

Instruction Manual



RAC 1700 / RACD 3400

Rotary Cutter with Cardan Shaft (Drag Type)

 **BALDAN**

■ Presentation

Wge 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.

BALDAN assures that 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 client about maintenance, safety, his/her 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 Manual



RAC 1700 / RACD 3400

Rotary Cutter with Cardan Shaft (Drag Type)

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.

 **BALDAN**

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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 to **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 features 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.

ATTENTION

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 the 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>

▪ Safety rules

- To the operator



ATTENTION

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



Do not perform adjustments when the RAC/RACD is in operation.

When performing any service on the RAC/RACD, switch off the tractor first. Use appropriate tools.

ATTENTION

16
km/h

10
MPH

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

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 drive shafts and rotary shafts.

ATTENTION

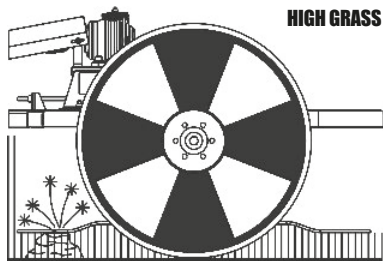
4 to 6
KM/H

3 to 4
MPH

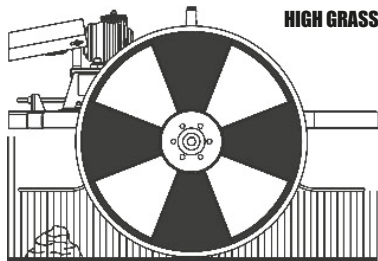
When working the RAC/RACD, do not exceed the 4 to 6Km/h or 3 to 4 MPH speed, avoiding risk of damages and accidents.

ATTENTION

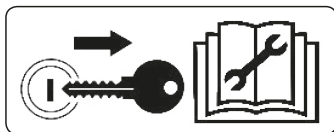
Never operate the blade at a minimum height on high grass terrains. When operating in this type of pasture, perform two trimming operations to prevent blades from touching objects that are hidden between the pasture.



WRONG OPERATION



WRONG OPERATION

▪ Safety rules**⚠ ATTENTION**

Remove the ignition key before performing any type of maintenance in RAC/RACD. Protect yourself against possible injuries or death caused by RAC/RACD unexpected start-up.

Do not start the tractor up if RAC/RACD is not properly engaged.

⚠ ATTENTION

Dispose residues inappropriately affects the environment and the ecology since you will be polluting rivers,

canal or the soil.

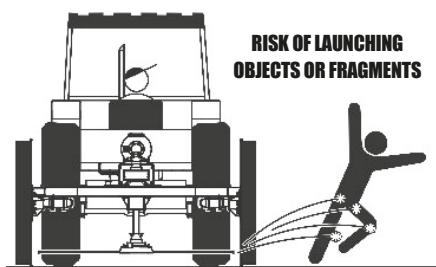
Inform yourself about the proper way of recycling or disposing residues.

PROTECT THE ENVIRONMENT!**⚠ ATTENTION**

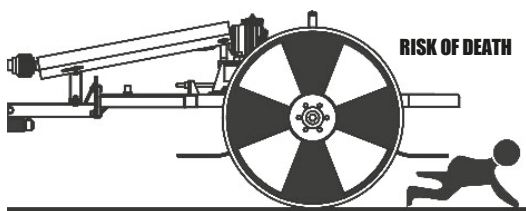
To prevent intoxications, injuries or death when the rotary cutter is running and its blades are spinning, proceed in the following manner:

- 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.




**⚠ ATTENTION**

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

▪ Warnings

-  When operating the RAC/RACD, do not allow people to stay too close, inside it or on it.
-  When performing any maintenance service, wear PPE.
-  Do not wear too loose clothing as they may get caught in RAC/RACD.
-  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 RAC/RACD. Always put the gear shift in neutral position, unplug the power take-off gear switch and place the hydraulic controls in neutral position.
-  Do not start the motor in a closed environment or with no proper ventilation since the exhaust gases are harmful to health.
-  When maneuvering the tractor to couple the RAC/RACD, make sure you have the necessary space and that there is no one very close, always maneuver at low gear and be prepared to brake in an emergency.
-  Do not perform adjustments when RAC/RACD is in operation.
-  When working in sloped terrains, proceed with precautions, always trying to maintain the required stability. In case of unbalance, reduce acceleration and turn the wheels of the tractor to the downward face of the terrain and never lift the RAC/RACD.
-  Always drive the tractor in speeds compatible to the safety, especially during works in bumpy lands or slopes, keep the tractor always engaged.
-  When driving the tractor in highways, keep the brake pedals interconnected.
-  Do not work with a tractor with a light rear. If its front tends to raise, add weights or ballasts to the front of the tractor or to its front wheels.
-  When leaving the tractor, put the gear lever in neutral position and apply the parking brake. Never leave RAC/RACD coupled to the tractor in the raised position of the hydraulic system.
-  All maintenance on the RAC/RACD must be carried while the vehicle is parked and with the tractor switched off.
-  Only operate the RAC/RACD from the driver's seat. Do not release controls until the movements are complete.
-  Do not leave the seat before locking the controls to avoid any movement.
-  Regularly check the presence of safety pins and screws. Do not replace with other objects, such as nails, wires, etc.
-  The warranty is immediately void when the RAC/RACD installation, adjustment, operation and maintenance instructions are not observed.

