

### **RD** 2250/2700/3000

Lateral and Extended Mounted Rotary Cutter



### Presentation

e appreciate the preference and would like to congratulate you for the excellent choice you just made, since you have acquired a product

manufactured with **BALDAN IMPLEMENTOS AGRÍCOLAS S/A** technology.

This manual will guide you through the procedures required since its acquisition until operational procedures of usage, safety and maintenance.

Certificao

**BALDAN** assures that it has delivered this implement for resale in full and in perfect conditions.

Resale was responsible for the custody and maintenance during the period in its possession, and also for the assembly, retightening, lubrication and overhaul.

During the technical delivery, dealer should guide the user regarding maintenance, safety, their obligations in eventual technical assistance, strict compliance with the warranty term and reading the instructions manual.

Any technical assistance request while in warranty should be made to the dealer from whom you have purchased it.

We reiterate the need for a careful read of the warranty certificate and compliance of all items from this manual, because by doing so you will increase the life of your device.

# Instruction



### **RD** 2250/2700/3000

Lateral and Extended Mounted Rotary Cutter

BALDAN IMPLEMENTOS AGRÍCOLAS S/A. CNPJ: 52.311.347/0009-06

Insc. Est.: 441.016.953.110



Scan the QR Code on the identification plate of your device and access this Instruction Manual online.





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### Baldan Warranty

**BALDAN IMPLEMENTOS AGRÍCOLAS S/A** ensures the dealer normal performance of the implement for a period of six (6) months as of the delivery date on the retail invoice to the first final consumer.

During this period, **BALDAN** undertakes to repair defects in material and/or of manufacture of its liability, including labor, freight and other expenses of the dealer's liability.

In the warranty period, request and replacement of eventual defective parts shall be made to the dealer of the area, who will submit the faulty piece for **BALDAN** analysis.

When this procedure is not possible and the resolving capacity of the dealer is exhausted, the dealer will request the support of **BALDAN** Technical Assistance through a specific form distributed to dealers.

After analyzing the replaced items by **BALDAN** Technical Assistance, and concluding that it is not a warranty, then the dealer will be responsible for the costs related to the replacement; as well as material expenses, travel including accommodation and meals, accessories, lubricant used and other expenses arising from the call out to Technical Assistance, and **BALDAN** company is authorized to carry the respective invoice in the name of the resale.

Any repair carried out in the product within the dealer warranty deadline will only be authorized by **BALDAN** upon previous budget presentation describing parts and workforce to be executed.

The product is excluded from this term if it is repaired or modified by representatives not belonging to the **BALDAN** dealer network, as well as the application of non-genuine parts or components to the user's product.

This warranty is void where it is found that the defect or damage is caused by improper use of the product, failure to follow instructions or inexperience of the operator.

It is agreed that this warranty does not cover tires, polyethylene tanks, cardan shafts, hydraulic components, etc., which are equipment guaranteed by their manufacturers.

Manufacturing and/or material defects, object of this warranty term, will not constitute, under any circumstances, grounds for termination of a purchase agreement, or for indemnification of any nature.

Baldan reserves the right to change and/or perfect the technical characteristics of its products, without previous notice, and without obligation to proceed in the same way with the products previously manufactured.



### General Information

To the owner

**BALDAN IMPLEMENTOS AGRÍCOLAS S/A** is not responsible for any damaged caused by accident due to usage, transportation, or in the improper or incorrect transportation of its implement, whether by negligence and/or inexperience of any person.

Only people with complete knowledge of the tractor and the implement should carry their transportation and operation.

BALDAN is not responsible for any damaged caused in unpredictable or unrelated situations to the normal use of the implement.

The incorrect handling of this equipment may result in severe or fatal accidents. Before starting the equipment, carefully read the instructions contained in this manual. Make sure that the person responsible for the operation is instructed as the correct and safe handling. Also make sure that the operator has read and understood the instructions manual of the product.



NR-31 - SAFETY AND HEALTH AT WORK IN AGRICULTURE, LIVESTOCK FORESTRY, FOREST EXPLORATION, AND AQUACULTURE.

This Regulatory Standard has the purpose of establishing precepts to be observed in the organization and work environment, compatible to the planning and development of agriculture, livestock, forestry, forest exploitation and aquaculture with safety and health and work environment.

MR. OWNER OR OPERATOR OF THE EQUIPMENT. Read and carefully comply with provisions of NR-31.

For more information, refer to the site and read in full NR-31. http://portal.mte.gov.br/legislacao/normas-regulamentadoras-1.htm

O8 RD



### Safety Rules

To the operator



THIS SYMBOL INDICATES IMPORTANT SAFETY WARNING. IN THIS MANUAL, WHENEVER YOU FIND IT, READ THE FOLLOWING MESSAGE CAREFULLY AND PAY ATTENTION TO THE POSSIBILITY OF PERSONAL ACCIDENTS.

### **!** ATTENTION



Carefully read the instructions manual to learn about the recommended safety practices.

### **ATTENTION**



Only start to operate the tractor when you are properly seated and with the seat belt locked.

### **ATTENTION**



Do not transport people or equipment on the tractor.

### **ATTENTION**



There are risks of severe injuries due to tipping when working in sloped terrains.

Do not over speed.

### **ATTENTION**



Do not work with the tractor if the front has insufficient ballast to the rear equipment. Should there be a trend to lift, add weights or ballasts to the front or the front wheels.

### **ATTENTION**



Before performing any maintenance in your equipment, make sure it is properly stopped. Avoid being run over.



### Safety Rules

### **ATTENTION**

FOLLOW ALL RECOMMENDATIONS, WARNINGS AND SAFE PRACTICES RECOMMENDED IN THIS MANUAL, UNDERSTAND THE IMPORTANCE OF YOUR SAFETY. ACCIDENTS MAY LEAD TO DISABILITY OR INCLUDING DEATH. REMEMBER, ACCIDENTS CAN BE AVOIDED!

### **ATTENTION**



When transporting the RD, do not exceed the 16Km/h or 10 MPH speed, avoiding risk of damages and accidents.

### **ATTENTION**





When working with RD, do not exceed the 4 km/h or 4 MPH speed, avoiding risk of damages and accidents.

### **ATTENTION**



Remove the ignition key before performing any maintenance on the RD. Protect yourself from possible injury or death caused by suddenly starting the RD.

If the RD is not properly engaged, do not start the tractor.

### ATTENTION



Always maintain places of access and work free of residues such as oil or grease to prevent accidents.

### **ATTENTION**



Before beginning the work or transportation of RD, check if there are people or blockages close to it.

### ⚠ A

tools.

### **ATTENTION**



Do not perform adjustments when RD is in operation. When doing any service on the RD, turn off the tractor first.
Use appropriate



### Safety Rules

### **ATTENTION**



There are risks of injuries or death to the rotary cutter operator and surrounding people during operations for the following reasons:

- -Body contact with rotating blades.
- -Engagement of the body in the drive shaft and rotary shaft.

### **ATTENTION**



Dispose residues inappropriately affects the environment and the ecology since you

will be polluting rivers, canals or the soil. Inform yourself about the proper way of recycling or disposing residues.

