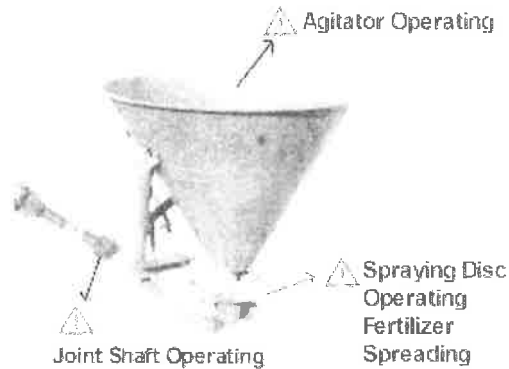


# Rondini SP 500



## 1 - How to use the machine

The spreader cannot be used for other purposes than those ones for which had been designed.

The liability is null and void in case of damages occurred when the machine is used for different applications than those ones specified by the manufacturer.

The way of operating the machine implies also to:

- Follow the operative prescription, maintenance and repair given by the manufacturer,
- The use of original parts and accessories advised by the manufacturer.

The spreader must be operated and repaired by skilled operators who are familiar with the way of using the machine. Said operators must be also aware of the dangers that can arise along the use of the machine.

The operator is requested to strictly follow the rules concerning the:

- accidents prevention
- labour safety rules
- circulation on public roads.

The operator must strictly follow the warnings stuck on the machine.

For whatever modification worked out on the machine by the user or by whatever person without the written permission of the manufacturer, the liability is born by the machine's owner.

**A)** The noise level created by the machine whilst working is less than 80 dB.

Prior operating and setting at work the unit machine-tractor, be sure of its conformity with the rules concerning the safety of labour and the road traffic code.

## **2 - Generality**

1. Strictly follow, besides the instructions reported on the present manual, the rules concerning the safety, and accident prevention prescriptions.
2. The warnings placed on the machine show the indications concerning the safety measures to be taken to prevent accidents.
3. When travelling on public roads strictly follow the traffic rules.
4. Prior starting at work the operator must necessarily get familiar with the controls and operating devices of the machine and their respective functions.
5. Dress in suitable way. Slapping clothes could get entrapped into the moving parts.
6. It is advisable to operate on tractors provided with cabin or with a safety frame according to the running rules.
7. Prior starting the job check if somebody is moving around (children). Try to have enough visibility. Move away any animal or person from the dangerous area of the machine (spreading area).
8. Carrying persons or animals during the job or during the displacements is strictly forbidden.
9. The connection of the machine to the tractor must be performed to the available engagement points according to the running safety rules.
10. Be prudent when engaging or disengaging the machine onto/from the tractor.
11. Prior connecting the machine, be sure that the ballasting of the front axle of the tractor be the suitable one. The ballasting must be performed on the proper brackets according to the specifications of the tractor's manufacturer.
12. Be sure that the load on the tractor front axle does not overcome the authorized one.
13. Strictly follow the maximum clearance gauge when travelling on the public roads.
14. Prior getting into a traffic road provide the machine with working guards and signalling devices (lights, reflex reflectors ... ) imposed by the law.
15. All remote control devices (cables, ropes, rods, flexible lines..) must be positioned in such a way as to prevent to perform manoeuvres which could lead to accidents or damages.

16. Do not leave the operating seat while the tractor is still moving.
17. The speed and the way of driving must always be according to the ground.  
In all cases do not perform sudden direction changes.
18. The steering uniformity, tractor adhesion, road holding and the efficiency of the braking devices are influenced by the following factors: weight and nature of the connected machine, ballasting of the front axle and the state of the ground or the cobblestone paving. It is important then, to follow the prudence rules dictated by each situation.
19. Be cautious when steering taking into consideration the trim, length, height and weight of the machine.
20. Prior using the machine check that all the guard devices are applied and be in good state. Damaged guards must be immediately replaced.
21. Prior beginning the job check the tightening of nuts and, screws and more peculiarly, those which are locking the implements (discs, firms, deflectors..). Tighten them if it were necessary.
22. Do not remain in the operating area of the machine (spreading area).
23. **CAUTION!** Crackings and shearing cases could take place on the remote control devices and in particular way on those hydraulically controlled ones.
24. Prior leaving the tractor seat, or in case of performing jobs on the machine, switch off the engine, remove the starting key and wait for the complete stop of all the moving parts.
25. Do not stand between the machine and the tractor without having applied the tractor hand brake and gear box parking mechanism.
26. Prior performing whatever job on the machine be sure that it cannot be incidentally moved.
27. Prior to loading the fertilizer into the hopper, read the instructions carefully, which are printed in the operator's manual, concerning the precautions to be taken in case of the toxicity and corrosive nature of the product. Prior performing the operation disconnect the power take off, switch off the engine, remove the starting key.
28. **CAUTION!** Do not overcome a lateral grade of 10 -11%. Turnover danger.