▪ Warnings

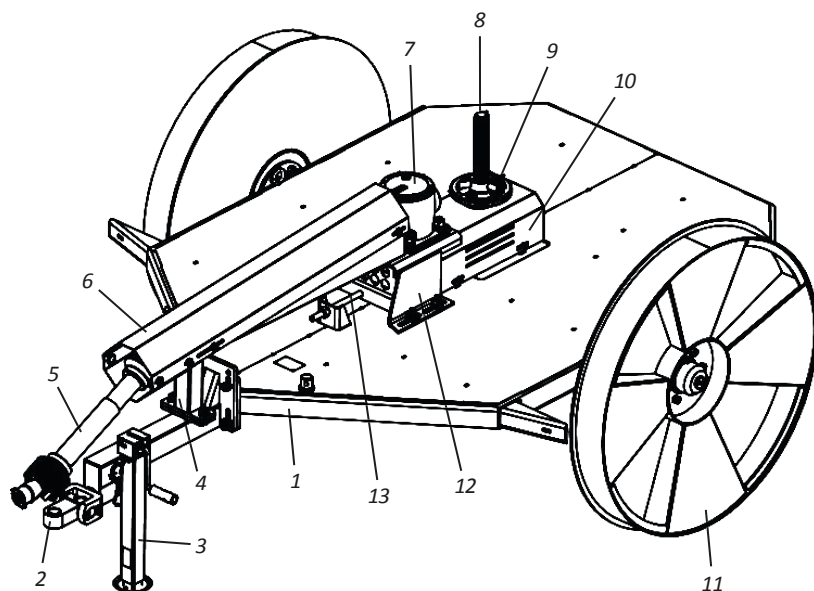
-  Unqualified persons and children are prohibited from operating the RAC/RACD.
-  Alcoholic beverage or some medications may cause loss of reflexes and change the operator's physical conditions. For this reason, never operate this equipment under the influence any of these substances.
-  Read or explain all the procedures of this manual to the operator who cannot read.

In case of doubts, refer to Post-Sales.
Telephone: 0800-152577 / E-mail: posvenda@baldan.com.br

■ Components

• RAC 1700 - Rotary Cutter with Cardan

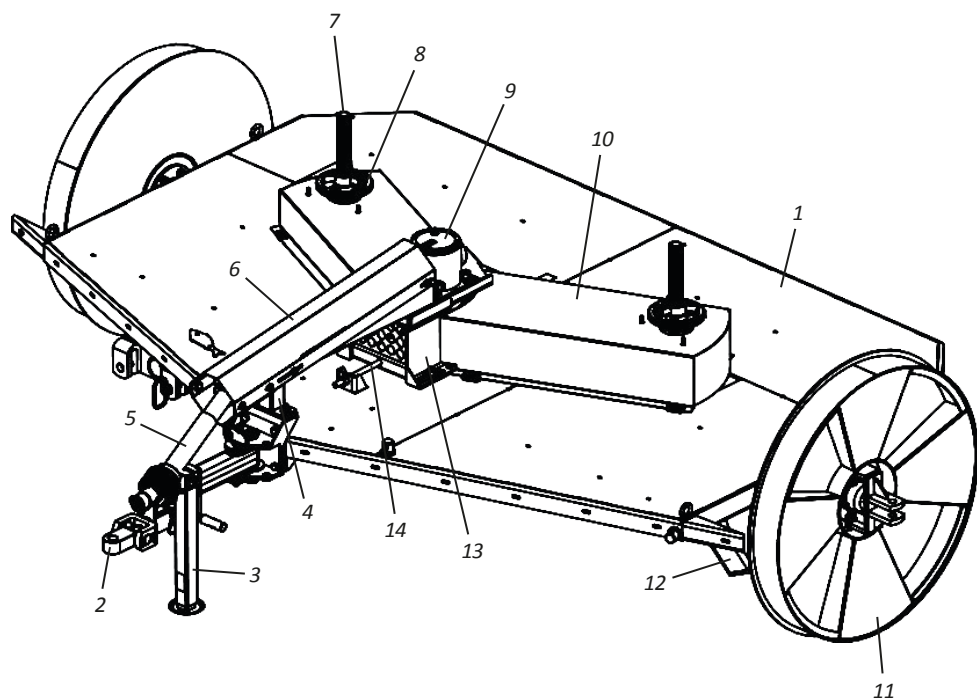
- | | |
|----------------------------|--|
| 1. Blade protection box | 8. Blade shaft |
| 2. Shackle | 9. Regulator wheel |
| 3. Lifting bracket | 10. Guard |
| 4. Bearing support bracket | 11. Iron wheel |
| 5. Cardan | 12. Support bracket multiplier gearbox |
| 6. Shaft guard | 13. Belt tensioner |
| 7. Multiplier gearbox | |



▪ Components

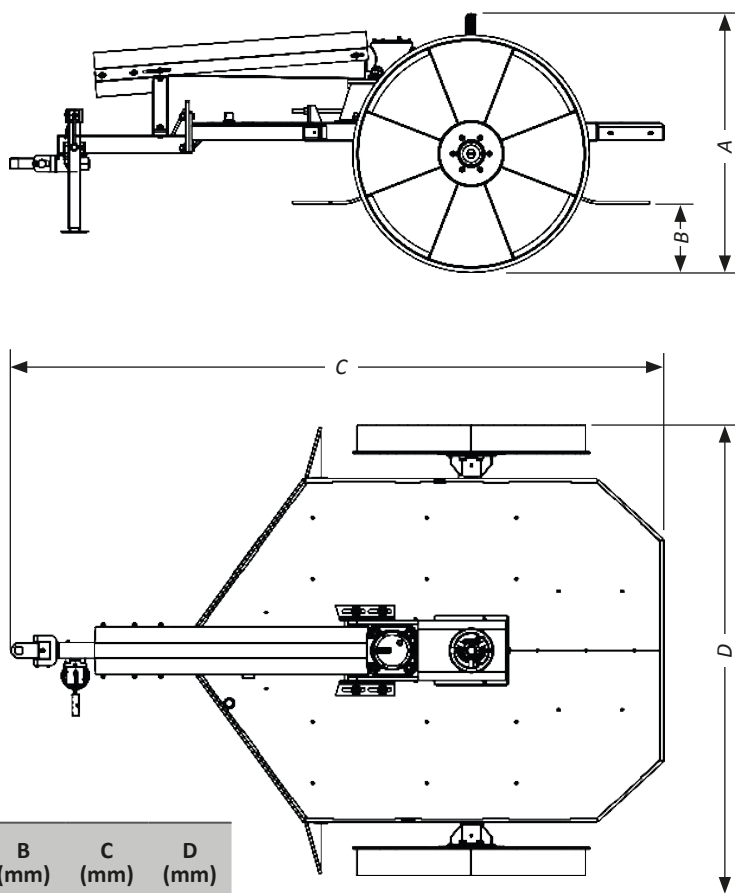
• RACD 3400 - Rotary Cutter with Cardan

- | | |
|----------------------------|--|
| 1. Blade protection box | 8. Regulator wheel |
| 2. Shackle | 9. Multiplier gearbox |
| 3. Lifting bracket | 10. Guard |
| 4. Bearing support bracket | 11. Iron wheel |
| 5. Cardan | 12. Blade |
| 6. Shaft guard | 13. Support bracket multiplier gearbox |
| 7. Blade shaft | 14. Belt tensioner |