#### PROTECT THE ENVIRONMENT!

### **ATTENTION**

To prevent intoxications, injuries or death when the rotary cutter is running and its blades are spinning, proceed in the following manner:

- Stop and turn the equipment off if there are people under 50 meters.



- Do not place hands or feet under the chassis. Contact with blades can cause serious injury or death.



 Never allow people to stand or get under the rotary cutter.



RD may release fragments or release objects at high speeds which can cause serious injury or death to nearby people.



### Safety Rules

PPE Equipment



DO NOT WORK WITH RD WITHOUT FIRST PUTTING PPES (SAFETY EQUIPMENT) ON. IGNORING THIS WARNING MAY CAUSE DAMAGES TO HEALTH, SEVERE ACCIDENTS OR DEATH.

When performing certain procedures with **RD**, put the following PPEs (Safety Equipment) on:





### **O** IMPORTANT

Safe practice should be performed in all work steps with RD, thus avoiding accidents such as objects impact, fall, noises, cuts and ergonomics, that is, the person responsible for operating RD is subject to internal and external damages to its body.

**OBSERVATION** 

All PPEs (Safety Equipment) should have certificate of authenticity.











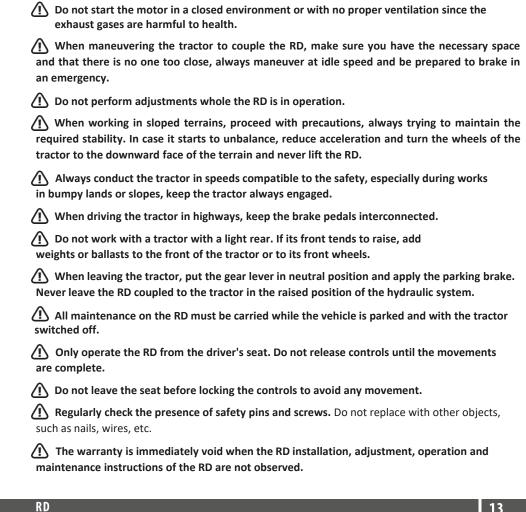






controls in neutral position.

### Wamings



When operating the RD, do not allow people to stay too close, inside it or on it.

(!) When starting the tractor motor, be properly seated in the operator seat and aware of the complete knowledge of correct and safe handling of both the tractor and RD. Always put the gear shift in neutral position, unplug the power take-off gear switch and place the hydraulic

When performing any maintenance service, wear PPE.

!\ Do not wear too loose clothing as they may get caught in RD.

know how to properly operate it.

safety, operation and affect service life.



### Warnings

Unqualified persons and children are prohibi	ted from operating the RD.
Always check if the RD is in perfect usage of interfere in the RD operation, arrange due maint	conditions. In case of any irregularity that may tenance before any work or transport.
Maintenance and especially inspection in t trained and qualified worker, respecting all sa disconnect all RD drive systems.	
Periodically check all RD components before	using it.
① Due to the equipment used and work of precautions are required. Baldan does not have the owner's responsibility to put into practice the	•
Mhen transporting the RD, drive at speeds con 16Km/h, since it reduces maintenance and, there	
1 Do not approach the moving distributors disc	cs.
Alcoholic beverage or some medications may physical conditions. For this reason, never operathese substances.	cause loss of reflexes and change the operator's te this equipment under the influence any of
(1) Read or explain all the procedures of this ma	nual to the operator who cannot read.
	In case of doubts, refer to Post-Sales.

Do not travel on highways especially at night. Use warning signs throughout the course.

If traveling with the RD on highways is necessary, first consult with traffic agencies.

Do not allow the RD to be used by people who have not been trained, that is, who do not

The transportation of people on self-propelled machines and implements is forbidden.
Alterations of the RD's original characteristics are not authorized since they may change

(1) Carefully read all safety information in this manual and in the RD.

Do not transport or work with the RD around obstacles, rivers or streams.

RD

Telephone: 0800-152577 / E-mail: posvenda@baldan.com.br

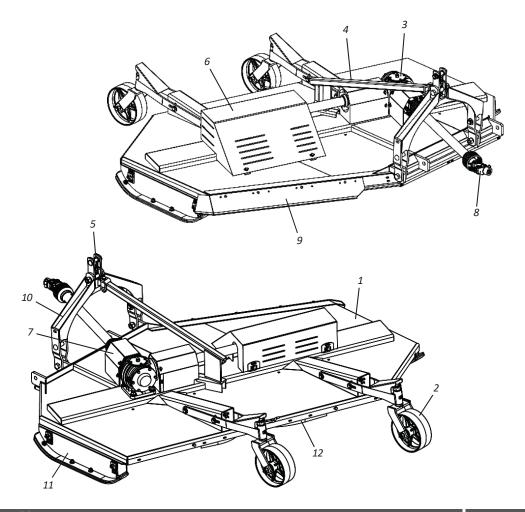


### Components

#### • RD - Lateral and Extended Mounted Rotary Cutter

- 1. Blade protection box
- 2. Back depth wheel
- 3. Multiplier box.
- 4. Head bracing
- 5. Hook Shackle
- 6. Front guard

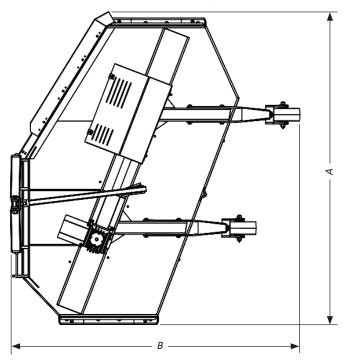
- 7. Protection plate
- 8. Cardan
- 9. Front guard
- 10. Coupling head
- 11. Cutting regulation shoe
- 12. Deflector plate

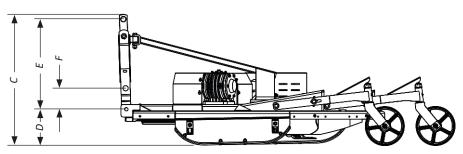




### ■ <u>Dimensions</u>

• RD - Lateral and Extended Mounted Rotary Cutter





Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
RD 2250	2631	2377	1051	275	738	172
RD 2700	2981	2746	1068	275	738	172
RD 3000	3235	2892	1063	275	738	172



### Specifications

### • RD - Lateral and Extended Mounted Rotary Cutter

Model	Blade NS	Cutting Width (mm)	Cardan Length (mm)	Wheels	App. Weight (Kg)	Tractor Power (HP)
RD 2250	4	2250	350 - 850	1	650	65
RD 2700	4	2700	350 - 850	2	760	75
RD 3000	4	3000	350 - 850	2	860	85

Cutting height	50 - 200 mm
PTO RPM	540
Blade RPM	1038

Baldan reserves the right to change and/or perfect the technical characteristics of its products, without previous notice, and without obligation to proceed in the same way with the products previously manufactured.

Technical specifications are approximate and informed under normal work conditions.

#### INTENDED USE OF THE RD

- -The **RD** was developed for high yields of the most diverse types of mowing in the most varied vegetation.
- The **RD** should only be driven and started by a properly instructed operator.