### 3 - Connection

1. When connecting or disconnecting the machine to/ from the tractor, place the hydraulic hoisting device lever in such a position as to prevent it to be neither operated nor to be incidentally moved.
2. When connecting the machine onto the three points of the tractor, be sure that forks and pins have the same diameter of the tractor's joints.
3. **Caution!** Around the three connection points, there is a risk of breakage or shearing of the connecting pins.
4. Do not stay between the machine and the tractor when acting the hoisting controlling lever.

5. During the transportation the hoisting arms must be secured by means of stiffening rods as to prevent oscillations and lateral rocking of the machine.
6. When the machine is not to be transported in hoisted position, block the booster controlling lever.

## 4 - Moving Parts

### (P.T.O. and cardan shaft)

1. Always use joint shafts delivered with the machine or those advised by the manufacturer.
2. The guards of the power take off and joint shafts should be always applied and be in a very good state.
3. Check the correct overlapping of the tubes of the joint shafts as well as to be correctly positioned while operating and also during the transportation of the machine.
4. Prior connecting or disconnecting a joint shaft, disengage the power take off and remove the starting key.
5. If the joint shaft is equipped with a torque limiting device or with a back stop, the latter must be absolutely mounted on the power take off of the machine.
6. Be careful when assembling and positioning correctly the joint shafts.
7. Be sure that the guards of the joint shafts are stiffened by means of chains provided for this purpose.
8. Prior engaging the power take off be sure that the selected speed and rotation sense are in accordance with the specifications of the manufacturer. Engage the power take off at engine low speed.
9. Prior engaging the power take off be certain that no persons or animals are staying around the machine.
10. Disengage the power take off when the angular limits of the joint shaft specified by the manufacturer are about to be overcome ( $25^{\circ}$ ).
11. **Caution!** After the disengagement of the power take off, the moving parts can still rotate for certain instants. Do not approach to them.
12. When storing the machine, the joint shaft must be hanged onto the machine by means of a proper chain.
13. After having taken out the joint shaft from the power take off of the tractor, it must be always provided with its guards.
14. In case the guards of the power take off and joint shaft were out of use, replace them immediately.

## **SIZING PTO SHAFT**

### **STEP 1**

Cutting the PTO shaft to length.

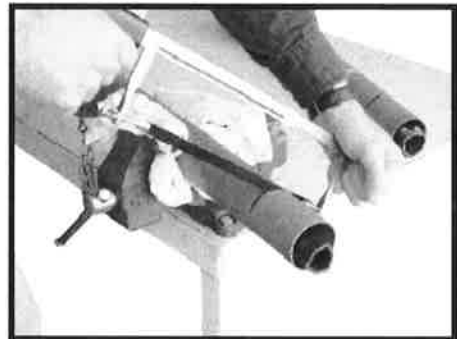
**NOTE:** Be sure to cut equal lengths of each PTO shaft section. Clamp end of PTO shaft in a vice and cut off shield where marked. **(Figure 1-A & 1-B)**



**Figure 1-A**

### **STEP 2**

Using cut section of the shield as a guide cut shaft off the same amount. **(Figure 2)**



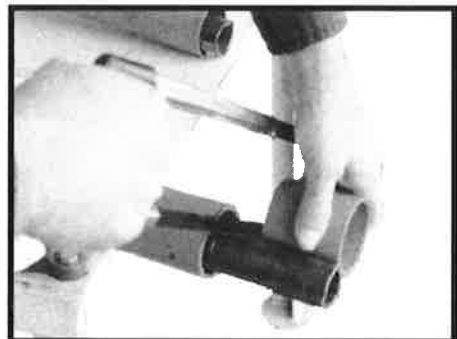
**Figure 1-B**

### **STEP 3**

Repeat steps 1 and 2 for other PTO shaft section.