▪ Dimensions

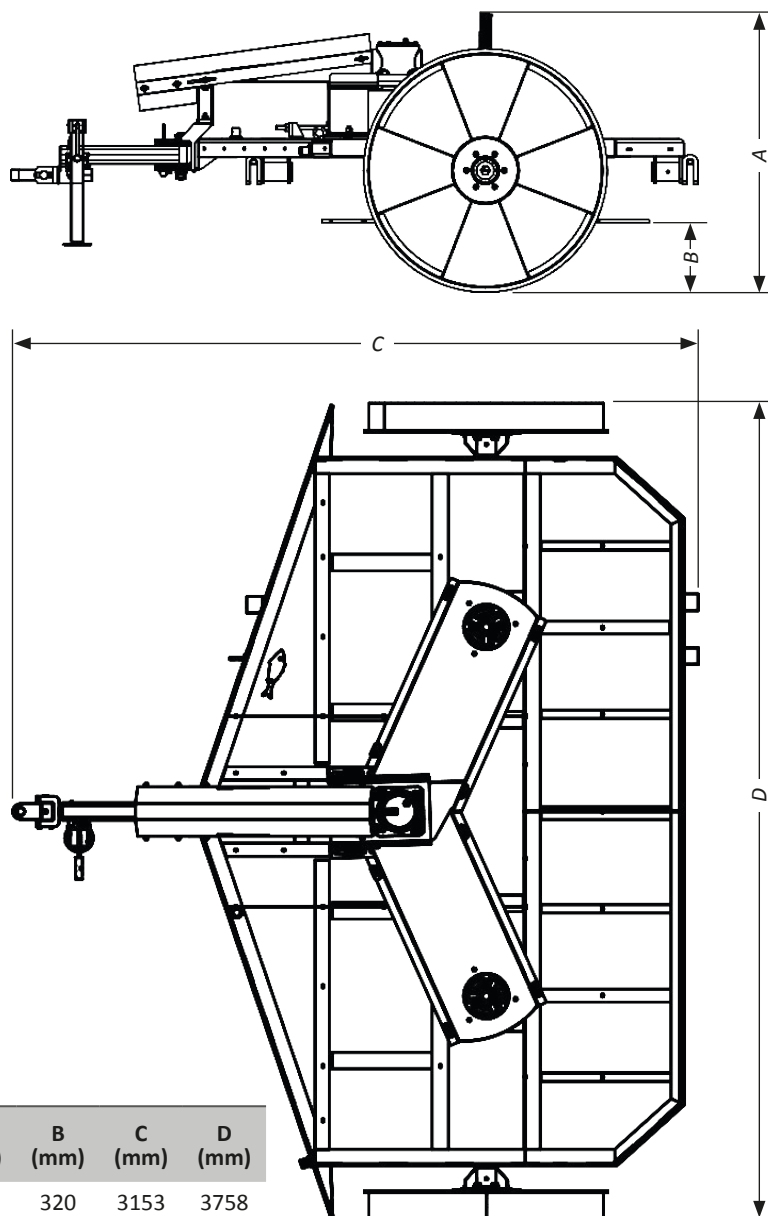
• RAC 1700



Model	A (mm)	B (mm)	C (mm)	D (mm)
RAC 1700	1218	320	3089	2126

▪ Dimensions

• RACD 3400



Model	A (mm)	B (mm)	C (mm)	D (mm)
RAC 3400	1282	320	3153	3758

▪ Specifications

• RAC/RACD - Rotary Cutter with Cardan

Model	Blade No	Cutting width (mm)	App. Weight (Kg)	Tractor Power (HP)
RAC 1700	2	1700	800	60
RACD 3400	4	3400	1180	70

Cutting height 100 - 320 mm

Cardan length 2900 mm

PTO RPM 540

Blade RPM 940

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.

RAC/RACD INTENDED USE

- The **RAC/RACD** was developed for works of cutting, clearing of pastures and elimination of crop residues in general.
- The **RAC/RACD** should only be driven and started by a properly instructed operator.

NON-ALLOWED USE OF RAC/RACD

- To avoid damages, severe accidents or death, do NOT transport people on other part of **RAC/RACD**.
- The **RAC/RACD** may not be used to couple, tow or push other implements or accessories.
- The **RAC/RACD** was developed for agricultural use, NOT to be used in urban areas.
- The **RAC/RACD** should NOT be used by an inexperienced operator who does not knows all the driving, command and operation techniques.

▪ Assembly

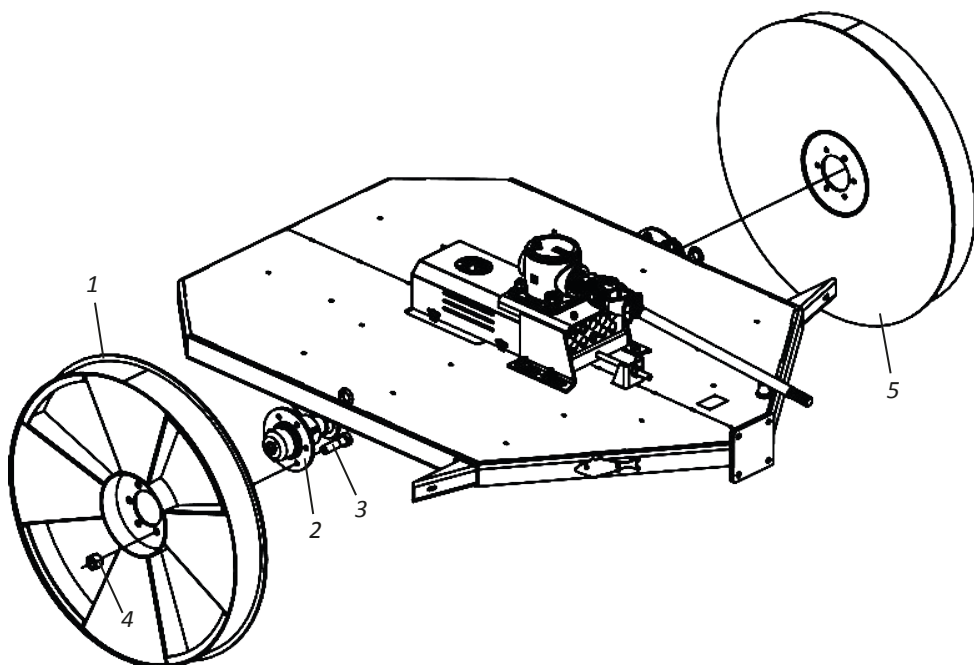
For easier logistics, the **RAC/RACD** is not fully assembled from factory, as only some components are assembled. To assembly them, follow the instructions below:

- ⚠ The assembly of RAC/RACD shall be done by the dealer, by trained, skilled and qualified personnel for this work.
- ⚠ Before beginning the assembly of RAC/RACD, look for a good place that facilitates the identification of the parts and their assembly.
- ⚠ Do not wear loose clothing, as they may get caught in the RAC/RACD.

• Assembly of guide wheels

In order to assemble the wheels, proceed as follows:

01 - Attach the tire (1) to the hub (2) tightening through the screws (3) and nuts (4).



OBSERVATION

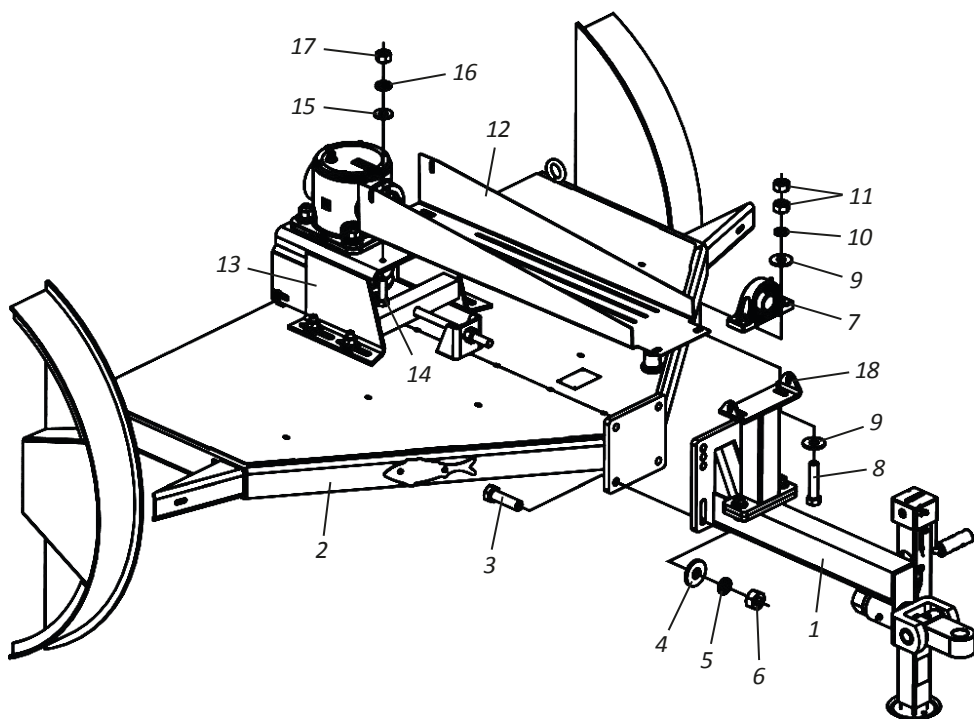
After assembling the wheel (1), repeat the procedure above to assembly the wheel (5).

▪ Assembly

• Assembly of head

To assemble the head, proceed as follows:

1. Attach the coupling head (1) to the chassis (2) attaching it with screws (3), flat washers (4), pressure washers (5) and nuts (6).
2. Then, release the bearing (7) through screws (8), plain washers (9), pressure washers (10), nuts and lock nuts (11).
3. Then, attach the lower guard (12) to the support (13) by fastening it through the screws (14), flat washer (15), pressure washers (16), and nuts (17).
4. Finish by fastening the bearing again (7) this time on the lower guard (12) and the bearing support (18) through bolts (8), plain washers (9), spring washers (10), nuts and locknuts (11).

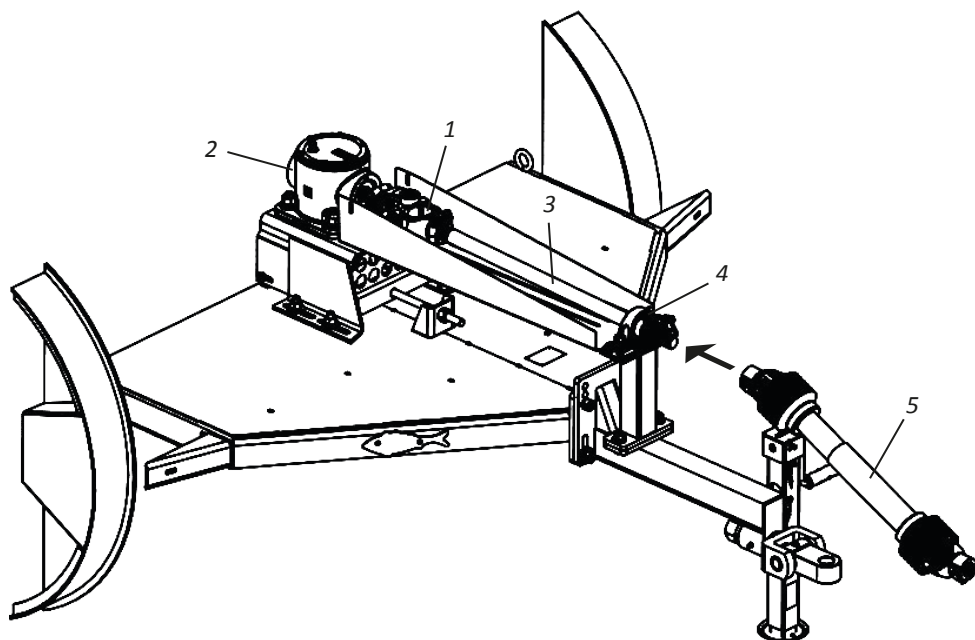


▪ **Assembly**

• **Assembly of shaft and cardan**

In order to assemble the shaft and the cardan (1), proceed as follows:

1. Connect the gasket (1) to the gearbox (2).
2. Then attach the shaft (3) to the gasket (1) and the bearing (4).
3. Then, attach the cardan (5) to the shaft (3).