#### **NON-ALLOWED USE OF THE RD**

- -To avoid damage, serious accidents or death, do NOT transport people on other part of **RD**.
- -The **RD** may not be used to couple, tow or push other implements or accessories.
- -The **RD** should NOT be used by an inexperienced operator who does not knows all the driving, command and operation techniques.

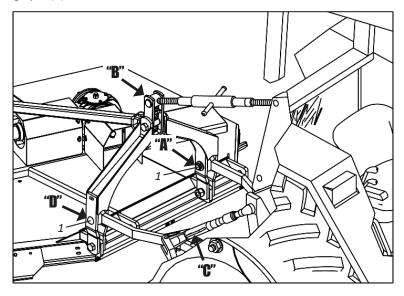


#### Hitch

Before coupling the **RD**, check if the tractor has front or rear weight or ballast sets in its wheels to avoid overturning. Rear wheels will give greater stability and soil traction to the tractor.

#### · Tractor Hitch

- 01- Slowly approach the tractor to the RD in reverse, being aware when to use the brakes.
- **02** Then, use the hydraulic position control lever as you approach the **RD**, leaving the left lower arm at the level of rotary cutter hitch.
- 03 Engage the lower left arm of the tractor through the engaging pin (1) on the "A" bracket of the RD
- 04 Hitch the 3rd point of the tractor in the "B" support of the RD.
- 05 Then, using the adjusting lever "C", engage the lower right arm of the tractor in through pin (1) into the "D" bracket of the RD.





When lifting the tractor hydraulics, check the hydraulic height limit so that the tractor does not touch the top of the blade guard. Hydraulic lift varies according to the tractor model.

**OBSERVATION** 

When hitching the RD up, look for a safe and easily accessible place, always use low gear with low acceleration.



#### Hitch

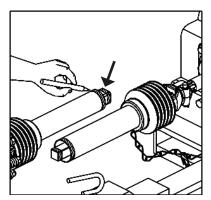
Before engaging the cardan, check the length of the tractor with respect to the tractor model that will pull the rotary cutter.

#### · Cardan length adjustment - Part I

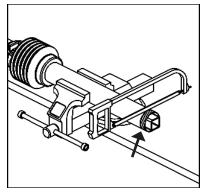
### IMPORTANT

Before cutting the cardan, check the adjustment of the tractor's drawbar, which can increase or decrease its compliance, avoiding the cardan cut.

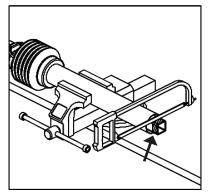
To perform the cardan cut, proceed as follows:



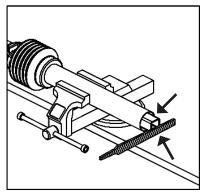
Secure the shaft halves from the shaft close to each other in the working position and mark the part to be cut.



Shorten the inner and outer guards of the cardan proportionally.



Cut the inner bars of the cardan in the same length as the protective tubes.

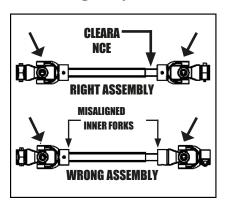


Remove all burrs and edges. Clean and grease the cardan bars.

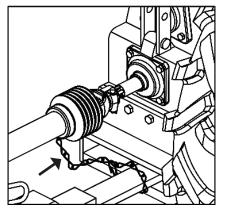


#### Hitch

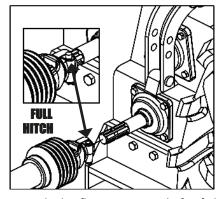
· Cardan length adjustment - Part II



When assembling, observe that the internal and external terminals are always in the same plane, aligned. Also check the clearance on the telescopic axle, which should be of 5 to 7 cm.



Do not connect the cardan chains while they are stretched. Keep a gap in the installation and consider angular movements.



Attach the flange to TDP shaft of the tractor observing that the engagement will only be completed when lock (1) springs out.

### **O** IMPORTANT

Every time you change the tractor, check the cardan shaft length again.

### **OBSERVATION**

Check the cardan joint angle on page 29 and other recommendations for using it.



Incorrect mounting of the cardan causes excessive vibration, which is harmful to the transmission.

When engaging the cardan in the TDP, the tractor must be switched off with the parking brake applied.

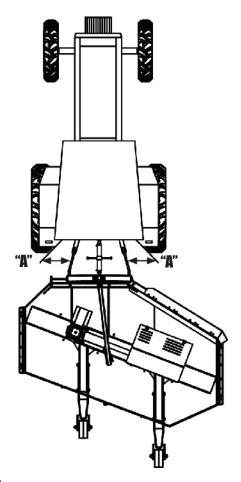


### Adjustment

Centralization

To center the **RD** relative to the longitudinal axis of the tractor, proceed as follows:

- 01 Align the top link of the RD with the 3rd point of the tractor.
- 02 Then lift the RD completely.
- **03** Next, check that the distances "A" of the lower hydraulic arms are equal to the tractor tires. The lower arms should be level with each other.





Never adjust the tractor's lower hydraulic arms with the RD down.

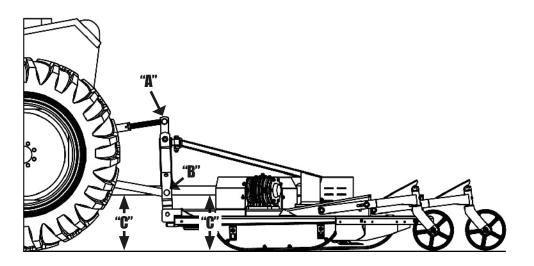


### Adjustment

Leveling

To level **RD** in relation to the longitudinal axis of the tractor, proceed as follows:

- 01 First off, the tractor must be in a flat location.
- **02** Then, through the upper arm "A" and lower right "B", which have adjustments, level the RD as per letter "C".





Check the clearance on the cardan, which should be of 5 to 7 cm. If there is no gap, adjust the length of the gimbal as instructed on pages 19 and 20.



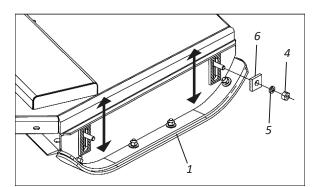
### Adjustment

### Cutting height adjustment

The cutting height of the **RD** is regulated by the side shoes (1), rear wheels (2) and front wheel (3). To adjust the cutting height, proceed as follows:

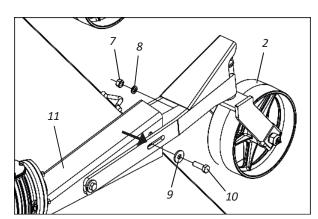
#### **SIDE SHOES**

- 01 Loosen the nuts (4), lock washers (5), and grooved plates (6).
- 02 Then adjust the side shoes(1) by positioning them at the desired height.
- 03 Then, retighten the grooved plates (6) through lock washers (5), and nuts (4).



#### **REAR WHEEL**

- **04** After regulating the side shoes (1), loosen the nuts (7), pressure washers (8), flat washer (9), and remove screws (10).
- **05** Then adjust the rear wheel (2) by positioning it at the desired height through the bracket bore hole (11).
- **06** Then replace the bolts (10), plain washers (9), locking washers (8) and nuts (7) by tightening them.





We recommend a cutting height of at least 50 mm above the ground.

