafts. (***Fig. 9***)

C) If this operation is not possible, please follow the instructions in the next section. (Length adjustment)

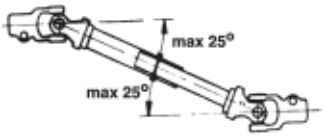
FIG. 8

FIG. 9



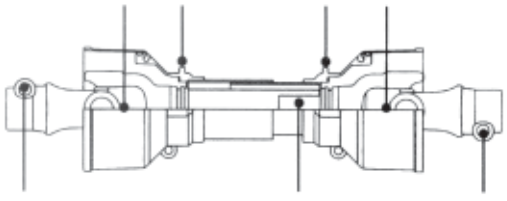
Maximum working angle (***Fig. 10***)

FIG. 10



WARNING: In order to avoid breaking or fracture of forks and braces, the cardan shaft must never exceed an angle of 25° when in use.

WARNING: In case of use of the fertilizer on different tractors, always check the appropriate length of the cardan shaft.



WARNING:
1. Check efficiency and lubricate all parts indicated in figure before using the cardan shaft.

2. Periodically lubricate the cardan shaft joints as indicated in the owners/user manual.

PREPARATION FOR USE

LENGTH ADJUSTMENT -

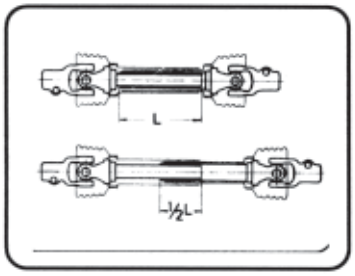
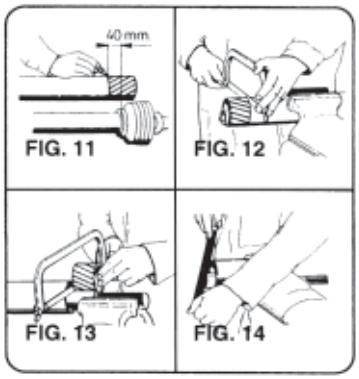


Fig. 11 - To modify the length, adjust the two half shafts to the shortest possible position, then mark the part to be cut off.

Fig. 12 - Shorten the inside and outside protection pipe by the same measure.

Fig. 13 - Shorten the inside/outside sliding profile with the same measure of the protective cover.

Fig. 14 - Accurately remove burrs and chips. Accurately bevel off, clean and lubricate the profiles.

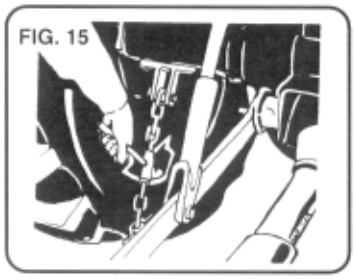


Further modifications to the shafts and its protective cover are not permitted.

USE AND MAINTENANCE -

In order to prevent side oscillations during work, block the lower arms of the hydraulic lifting unit with the stabilizers. (***Fig. 15***) Position the spreader at 75 - 85 cm. from ground at the level of the spreading disc.

After filling the spreader two or three times, check nuts and bolts and tighten if necessary.



LOADING PROCEDURE

The machine shall be loaded only when solidly connected to the three points of the tractor.

WARNING: Serious damage to the spreader can be caused by lack of compliance during this procedure.

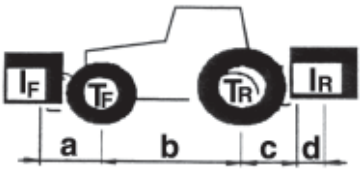
It is necessary to use accessory equipment to load the fertilizer in case the height of manual load exceeds 1250 mm; the height of load is defined as the vertical distance from the upper edge of the hopper or extension and the ground.

STABILITY OF THE COMBINATION TRACTOR/SPREADER -

Due to the weight of the machine itself and the products in the hopper, the combination tractor/spreader may be unstable.

In order to verify the total stability, the following mathematical formula can be applied:

Calculation of the minimum front ballast



$$I_F\,min = \frac{I_R \bullet (c + d) - T_F \bullet b + 0{,}2 \bullet T_E \bullet b}{a + b}$$

Key:
- I_R = Total weight of the trailed machine plus carried product
- T_F = Load on the front axle of the unloaded tractor
- T_R = Load on the rear axle of the unloaded tractor
- T_E = Tare weight of the tractor
- I_F = Minimum front ballast

A = Distance in mt. from the center of gravity of the front ballast and the center of the front axle.

B = Tractor's wheelbase in mt.