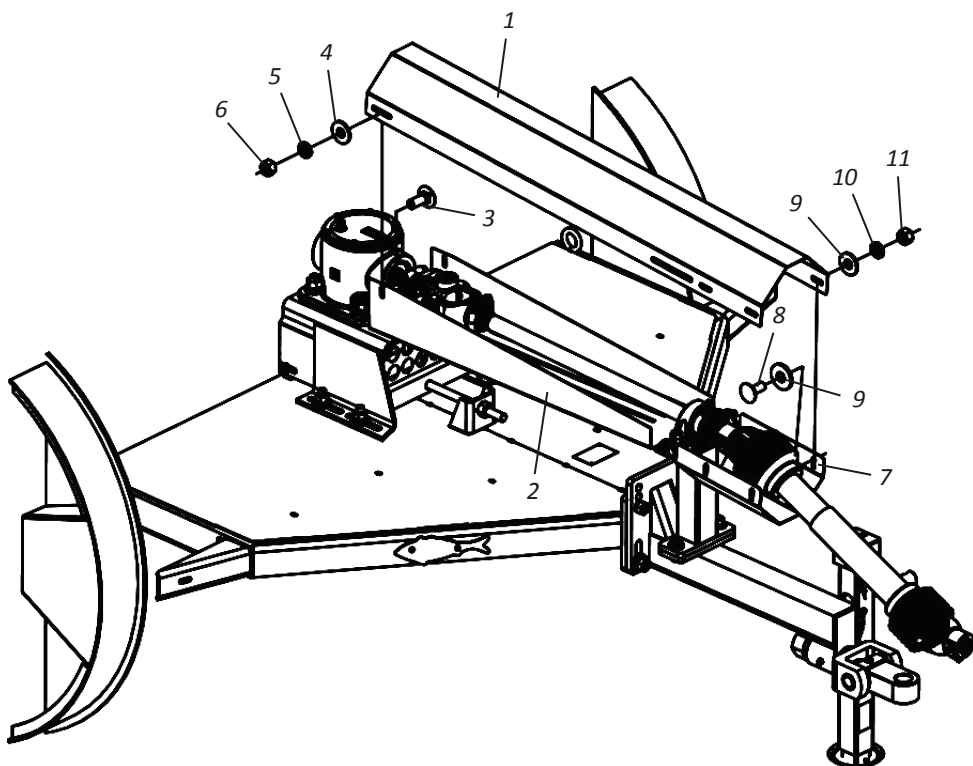


▪ Assembly

• Assembly of guards

In order to assemble the guards, proceed as follows:

1. Couple the guard (1) to the lower guard (2) attaching it with screws (3), flat washers (4), pressure washers (5) and nuts (6).
2. Couple the guard (7) to the lower guard (1) attaching it with screws (8), flat washers (9), pressure washers (10) and nuts (11).



ATTENTION

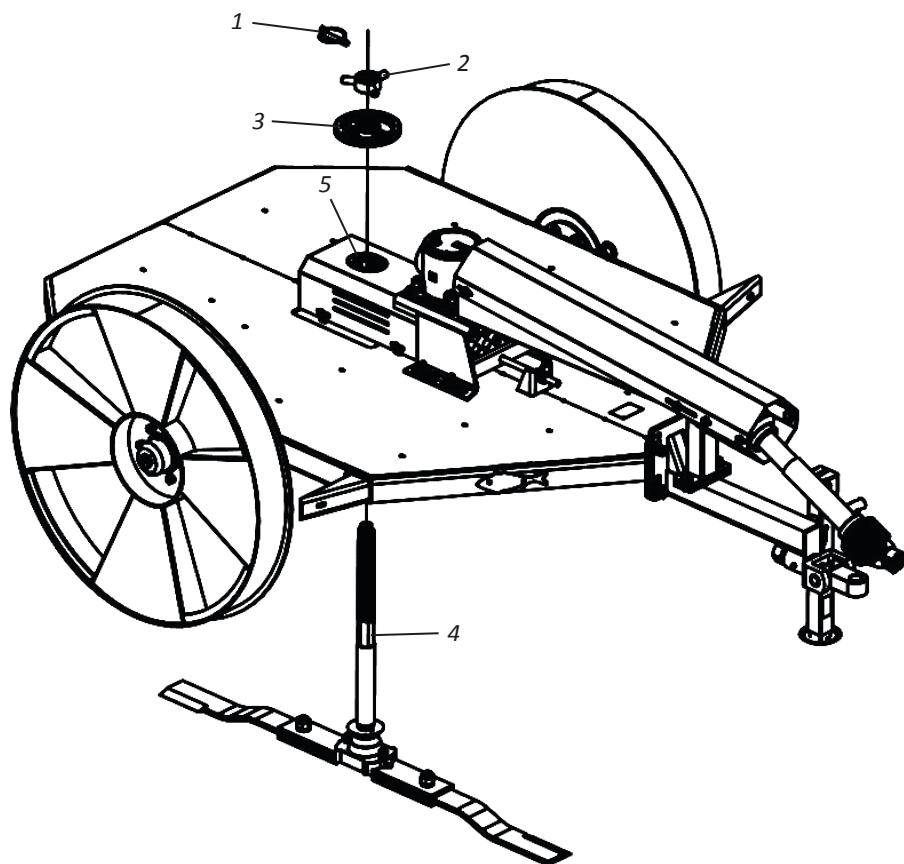
Do not work with the RAC/RACD without its protective covers (1, 2, and 7) on the shaft. Ignoring this warning may cause severe accidents or death.

▪ Assembly

• Assembly of blade shaft

In order to assemble the blade shaft, proceed as follows:

1. Remove the locking ring (1) and locking nut (2) and regulating wheel (3).
2. Then insert the blade shaft (4) into the pulley hub (5), replace the regulating wheel (3), adjusting the shaft of the knives (4) at the desired cutting height.
3. Remove the locking ring (2) and locking nut (2) and regulating wheel (1).