### **STEP 4**

Use a file to deburr PTO shafts. Clean up all chips, burrs and filings from both ends of the PTO shaft.



**Figure 2**

## 5 - Maintenance

1. Prior performing whatever maintenance or repairing job or when it deals of individuating the origin of a defect or the reason of a working accident, disengage the power take off, switch off the engine and remove the starting key from the panel.
2. Periodically check the tightening of nuts and screws. Tighten them if it were necessary.
3. Prior performing maintenance operations on a machine in raised position prop it by means of proper means.
4. When it deals with the replacement of a part, wear hand gloves and use proper means for said operation.
5. To respect the environment it is forbidden to bum or scatter oils, greases and filters of any kind. Deliver them to specialized services for their salvage.
6. All guards devices subjected to normal wear must be periodically checked. Replace them if it were necessary.
7. The spare parts must be in accordance with the specifications given by the manufacturer. Use originals spares only!
8. Prior performing welding jobs on the connected machine to the tractor, remove the alternator and battery's cables.

## 6 - Setting at Work

### A - Preparation of the machine

#### At the delivery:

- ☒ Check if some parts are missing.
- ☒ Be sure that the hopper is free from foreign matters.
- ☒ The spreader must be used for the designed purposes only.
- ☒ Check for eventual damages occurred during the transportation and no bags or parts are missing. The claims will be taken into consideration if reported at the delivery.
- ☒ Show eventual damages to your transporting agent.
- ☒ In case of doubts or controversies apply to your selling agent.

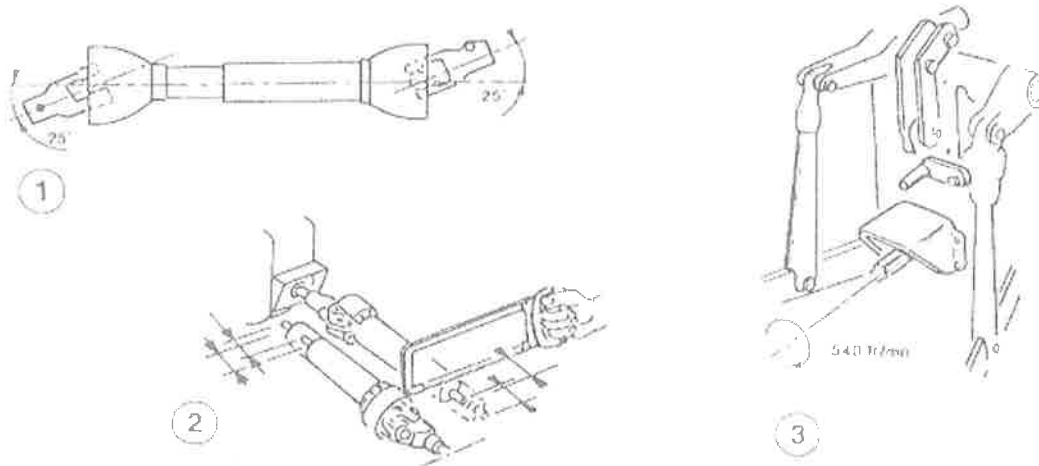
### B - Maintenance

Clean all parts providing of not damaging the gear box, or other parts of the machine.

### C - Transmission (for models working with joint shaft)

Prior using the machine grease the joint shaft.

To preserve the joint shaft in a good working state: (see figure below)



- Do not overcome the joint working angular position of 25° (1). Check that the length of the joint shaft suits your tractor.
- Let a clearance of 3 cm at each end (2).
- The rotation speed must be of 540 r.p.m. (3).