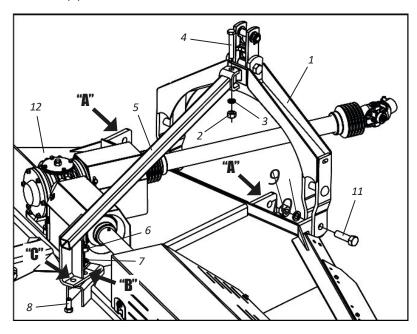


### Adjustment

#### · Working Position - Part I

The **RD** can work in the center and side position in relation to the tractor. To adjust head position (1), proceed as follows:

- 01 Loose the nut (2), lock washer (3), screw (4) that secures the holder (5) in the head and also the nut (6), lock washers (7), and screw (8) from bracket base (5), and they do not need to be removed.
- **02** Then remove the nuts (9), lock washers (10), screws (11) and move the header (1) (1) to bracket "A" of the blade guard box (12).
- 03 Then replace the screws (11), lock washers (10) and nuts (9) by tightening the head.
- **04** Then, retighten the nut (2) and lock washer (3), and screw (4) that secures the bracket in the head (1) and also the nut (6), lock washer (7), and nut (5) from the bracket base (5).





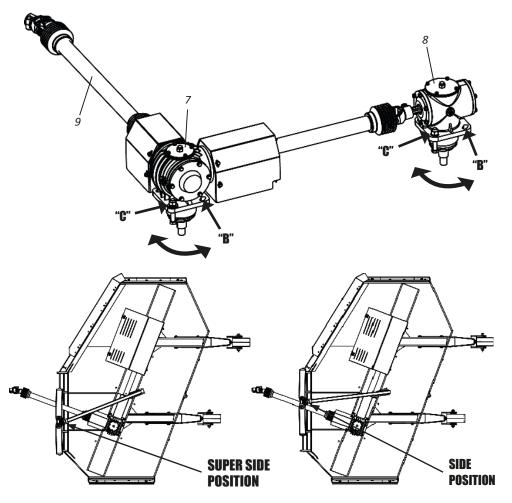
SIDE Position In this position, screw (8) must be inserted into hole "B" to fix the base of the support (5) to the guard box of the blades (12). SUPER SIDE Position: In this position, screw (8) must be placed into hole "C" to secure the base of the support (5) in the guard box of the blades (12).



### Adjustment

### Working position - Part II

The speed multiplier gearbox (7) and the transmission gearbox (8) have oblong holes "B". When positioning the head bracket in the super lateral position, if necessary, loosen the screws "C" and turn the multiplier gearbox (7) and the transmission gearbox (8) to better position the cardan (9).



**OBSERVATION** 

Check the cardan joint angle on page 29 and other recommendations for using it.



### Adjustment

#### · Working position - Part III

For measurements exceeding the right side of the tractor using the **RD** in the center or side positions, use the formula below.

Formula: A - C = X

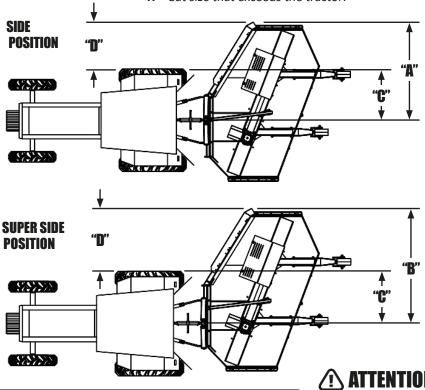
B - C = X

**Data:** A = Dimension of the center of the **RD** header in the center position until the end of the cut.

**B** = Dimension of the center of the **RD** header in the side position until the end of the cut.

**C** = Dimension of the tractor 's rear wheel divided by 2.

X = Cut size that exceeds the tractor.



Central Side Position Moving between Model Position "A" "B" "A" and "B" **RD 2250** 1579 1852 273 **RD 2700** 2107 274 1833 **RD 3000** 2009 2284 275

Measurements "C and D" vary from tractor to tractor due to different gauge sizes.

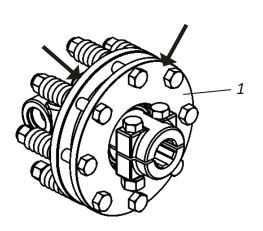


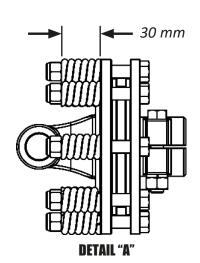
### Adjustment

#### · Friction - Part I

Friction is factory set and no adjustments are required before using the **RD**. When overload is found, friction starts, and the work should be stopped immediately by lifting the **RD**.

- The recurrence of friction, after some time of use and without overloading, indicates the need to adjust friction due to wear on the discs (1).
- It is important to maintain a 30 mm adjustment in the springs as shown in **detail "A"** to compensate for wear on the discs (1) and to maintain proper friction operation.



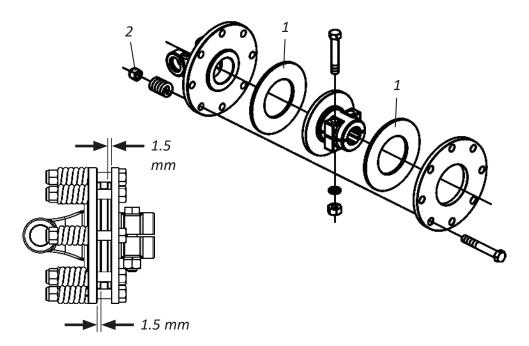


- When the mechanic (or trained person) performs the clutch adjustment in the field, it must be careful not to tighten the springs excessively, because **BLOCKED CLUTCH** will occur, which interrupts clutch function, providing risk of cracks in pinions, crowns, shafts, crosses and even in the TDP of the tractor.
  - How to adjust in the field.
- **01** Make a visual evaluation of the components of the clutch (discs, springs, etc.).
- 02 Then tighten the springs equally, one by one, approximately 1/3 of a turn.
- 03 Repeat this procedure every time the clutch starts activating continuously.



### Adjustment

- · Friction Part II
- Setting the spring height to keep the factory-set clutch may not be the best way to do the evaluation, since the sets have particular variables that can distort results.



### **ATTENTION**

If the RD is idle for a while in an open area, the clutch must be removed and cleaned before returning to work. Friction discs may lock and not work when in direct contact with the other components of the clutch. Check the post-installation instructions on p. 42.

### IMPORTANT

Discs (1) must be replaced as soon as they become 1.5mm thick or before larger damage. To do so, loose the nuts (2) and disassemble the friction.

### **OBSERVATION**

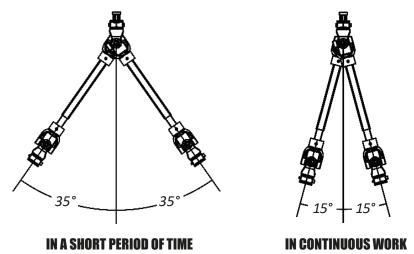
If a large volume of vegetation is encountered or if there is excessive cutting resistance, decrease the working speed or try to cut on a narrower range.