OBSERVATION

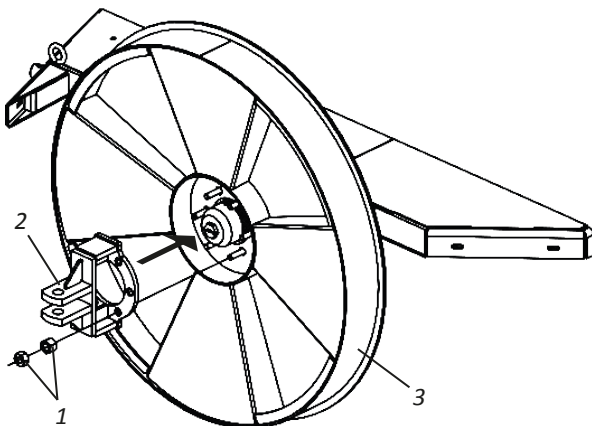
The RACD model cutter has 2 blade shafts. At the end of the assembly of the 1st blade shaft, repeat the same procedure for the assembly of the 2nd blade shaft.

- **Assembly**

• Assembly of mechanical side transport kit (Optional) - Part I


The **RAC 3400** can be optionally purchased with the **Mechanical Side Transport Kit**. To assemble the mechanical side transport kit, proceed as follows:

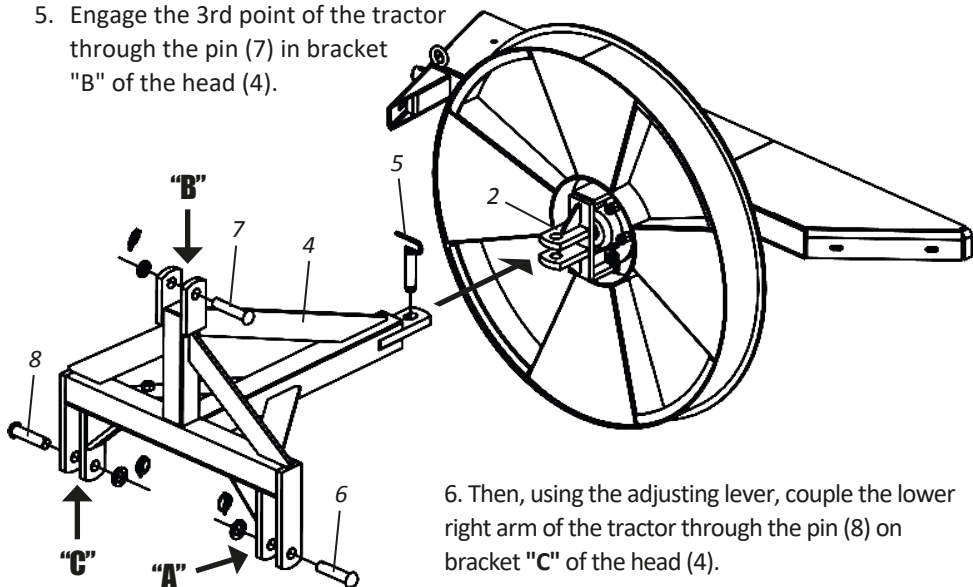
1. Remove nuts and locknuts (1).
2. Then attach the shackle (2) to the wheel (3) and retighten the nuts and locknuts (1) by locking the shackle (2).



OBSERVATION

Mount the jumelo (2) on the two wheels (3) of the RACD 3400.

3. Then, attach the head (4) to the shackle (2) by fastening it with the pin (5).
 4. Then, couple the lower left arm of the tractor through the pin (6) on the "A" bracket of the head (4).
 5. Engage the 3rd point of the tractor through the pin (7) in bracket "B" of the head (4).
- 
- The diagram shows a side view of the tractor's lower left arm being inserted into the 'A' bracket of the head (4). Pin (6) is shown at the point of contact between the arm and the bracket.

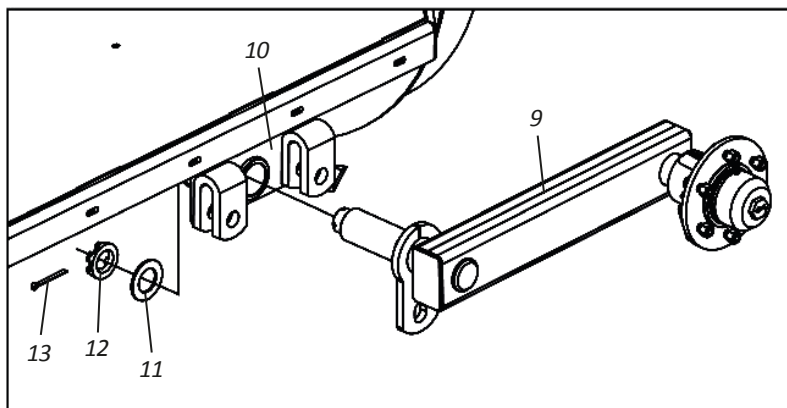


6. Then, using the adjusting lever, couple the lower right arm of the tractor through the pin (8) on bracket "C" of the head (4).

▪ **Assembly**

• **Assembly of the mechanical side transport kit (Optional) - Part II**

07. Then raise the RACD 3400 in the tractor hydraulics and attach the tire holder (9) to the chassis (10), securing it through the plain washer (11), castle nut (12) and cotter pin (13).



08. Once secured, turn the bracket (9) to an upright position by locking it with the pin (14) and the locking ring (15).

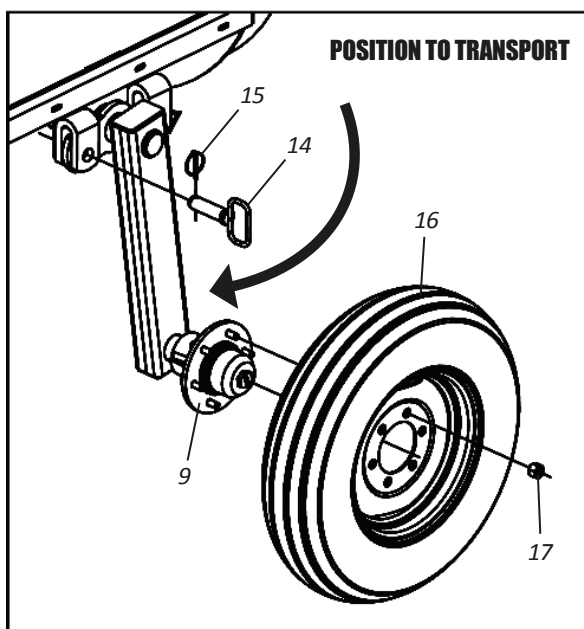
09. Next, attach the tire (16) to the support (9) by fixing it through the nuts (17).