C = Distance in mt. from the center of the rear axle and the center of the lower pivots

D = Distance from the center of the lower pivots and the center of gravity of the spreader.

SPREADING CHARTS-INTERPRETATION

All the data given on the spreading chart, and especially the quantity of delivered material result from special practical tests. These tests have been carried out at 540 RPM with horizontal spreading disc at 75-85 cm. from ground. The spreading charts give the quantity of fertilizer per unit of surface, in this case kg/ha, considering parameters such as working width, power take-off speed, tractor speed, and also machine regulations such as height, orientation and feed cylinder opening. The most important data is the quantity of material distributed per unit of time (given in the 2nd left hand column, next to the opening number and expressed in kilograms per minute). However all the data must be considered indicative since there are many factors which can modify the delivered quantity, for example the different physical features of a fertilizer that vary depending on the season of purchase, the supplier, or on weather conditions.

SPREADING OPERATION -

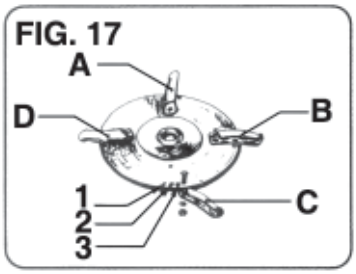
WARNING: When buying a type of fertilizer, please observe manufacturer's indications. Improper use of fertilizers can cause serious damages to people, animals, crops, soil, and can cause water pollution.

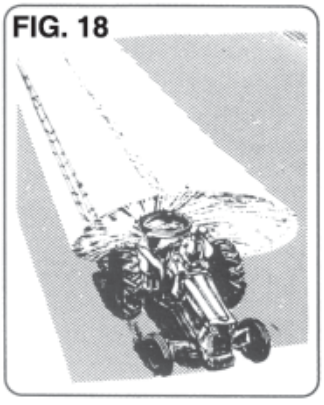
After choosing spreading width, working speed, type of fertilizer and quantity to spread, you can set the desired opening. This is obtained directly from the spreading chart.
Turn the wheel to the desired opening (***Fig. 16, ref. 1***) up to the desired quantity. It is possible to set the vanes moving them to their special positions **1-2-3** (***Fig. 17***) in order to obtain distribution uniformity, both to the right and the left, according to the specific weight of the fertilizer in use.

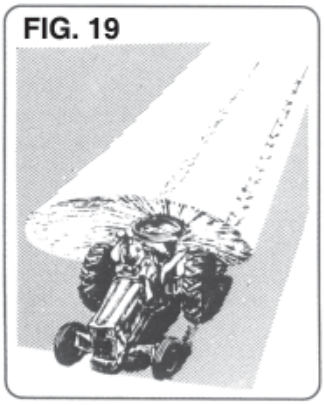
The standard position of the vanes should be as follows:

Vane **(A)** and **(C)** position **2**
Vane **(B)** and **(D)** position **3**

By moving all the vanes to the position **1**, there will be a spreading increase to the left of the driver (***Fig. 18***). By choosing position **3**, there will be an increase to the right of the driver (***Fig. 19***). According to the fertilizers in use, the adjustment depends on the working knowledge of the spreader.

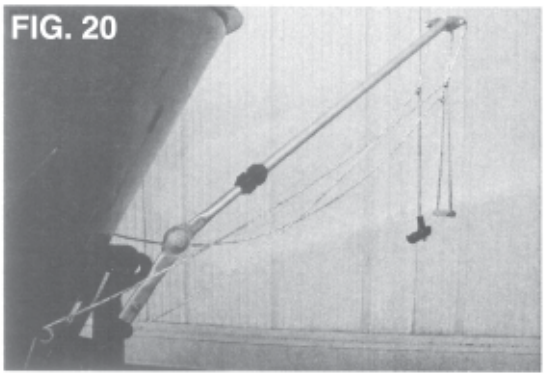




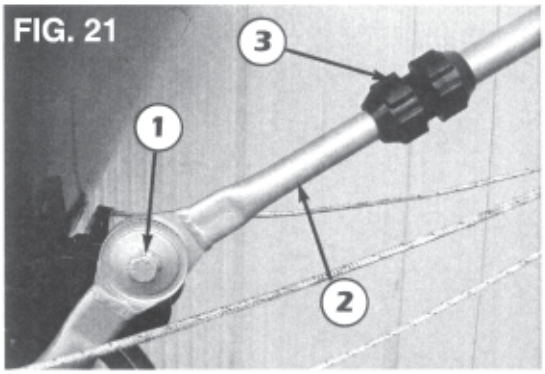


REMOTE CONTROL

Your fertilizer spreader has a remote control for the opening and closing of the dosage doors. This control is worked through a system of ropes and two handles (***Fig. 20***). Two ropes singularly act on the opening, a third rope closes. This control is adjustable to be used on several kinds of tractors. It is possible to incline the support (***Fig. 21, ref. 2***) by acting on the screw and nut (***Fig. 21, ref. 1***); it is also possible to lengthen or shorten this structure by unscrewing the threaded ring (***Fig. 21, ref. 3***).