### Operations

#### Cardan recommendations

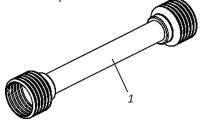
The cardan is limited in its maximum angle of articulation. This angle, with a running cardan, can reach a maximum of 35° for a short period of time. In continuous work, it should not exceed 15°.



### **ATTENTION**

Never engage to TDP when the joint is at an angle greater than 15°. When maneuvering with TDP off, never exceed the pivot angle of 35 degrees, this may occur in transportation routes or maneuvers in warehouses with the coupled cardan.

Safety protection (1) is a fundamentally important component for the user's personal safety and for the cardan shaft's lifespan.





Do not work with the RD if the cardan is not guarded (1). Ignoring this warning may cause severe accidents or cardan damages.

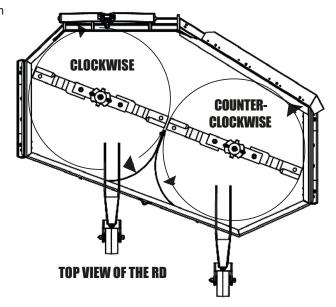


### Operations

#### · Direction of rotation of the blades.

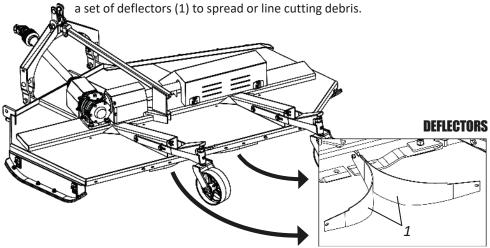
The RD has 4 equal blades where two blades rotate clockwise and two rotate

counterclockwise. This system facilitates cutting of the vegetation, which laid down by the set (tractor and rotary cutter) taking it to the opposite direction by cutting and expelling it without dicing it, forming a dead cover.



#### Deflectors - Part I

With the clockwise and anti-clockwise rotation of the blades, the **RD** is provided with



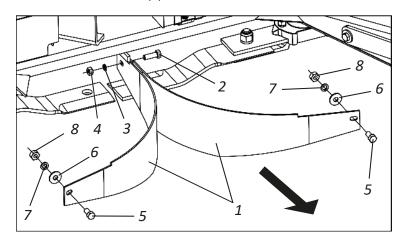


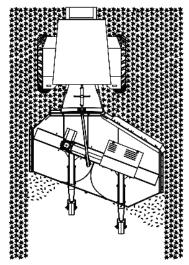
### Operations

#### · Deflectors - Part II

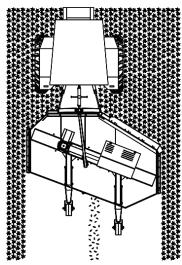
In order to remove the deflectors (1), proceed as follows:

- 01 Loosen the screw (2), lock washer (3), and nut (4).
- 02 Loosen the screws (5), flat washers (4), pressure washers (5), and nuts (8).
- 03 Then remove the deflectors (1).





RD IN OPERATION WITH DEFLECTORS (CUTTING DEBRIS SPREAD)



RD OPERATION WITHOUT DEFLECTORS (CUTTIN DEBRIS ARE LINED)



### Operations

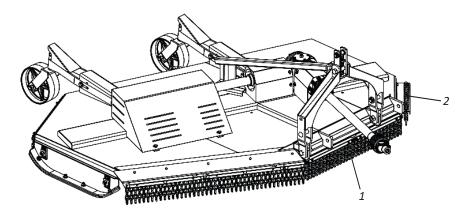
- Recommendations for the operation
- 01 Before starting to work, thorough review the RD. It should be completed the oil level of the multiplier, and retighten nuts and screws. Also check the locking of pins and cotter pins.
- 02 The ideal work rotation is 540 rpm for TDP. Check the corresponding rotation on the motor, in the tractor manual. This rotation on the traction motor changes from tractor to tractor.
- 03 For best performance, we recommend a cutting height of at least 50 mm above ground.
- **04** To ensure a good work result, the terrain to be cleared must be free of stones and stumps.
- 05 First, put the blades in operation and then start cutting the vegetation.
- **06** Do not connect to TDP with blades caught in dirt mounds, sticks, or stumps, as objects may be projected and cause serious injury.
- 07 During work, maintain a constant motor rotation, avoiding the average speed variation of the tractors in order to prevent inefficiency or product distribution failures.
- 08 To engage or uncouple the cardan, the TDP must be switched off.
- 09 During work do not vary the speed of the tractor, as this causes inefficient cutting. Keep an average speed throughout the work. Recommended average speed is 4 to 6 km/h.
- 10 In excessively corrugated soils, adjusting the cutting height should prevent the blades from excessively touching the ground.
- 11 The lower arms of the tractor must be adjusted with the RD fully raised.
- **12** In high density vegetation, we recommend the use of reduced gear, maintaining the rotation in the **TDP at constant 540 rpm**.
- 13 When transporting or performing maintenance/inspection, keep the power outlet off.
- 14 Stop and turn the equipment off if there are people under 50 meters.

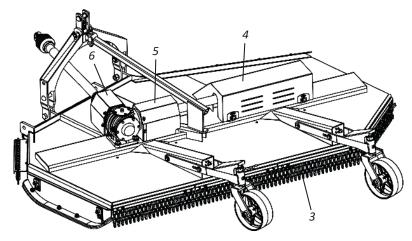


#### Maintenance

#### Front, rear and side shields

Always check the conditions of the front (1), side (2), rear (3) guards, box front guard (4), clutch guard (5) and cardan guard (6) before using the **RD**. In the event of a break or loss of any of these protections, they must be replaced or replaced immediately to avoid serious accidents or death during work.







Do not work with the RD without the front (1), side (2), rear (3) guards, front box guard (4), clutch guard (5) and cardan guard (6). Ignoring these warnings may cause severe accidents or death.

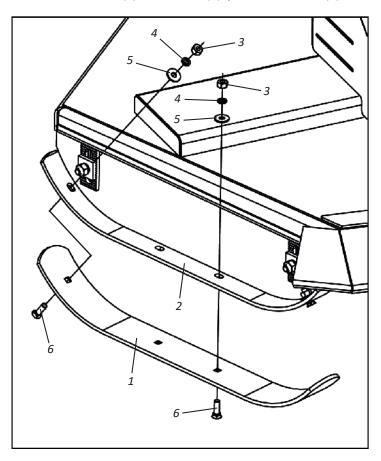


#### Maintenance

#### · Replacement of side shoe guide plates

Check periodically the guide plates (1) of the side shoes (2) of the **RD** for wear, and replace them if necessary. To adjust the guide plates (1), proceed as follows:

- 01 Loosen the screws (3), pressure washers (4), flat washer (5) and screws (6).
- 02 Then replace the guide plates (1).
- 03 Then secure it with screws (6), flat washer (5), pressure washers (4) and screws (3).





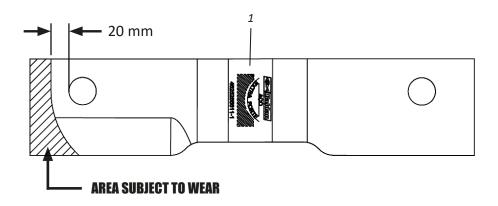
If screws (6), plain washers (5), lock washers (4) and nuts (3) are worn, immediately replace them. Ignoring these warnings may cause severe accidents or death.