#### D - Connection (for models working with joint shaft)

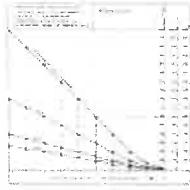
- The spreader must be connected to the three points device.
- The lugs position of machine and tractor must be equivalent.
- Place the spreading disc or the oscillating tube at a distance of 70/80cm and parallel to the ground.

## 7 - Adjustments

### A - Capacity adjustment

- Adjust the lever opening position of the port according to: the quantity to be spread, the tractor speed and the fertilizer used by placing the index from 0 to 10 for models working with spreading disc and from 0 up to 9 for models working with oscillating tube.
- To get a uniform capacity keep a constant forwarding speed.
- Adjustment rules (see diagram or table).

## The Diagram below shows the SP500's Spreading Rate



Click on the image for a large screen view

### B - Width adjustment

The spreader had been designed to get a good fertilizer distribution on the ground. To get good results it is necessary to reach the following conditions:

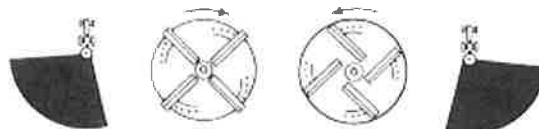
- Keep the power take off rotational speed at 540 r.p.m. (the spreading width is strongly influenced by said speed).
- Keep the machine in horizontal position and the centrifugal disc or oscillating tube at 70/80cm above the ground level.
- Keep the spreading fins and the oscillating tube in a good state.
- The hopper agitator must be replaced if excessively worn.

### Other factors influencing the fertilizer distribution:

- The unit weight of the product and its dimension.
- The specific humidity and the wind.

### To select the distribution, adjust the disc fins position:

- Move them back if the fertilizer is mainly spread towards the left side.
- Move them forward if the fertilizer is mainly spread towards the right side.



## 8 - Maintenance & Preservation



## **A- Washing procedure: advices**

The spreader is an agricultural implement whose maintenance is difficult to perform. It is constantly submitted to the worst conditions:

- Chemical etching: potassium, phosphoric acid, nitrogen.
- Mechanical damages: granulated abrasion, shocks and scoring.
- Weather damages: rain, close to the sea, inclemency of the weather.
- High pressure washing: high pressure and too close to the machine.

## **9 - Suggestions**

### **Before setting at work:**

- Spray a mixture of fuel and oil on the implement and specially on concealed parts and corners without forgetting to perform the operation in a ventilated room or at open air.
- Apply, by means of a brush or greaser a thick grease on the moving parts as joint shafts and spiders.

### **After each work:**

Wash the implement after each work without excessive pressure and without approaching too much the jet to the moving parts (i.e. bearings).

- Dry carefully the implement.

Water + fertilizer = liquid fertilizer = corrosion

- Spray a mixture of fuel and vegetal oil on the implement in a well ventilated room or at open air.
- Grease with brush or greaser the moving parts.

### **At the end of each season:**

- After the washing, drying, spraying and greasing operations, store the implement far from the inclemency of the weather. The oxidation causes serious damages when the implement remain at rest.

### **If cracks and scoring have taken place:**

- Brush them by means of wire brush and smear a rust proof preventer.
- Store the implement on wooden boards.

### **To be checked:**

- Tighten the screws after 10 hours of operation. Tighten them if necessary.
- The state of the wearing parts. Replace them if necessary.
- The oil level for models equipped with gear box filled with oil. Replace the oil

after the first 30 hours of operation and then after each 150 hours of operation by means of SAE 85 W6140 oil.

## 10 - Technical Specifications

<b>Model</b>	SP500
<b>Capacity</b>	350 lt.
<b>Max. Carrying Capacity</b>	480 kg
<b>Loading Height</b>	1,15 mtr
<b>Width</b>	1,20 mtr
<b>Empty Weight</b>	60 kg
<b>Spreading Width *</b>	6 - 14 mtr
<b>Absorbed power HP</b>	8
<b>P.T.O. r.p.m.</b>	540

Please Note: These specifications are subject to change without notification.