⚠ ATTENTION

To place the support (9) in the vertical position, it is necessary to lift the RACD 3400 through the transport header coupled to the tractor hydraulics and to the RACD 3400 wheel.

🔍 OBSERVATION

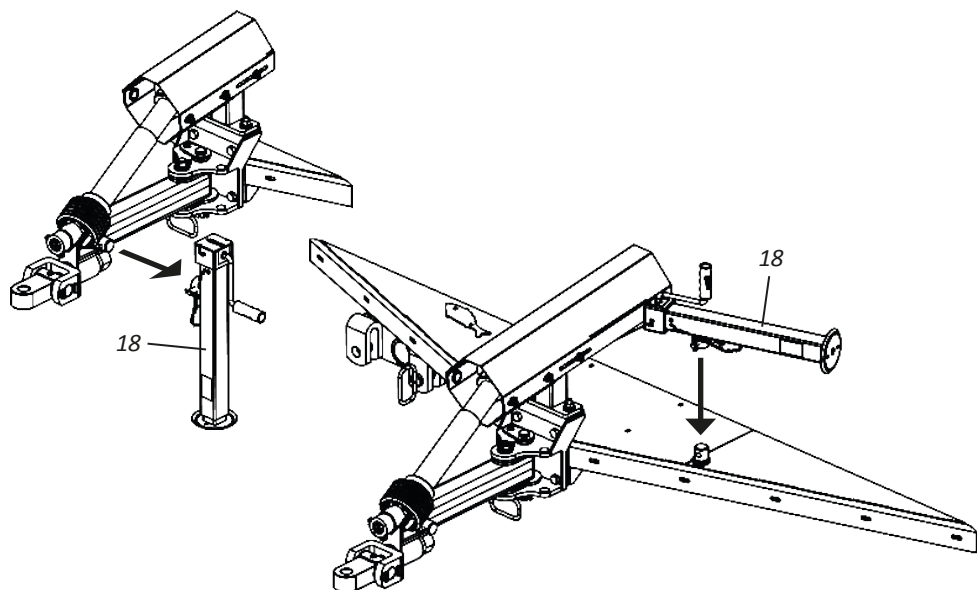
Repeat the procedure above to assemble the wheel bracket.



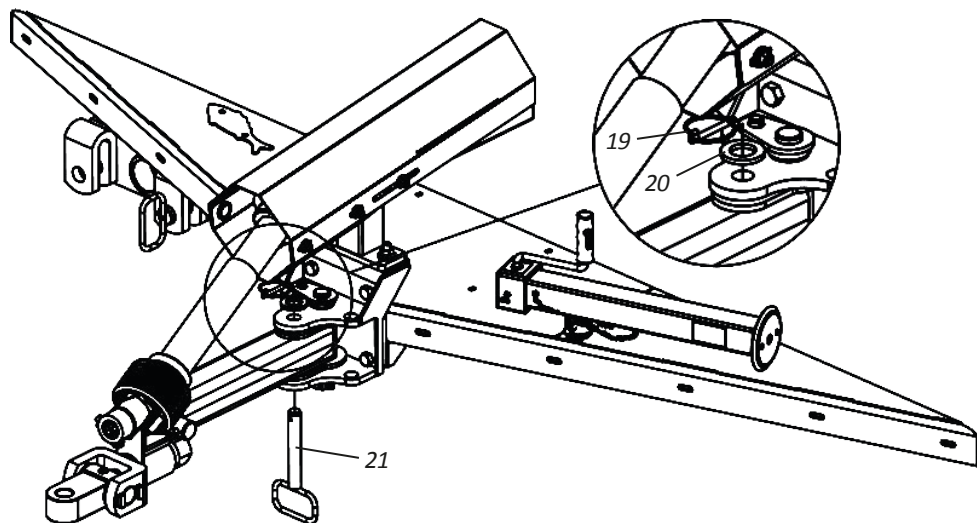
Assembly

• Assembly of the mechanical side transport kit (Optional) - Part III

Then remove the mechanical jack (18) and attach it to the **RACD 3400** in the horizontal position.