#### Maintenance

#### Blade wear - Part I

The blades in the **RD** are reversible. Before starting the work, do a thorough review on the rotary cutter especially on the blades so that no wear will affect the hole, which should have a 20mm wall. If the wear affects the hole or the wall becomes too thin, we recommend the replacement of the blade immediately because it will not have the necessary safety, thus creating a risk of accidents.





In the event of loss or breakage of any of the rotating elements, especially the blades (1), they must be replaced immediately to avoid vibrations and consequently damage to RD, work failure, serious accident or death.



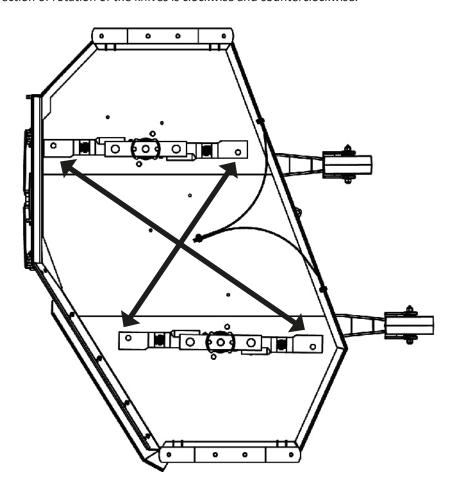
Always keep blades (1) sharpened to increase yield and require less tractor effort.



#### Maintenance

#### · Blade wear - Part II

The blades have a double-sided cut. When there is wear on one side of the blade, reverse the blade **as shown below**. Note that the inversion is made in cross because the direction of rotation of the knives is clockwise and counterclockwise.





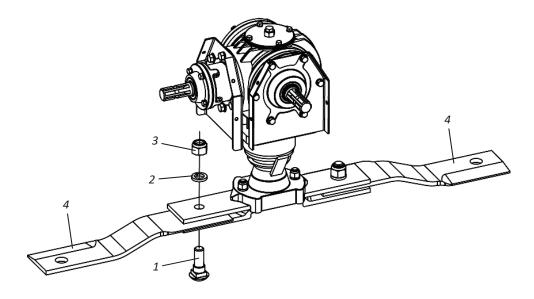
Keep away from the rotating elements especially of the blades until the movement of the blades is interrupted.
When blades break, replace them immediately.
Ignoring these warnings may cause serious accidents or death.



#### Blade replacement - Part I

Before each use of the **RD**, check the blades for good condition and proper installation. Have the blades replaced if they are broken, bent, over-worn, or otherwise damaged. In addition, replace the blades when you notice imperfections in the cut. To replace tje blades, proceed as follows:

- 01 Loosen the screws (1), pressure washers (2), and nuts (3).
- 02 Then replace the blades (4).
- 03 Then, secure them again with screws (1), pressure washers (2), and nuts (3).



# **ATTENTION**

Periodically check the conditions and tightness of the bolts (1), pressure washers (2) and nuts (3) that secure the blades (4). Ignoring this warning may cause severe accidents or death.

# **•** IMPORTANT

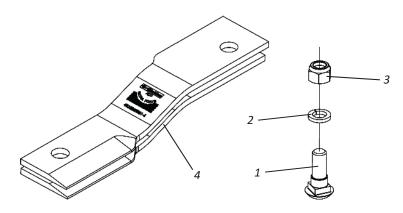
When changing blades, always change torque avoiding damage to the RD due to unbalance.

cause of the unbalance. Always demand Baldan original parts.



#### Maintenance

· Blade replacement - Part II



# **ATTENTION**

When replacing the blades (4), note that they are supplied in pairs, which must be retained until they are mounted to the RD rolling bearing. Unbalanced blades can cause excessive vibration and damage bearings, retainers and the transmission gearbox. The weight variation between these blades (4) is within the tolerance limit.

# IMPORTANT

When changing blades (4), also replace the screw (1), lock washers (2) and nuts (3). Periodically check the condition and tightness of the blades' set screws and nuts.



The **RD** has been developed to provide you with the maximum yield on land conditions. Experience has shown that periodic maintenance of certain parts of the **RD** is the best way to help you avoid problems, so we suggest verification.



Check nuts and bolts, retighten them if necessary. The maintenance of general re-installation of the equipment must be performed every 8 hours of work

#### Lubrication

Lubrication is indispensable for a good performance and greater durability of the **RD** moving parts, contributing to the maintenance cost savings.

Before starting the operation, carefully lubricate all grease cups, always observing the lubrication intervals in the following pages. Make sure of the lubricant quality regarding its efficiency and purity, avoiding products contaminated by water, dust and other agents.

#### Table of greases and equivalents

Manufacturer	Types of grease recommended			
Petrobrás	Lubrax GMA-2			
Atlantic	Litholine MP 2			
Ipiranga	Ipiflex 2			
Castrol	LM 2			
Mobil	Grease MP			
Texaco	Marfak 2			
Shell	Alvania EP 2			
Esso	Multi H			
Bardahl	Maxlub APG-2EP			
Valvoline	Palladium MP-2			
	Tutela Jota MP 2 EP			
Petronas	Tutela Alfa 2K			
	Tutela KP 2K			

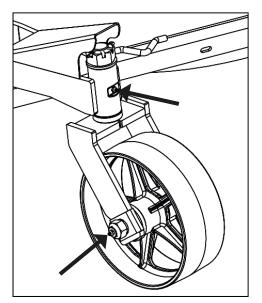


If there are equivalent manufacturers and/or brands that are not listed in the table, consult the manufacturer's technical manual.

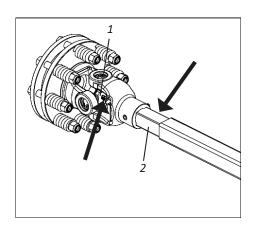


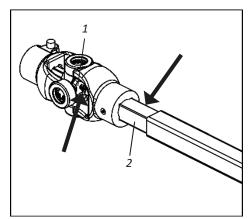
#### Maintenance

• Lubrication every 8 hours of work



Lubricate the crossbars (1) with grease every 8 hours. The telescopic axle (2) must be lubricated weekly.





# • ATTENTION

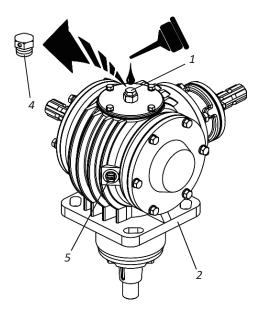
When lubricating the RD, do not exceed the amount of new grease. Insert a sufficient amount.

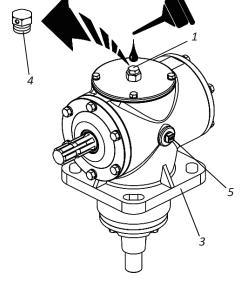


#### Oil change

Before putting the **RD** into operation, remove the plugs (1) from the speed multiplier gearbox (2) and the speed transmission box (3) and place the breather (4) in their place.

Periodically check the oil level of the speed multiplier gearbox (2) and the transmission gearbox (3)through the level plugs (5) and refuel as necessary.