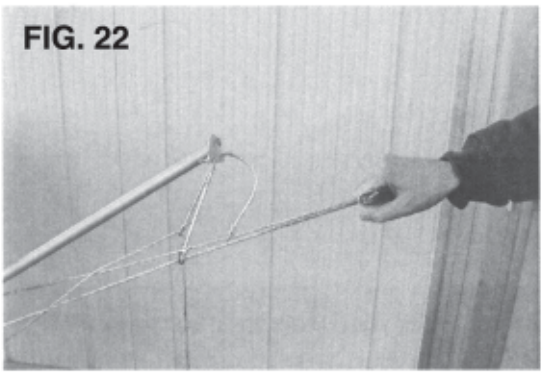
After this operation, screw the threaded ring again (***Fig. 21, ref. 3***).

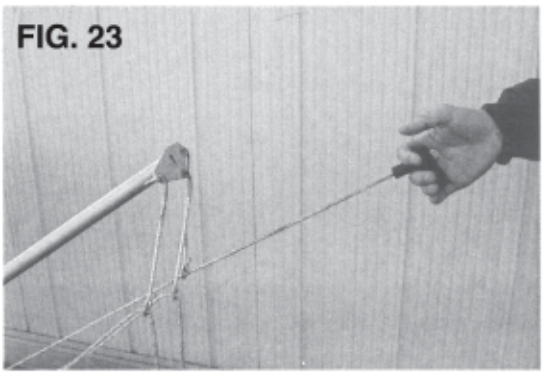


HOW TO PROCEED:

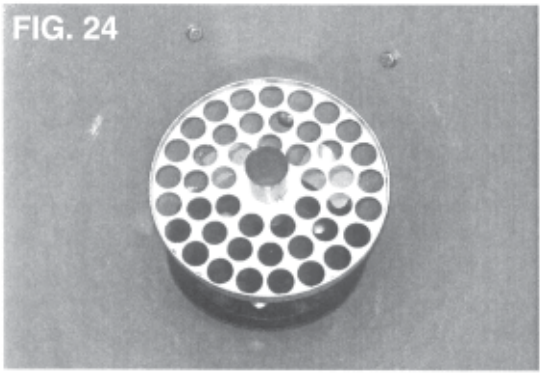
With the power take-off in use, pull the handle connected to the two ropes for the opening (***Fig. 22***) (the doors will stop at the pre-selected opening position), and proceed at the chosen speed.

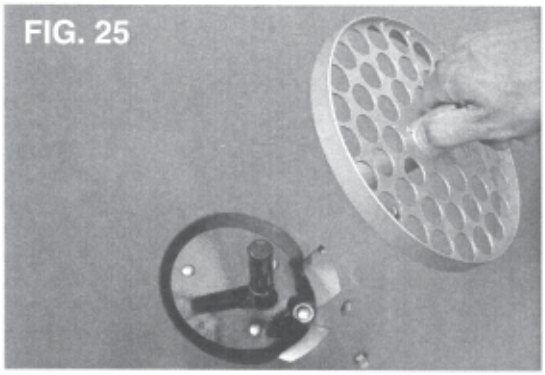
To close, pull the third rope (***Fig. 23***).