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### Accessories Upon Demand

- Spraying limiter
- Dusty fertilizer stirrer
- Remote control
- Lateral spot layer conveyor
- Four rows device

\* According to the fertilizer composition

Pos.	Code	Q.ty	Denomination
1	04.000.01.00	6	Nut M12
2	04.000.02.00	3	Cyl. screw M12x30
3	04.000.03.00	5	Hex. screw M8x25
4	04.000.04.00	4	Spring washer Ø8
5	04.000.05.00	7	Nut M8
6	04.000.06.00	5	Washer Ø14 x 28
7	04.000.07.00	6	Washer Ø8x17
8	04.000.08.00	1	Hex.screw M10x50 8.8
9	04.000.09.00	1	Lever
10	04.002.10.01	1	Lever bracket DG
11	04.000.11.00	1	Hex. screw M12x80
12	04.000.12.00	1	Nylon washer Ø12x48x3
13	04.000.13.00	1	Spring
14	04.000.14.00	1	Self-locking nut M12
15	04.002.15.01	1	L.S shutter DG
16	04.000.16.00	1	Joint external guard
17	04.002.17.01	2	Tie DG
18	04.000.18.00	1	Joint internal guard
19	04.000.19.00	1	Articulated stirrer wheel
20	04.000.20.00	1	Cotter pin Ø4
21	04.000.21.00	2	Joint external fork
22	04.000.22.00	1	Powder articulated stirrer beam
23	04.000.23.00	1	Self-locking nut M10
24	04.150.24.01	1	Spring ring Ø25
25	04.000.25.00	1	Fork with external tube
26	04.000.26.00	1	Fork with internal tube
27	04.150.27.01	3	Allen screw M8x45 8.8
28	04.000.28.00	3	Hand wheel M8x15
29	04.000.29.00	1	Lever stopper
30	04.002.30.01	1	R.S shutter DG
31	04.002.31.01	1	Scaled rod DG
32	04.150.32.01	1	Frame SP 150-250-300-400
32 a	04.150.32.51	1	Frame SP 500
33	04.000.33.00	1	Guard
34	04.000.34.00	2	Hex. screw M8x20
35	04.149.35.01	1	Hopper SP 150 DG
35 a	04.250.35.01	1	Hopper SP 250 DG
35 b	04.300.35.01	1	Hopper SP 300 DG
35 c	04.400.35.01	1	Hopper SP 400 DG
35 d	04.500.35.01	1	Hopper SP 500 DG
36	04.000.36.00	1	Spring pin Ø5x40
37	04.000.37.00	1	Spring pin Ø8x40
38	04.000.38.00	1	Self-locking nut M8
39	04.000.39.00	1	Stationary stirrer
40	04.000.40.00	1	Hex. screw M8x40 8.8
41	04.000.41.00	8	Hex. screw M6x14
42	04.000.42.00	4	Spreader wing
43	04.000.43.00	1	Spreader disc
44	04.000.44.00	8	Spring washer Ø6
45	04.150.45.01	1	Outgoing shaft
46	04.000.46.00	1	Hex. screw M8x45 8.8
47	04.000.47.00	8	Nut M6
48	04.150.48.01	1	Seal ring Ø25x37x5
49	04.150.49.01	2	Bearing 6205
50	04.150.50.01	3	Nut M8 UNI 5588
51	04.000.51.00	1	Powder articulated stirrer
52	04.000.52.00	2	Rubber cap Ø60
53	04.000.53.00	3	Hex. screw M10x110
54	04.150.54.01	1	L.S half box L150
55	04.000.55.00	3	Nut M10
56	04.000.56.00	3	Spring washer Ø10
57	04.000.57.00	5	Washer Ø10x21
58	04.150.58.01	1	R.S half box L150
59	04.150.59.01	1	Ingoing shaft
60	04.000.60.00	2	Spilder
61	04.002.61.00	2	Spring's tie DG
62	04.002.62.00	1	Tie attachment plate DG
-	04.150.70.00	1	Joint assembly
-	04.150.71.01	1	Gear box assembly
-	04.150.72.00	1	Articulated stirrer assembly