# **ATTENTION**

Change the oil of the speed multiplier gearbox (2) every 600 hours of work using 2.5 liters.

Only use the specified oil: 85W140 API GL-5 MIL-L-2105D;SAEJ306;Maio/81.

# **ATTENTION**

Change the oil the transmission gearbox (3) every 600 hours of work using 1.75 liters.

Only use the specified oil: 85W140 API GL-5 MIL-L-

2105D;SAEJ306;Maio/81.

# **O** IMPORTANT

To drain all the oil in the speed multiplier gearbox (2), remove the drain plug (5).

# **OBSERVATION**

When using a specific oil brand, avoid filling the oil level with different brand and specification.



#### Maintenance

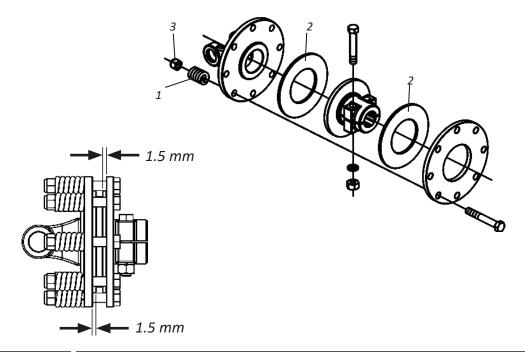
#### Storage

Before storing the **RD**, remove the cardan and store it in a covered, dry place. Check all transmission components, if necessary, replace any worn or damaged parts. **Always demand Baldan original parts.** 

#### Post storage

Before resuming work with the **RD**, lubricate all components and check the oil level. With friction, perform the following procedures.

- 01 Before disassembling friction, note the average length of the springs (1).
- 02 Then, remove friction, note the average length of the springs (1).
- 03 Then, with friction removed, discs (2) must rotate freely on the metal parts.
- 04 Discs (2) that are less than 1.5 mm thick must be replaced.
- 05 Then reassemble friction.
- 06 Springs (1) should be adjusted so they have the same length as before disassembly.
- **07** If, after preventive maintenance, friction is constantly activated in normal working conditions, tighten nuts (3) proportionally until this is no longer the case.



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### ■ <u>Maintenance</u>

### • Operational maintenance - Part I

PROBLEMS	CAUSES POSSIBLE	SOLUTIONS
No cutting.	Blades worn or broken.	Replace blades (only in pairs only) as instructed on pages 37 and 38.
	TDP rotation is incorrect.	Correct rotation 540 Rpm.
	Excessive speed.	Reduce work speed.
	Blades do not spin when TDP is running	Check the drive shaft connection.
	Multiplier box is not working properly.	Repair the multiplier box.
	Direction of rotation of the blades.	Make sure the correct side of the cut of the blades and the direction of rotation of the multiplier box
Irregular cut.	Blades worn or broken.	Replace blades (only in pairs only) as instructed on pages 37 and 38.
	Excessive speed.	Reduce work speed.
	Excessive cutting height	Lower cutting height.
	Vegetation of great density and of excessive height.	Use reduced speed.
Noisy	Loose components.	Check all the screws and tighten.
Rotary Cutter	Low oil of the multiplier box.	Check oil level as instructed on page 41.
Tip and blades wear too fast.	Blades are touching the ground.	Adjust and operate it at a height that will eliminate contact with the ground.
	The cutter is not operating at the correct TDP speed.	Keep the correct TDP speed.



### ■ <u>Maintenance</u>

### • Operational maintenance - Part II

PROBLEMS	CAUSES POSSIBLE	SOLUTIONS
Vibration.	Broken blades.	Replace blades (only in pairs only) as instructed on pages 37 and 38.
	Incorrect cardan length	Check the length of the cardan.
	Cardan shaft crosshead assembly.	Check the correct mounting of the cardan brackets.



- Cares
- 01 Before each work, check the condition of all pins, screws, gear box, and blades. Where necessary, retighten or replace them.
- 02 At every 8 hours of work, retighten screws and nuts.
- 03 Traveling speed should be carefully controlled according to the land's conditions.
- 04 RDs are used in many applications, requiring knowledge and attention during its handling.
- 05 Only local conditions can determine the best method of operation of the RD.
- 06 When assembling or disassembling any part of RD, employ proper methods and tools.
- 07 Carefully watch the lubrication intervals in the many lubrication points in the RD.
- 08 Always check the parts for wear and tear, specially the blades. If there is a need for replacement, always demand Baldan original parts.

Proper and periodical maintenance are necessary to guarantee a long useful life of RD.



#### Maintenance

- · General Cleaning
- 01 When storing the RD, perform a general cleaning and thoroughly wash it with water only. Make sure the paint has not worn out, if so, give the RD a general coat, apply protective oil and fully lubricate it.
- 02 Fully lubricate the rotary cutter. Check all moving parts of the RD, if they present wears or gaps, perform the required adjustment or replace the parts, leaving the machine ready for the next work.
- 03 During the period you are not using the RD, clean any remaining residues after use such as grass, dirt, crop residues, etc.
- 04 Spray the entire RD with preservation oil, never use burned oil.
- **05** Replace all adhesives, especially those about warnings, that are damaged or missing. Make everyone aware of the importance and risks of accidents when instructions are not followed.
- 05 Clean the cardan every 15 days or sooner if necessary.
- 07 Remove protective caps, separate "male" from "female" threads, wash and remove crusts, dry and lubricate the sliding parts with grease and reassemble.
- 08 After all maintenance precautions, store your RD in a plain surface, covered and dried location, away from animals and children.
- 09 We recommend to wash the RD with water only when starting the works.



**ATTENTION** Do not use chemical products to wash RD, as it may damage its painting.

Rotary cutter conservation - Part I

To extend the service life and appearance of the **RD** longer, follow the instructions below:

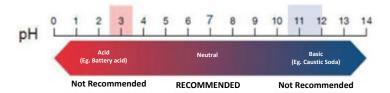
- 01 Wash and clean all rotary cutter components during and at the end of the work season.
- 02 Use neutral products to clean the rotary cutter following the safety and handling guidelines provided by the manufacturer.
- 03 Always carry out maintenance during the periods indicated in this manual.
  - Rotary cutter conservation Part II

The practices and precautions below if adopted by the owner or operator make the difference for the conservation of the RD.

01 - Be careful when performing high-pressure washing; do not direct the water jet directly into the connectors and electrical components.



- 02 Use only NEUTRAL detergent and water (pH equal to 7);
- 03 Apply the product, following the manufacturer's instructions strictly, on the wet surface and in the correct sequence, respecting the time of application and washing;
- 04 Stains and dirt not removed with the products should be removed with the aid of a sponge.
- 05 Rinse the machine with clean water to remove any chemical residues.
- **06** Do not use: Detergents with a basic active ingredient (pH less than 7) can damage/stain the paint on the rotary cutter.
  - Detergents with acid active ingredient (pH less than 7), act as stripper/remover of zinc coating (the protection of parts against oxidation).