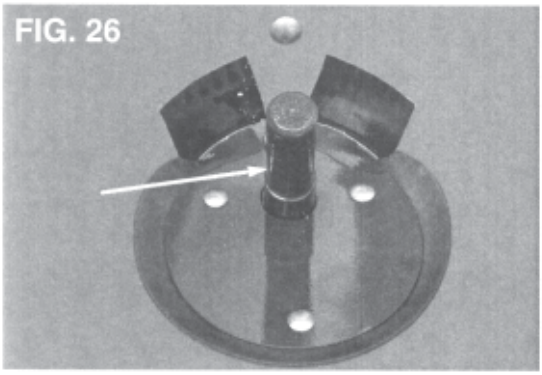


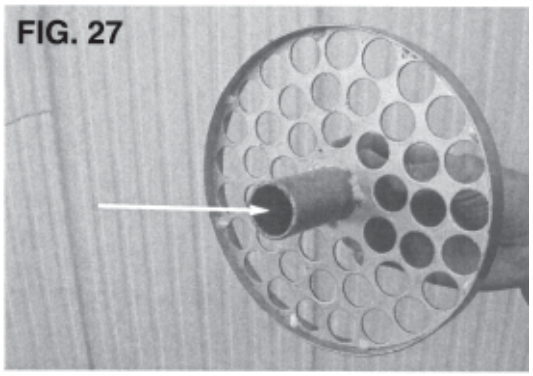


DISTRIBUTION









To distribute near field edges, open only one door.

HOW TO PROCEED:

Example: To distribute near the right edge of a field, position the spreader near the edge and pull only the right rope, which will open only the right door in the direction of travel.

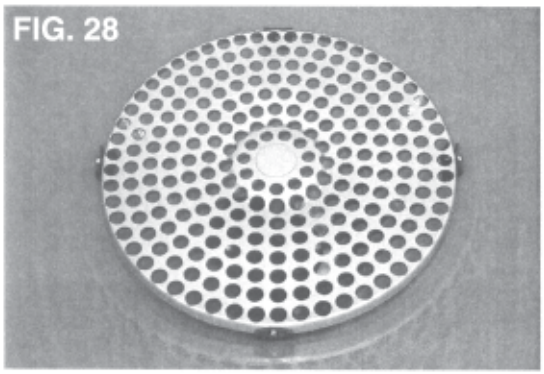
To distribute near the left edge follow the above-mentioned instructions, but in this case you will pull the left rope (direction of travel), which will open only the left door in the direction of travel.

STANDARD GRID OR ADDITIONAL GRID (ON REQUEST)

Your fertilizer spreader has a standard grid (***Fig. 24***) to hold the clots that may partially or totally block the feed doors. To clean the spreader accurately or with special products to distribute, it may be useful to remove it. Pull the grid upwards and it will come out of the central pin (***Fig. 25***).

After using the spreader and after cleaning it, we suggest greasing the central pin and the inside of the grid pipe before re-positioning the grid (***Fig. 26 and Fig. 27***).

To replace the standard grid with that on request (bigger and in an upper position, see ***Fig. 28***), proceed as described above.



DISTRIBUTION

SPREADING ON THE RESIDUAL PART:

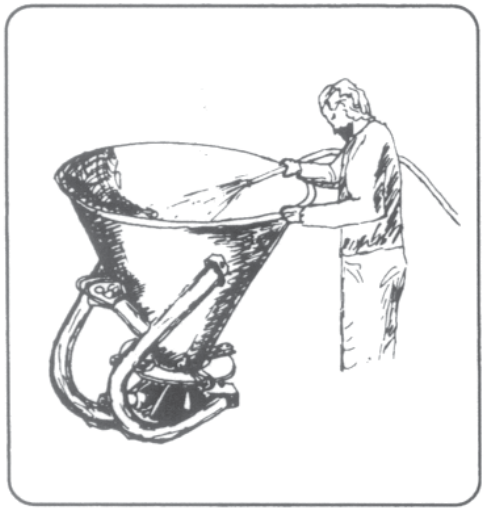
The dimension of a field to fertilize is not always multiple of the chosen working width. The residual part of field can have a smaller width than the one chosen before.

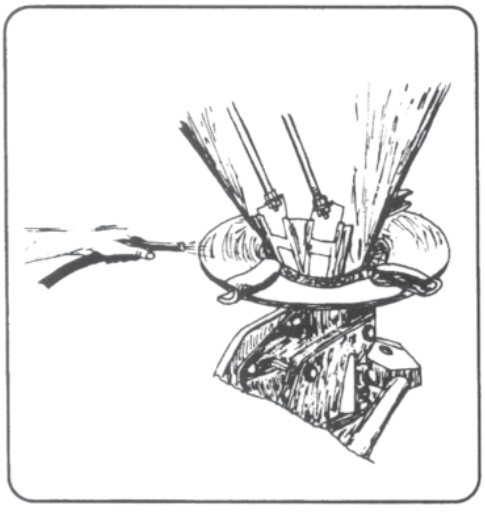
HOW TO PROCEED:

Verify the residual width of the field; refer to the spreading chart again for the fertilizer in use; look for the new spreading width, the batching Kg/ha and the forwarding speed. At this point find the new opening, set it up into your machine and proceed to spread. With this system, it is possible to obtain the best fertilization of the part to treat.

SPREADER CLEANING -

To maintain your spreader in good condition, after each use we suggest a complete wash with a strong jet of water to remove the fertilizer remains.





LUBRICATION

At the end of the season, add 20 gr. of grease to each angle unit, as indicated in ***Fig. 29***.

Furthermore grease after each cleaning as indicated in ***Fig. 30 and 31***.

FIG. 29

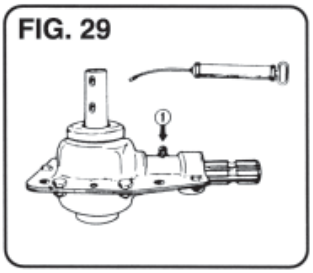


FIG. 31

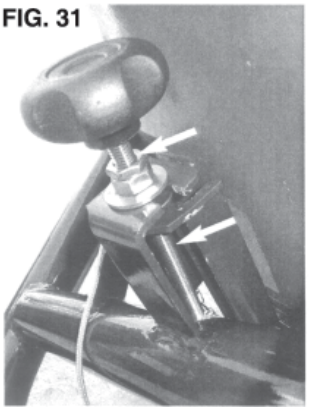
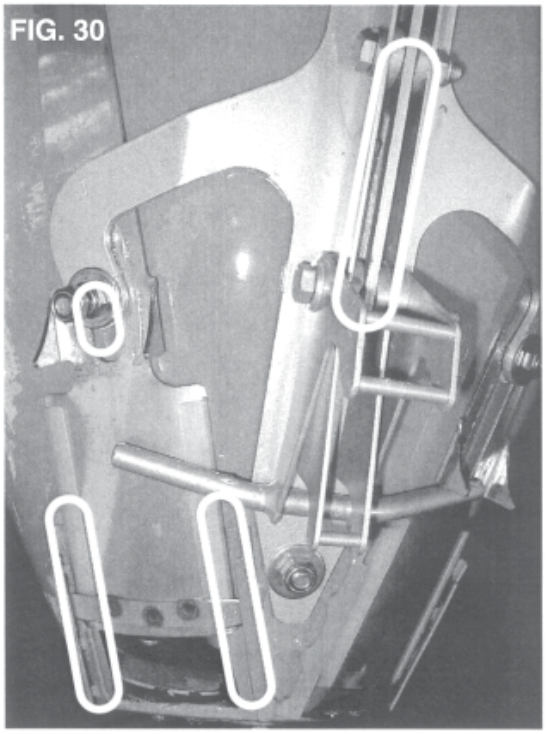


FIG. 30



HOW TO PARK THE SPREADER:

The spreader can be parked on solid and even ground exclusively with empty hopper.

DEMOLITION INSTRUCTIONS:

First remove grease from the angle unit, then proceed to waste disposal both for grease and for iron scrap according to your country's rules. Do not dump your machine.

IMPORTANT ADVICE FOR OPTIMAL FERTILZER SPREADING:

1. Avoid, whenever possible, working in the rain, with high wind or high humidity.
2. Use dry granular fertilizers, without conglomerations.
3. Position the spreader in a perfect horizontal position.
4. Verify the good condition of discs and vanes.
5. Verify and respect the preselected feed speed.
6. Check the rotation speed of the power take-off as indicated.
7. Accurately wash and lubricate your spreader after each use.
8. Constantly verify the good condition of all the components.

LIMITED WARRANTY

GEARMORE INC.

GEARMORE, INC., warrants each new Gearmore product to be free from defects in material and workmanship for a period of twelve (12) months from date of purchase to the original purchaser. This warranty shall not apply to implements or parts that have been subject to misuse, negligence, accident, or that have been altered in any way.

Our obligation shall be limited to repairing or replacement of any part, provided that such part is returned within thirty (30) days from date of failure to Gearmore through the dealer from whom the purchase was made, transportation charges prepaid.

This warranty shall not be interpreted to render us liable for injury or damages of any kind or nature, direct, consequential or contingent, to person or property. This warranty does not extend to loss of crops, loss because of delay in harvesting or any other expenses, for any other reasons.

Gearmore in no way warranties engines, tires, or other trade accessories, since these items are warranted separately by these respective manufacturers.

Gearmore reserves the right to make improvements in design or changes in specification at any time, without incurring any obligations to owners or units previously sold.

GEARMORE, INC.
13477 Benson Ave.
Chino, CA 91710

Always refer to and heed machine operating warning decals on machine.

The serial number of this product is stored in our computer database, thus submitting a warranty registration card is not required.