- 07 Allow the machine to dry in the shade so that it does not accumulate water in its components. Very fast drying can cause stains on your paint.
- 08 After drying, lubricate all chains and greases according to the recommendations in the operator's manual.
- 09 Spray the whole machine, especially the zinc parts, with protective oil, following the manufacturer's application guidelines. The protective also prevents dirt from adhering to the machine, facilitating subsequent washings.
- 10 Observe curing (absorption) time and application intervals as recommended by the manufacturer.



Do not use any other type of oil to protect the rotary cutter (used hydraulic oil, burnt oil, diesel oil, castor oil, kerosene,

We recommend the following protective oils:

- Bardahl: Agro protective 200 or 300 ITWChemical: Zoxol DW Series 4000

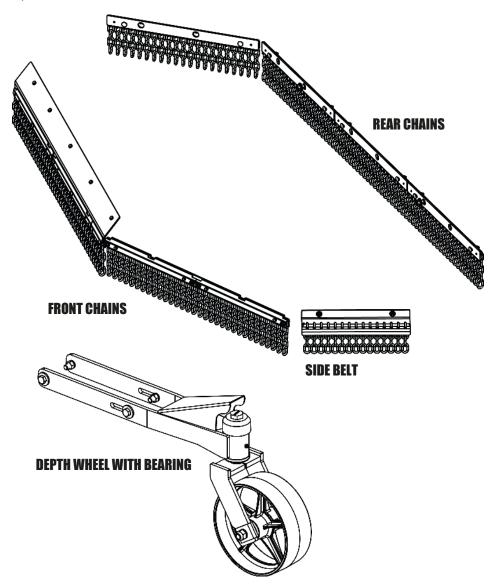
Ignoring the conservation measures mentioned above may result in the loss of warranty for painted or zinc-coated components which may show oxidation (rust).



### Optional

Optional accessories

**RD** rotary cutters has optional features which can be acquired according to the work requirement.





#### Identification

#### Identification plate

To consult the parts catalogue or request Baldan technical support, always identify the model (01), serial number (02) and manufacture date (03), which can be found on the identification plate of your **RD**.





The drawings in this Instruction Manual are merely illustrative.



In case of doubts, never operate or handle your equipment without referring to Post-Sales.

Telephone: 0800-152577

e-mail: posvenda@baldan.com.br

### **PUBLICATIONS**

Code: 60550201570 | CPT: RD03020L





### Identification

#### Product identification

Please make the correct identification of the data below, to always have information about the service life of your equipment.

Owner:
Dealer:
Property:
ity:
tate:
Certificate of Warranty no.:
mplement:
erial No.:
Purchase Date:
nvoice:



■ <u>Notes</u>		



BALDAN IMPLEMENTOS AGRÍCOLAS S/A ensures the dealer normal performance of the implement for a period of six (6) months as of the delivery date on the retail invoice to the first final consumer. During this period, BALDAN undertakes to repair defects in material and/or of manufacture of its liability, including labor, freight and other expenses of the dealer's liability.

In the warranty period, request and replacement of eventual defective parts shall be made to the dealer of the area, who will submit the faulty piece for **BALDAN** analysis. When this procedure is not possible and the resolving capacity of the dealer is exhausted, the dealer will request the support of **BALDAN Technical Assistance** through a specific form distributed to dealers. After analyzing the replaced items by Baldan Technical Assistance, and concluding that it is not a warranty, then the dealer will be responsible for the costs related to the replacement; as well as material expenses, travel including accommodation and meals, accessories, lubricant used and other expenses arising from the call out to Technical Assistance, and Baldan company is authorized to carry the respective invoice in the name of the resale. Any repair carried in the product within the dealer warranty deadline will only be authorized by **BALDAN** upon previous budget presentation describing parts and workforce to be performed.

The product is excluded from this term if it is repaired or modified by representatives not belonging to the **BALDAN** dealer network, as well as the application of non-genuine parts or components to the user's product. This warranty is void where it is found that the defect or damage is caused by improper use of the product, failure to follow instructions or inexperience of the operator.

It is agreed that this warranty does not cover tires, polyethylene tanks, cardan, hydraulic components, etc., which are equipment guaranteed by their manufacturers. Manufacturing and/or material defects, object of this warranty term, will not constitute, under any circumstances, grounds for termination of a purchase agreement, or for indemnification of any nature.

**BALDAN** reserves the right to change and/or perfect the technical characteristics of its products, without previous notice, and without obligation to proceed in the same way with the products previously manufactured.



### Inspection and Delivery Certificate

**SERVICE BEFORE DELIVERY:** This implement was carefully prepared by the sale organization, with all its parts inspected according to the manufacturing prescriptions.

**DELIVERY SERVICE:** The user was informed about the current warranty terms and instructed on the usage maintenance precautions.

I confirm that the user has been informed about the current warranty terms and instructed on the usage maintenance precautions.

_ Tax Number:
CEP:
State:
Number:
State:



### Inspection and Delivery Certificate

**SERVICE BEFORE DELIVERY:** This implement was carefully prepared by the sale organization, with all its parts inspected according to the manufacturing prescriptions.

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I confirm that the user has been informed about the current warranty terms and instructed on the usage maintenance precautions.

Date:	Tax Number:		
Dealer:		_	
Telephone:	CEP:	_	
City:		_	
Owner:		_	
Telephone:		_	
Address:	Number:	_	
City:	State:		
Email:			
Sale date:		_	
Signature / Dealer Stamp			



### Inspection and Delivery Certificate

**SERVICE BEFORE DELIVERY:** This implement was carefully prepared by the sale organization, with all its parts inspected according to the manufacturing prescriptions.

**DELIVERY SERVICE:** The user was informed about the current warranty terms and instructed on usage maintenance precautions.

I confirm that the user has been informed about the current warranty terms and instructed on the usage maintenance precautions.

Date:	Tax Number:		
Dealer:		_	
Telephone:	CEP:	_	
City:		_	
Owner:		_	
Telephone:		_	
Address:	Number:	_	
City:	State:		
Email:			
Sale date:		_	
Signature / Dealer Stamp			

3rd copy - Manufacturer (Please send completed within 15 days)

1.74.05.0059-5

AC MATÃO ECT/DR/SP

# **RESPONSE CARD**

**NO STAMPING IS REQUIRED** 

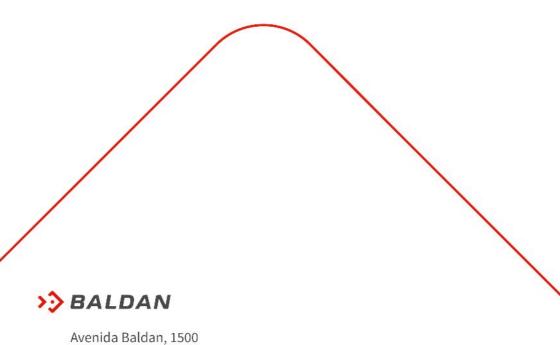
#### THE STAMP WILL BE PAID BY:



#### BALDAN IMPLEMENTOS AGRÍCOLAS S/A.

Av. Baldan, 1500 | Nova Matão | CEP: 15993-900 | Matão-SP. | Brazil Tel: (16) 3221-6500 | Fax: (16) 3382-6500 www.baldan.com.br | email: sac@baldan.com.br Export:Tel: +55 (16) 3221-6500 | Fax: +55 (16) 3382-4212 | 3382-2480

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