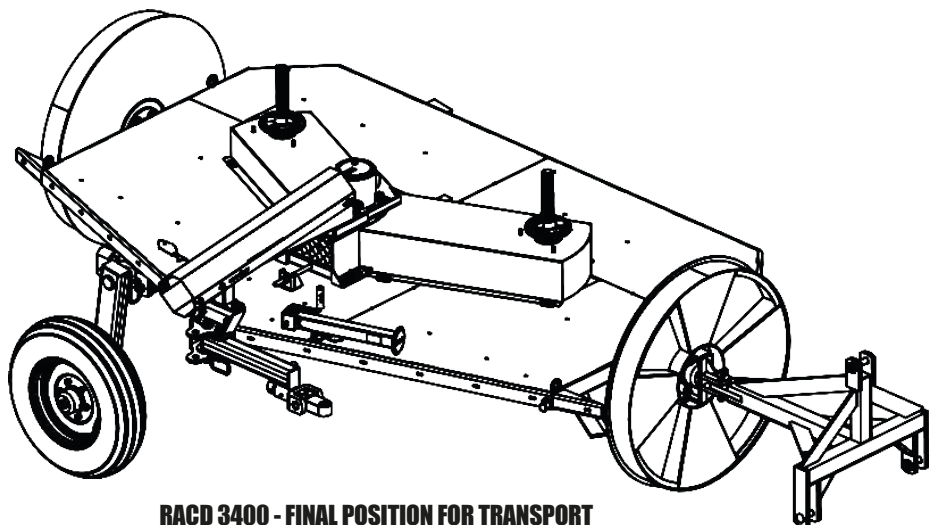
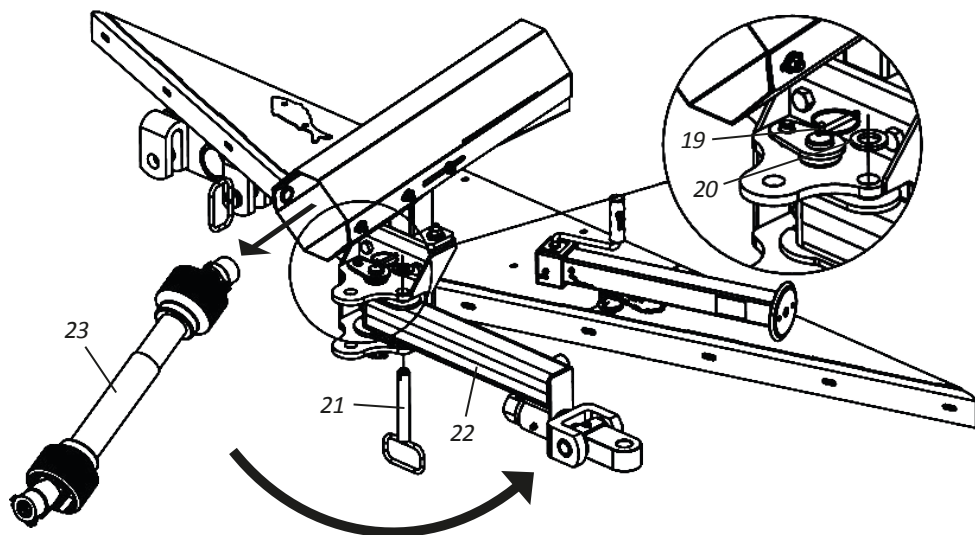
11. Then, release the ring lock (19), plain washer (20) and remove the pin (21).



▪ Assembly

• Assembly of the mechanical side transport kit (Optional) - Part IV

12. Then rotate the head (22) and replace the pin (21), flat washer (20) and locking ring (19), locking the head again.
13. Finish by removing cardan (23).



RACD 3400 - FINAL POSITION FOR TRANSPORT

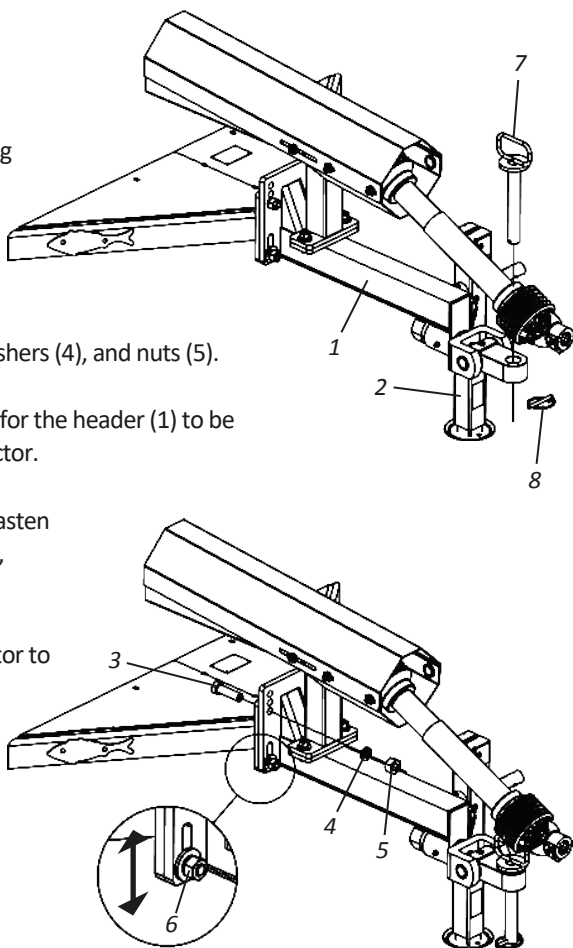
▪ Coupling


Before coupling the RAC/RACD, 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 - Part I

To couple the **RAC/RACD**, proceed as follows:

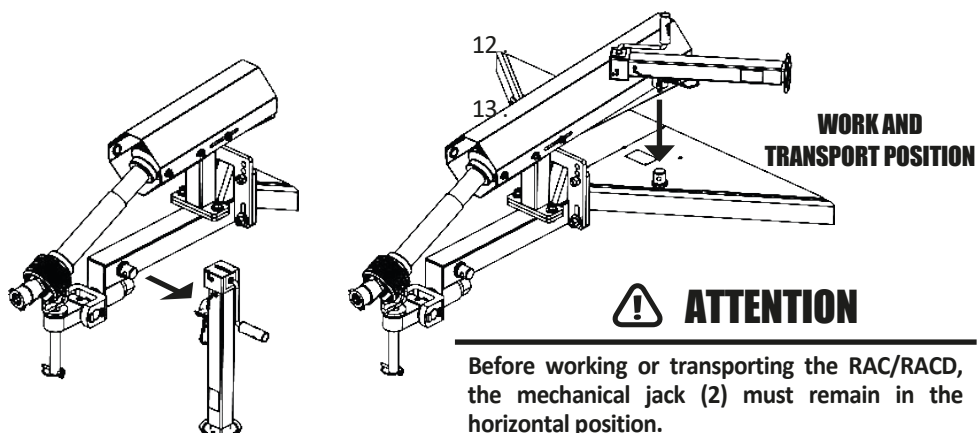
1. Level the head (1) of the RAC/RACD in relation the tractor's hitch through the mechanical jack (2). If this leveling is not enough to engage the tractor, do so through the head (1). To use it, proceed as follows:
2. Remove screws (3), pressure washers (4), and nuts (5).
3. Then, loosen the nut (6) enough for the header (1) to be adjusted to the height of the tractor.
4. Then, retighten the nut (6) and fasten screws (3), pressure washers (4), and nuts (5).
5. Finally, slowly approach the tractor to the RAC/RACD in reverse, being aware when to use the brakes. Couple the RAC/RACD to the tractor by attaching it through the hitch pin (7), and lock (8).



 **OBSERVATION** When hitching the RAC/RACD up, look for a safe and easily accessible place, always use low gear with low acceleration.

▪ Hitch

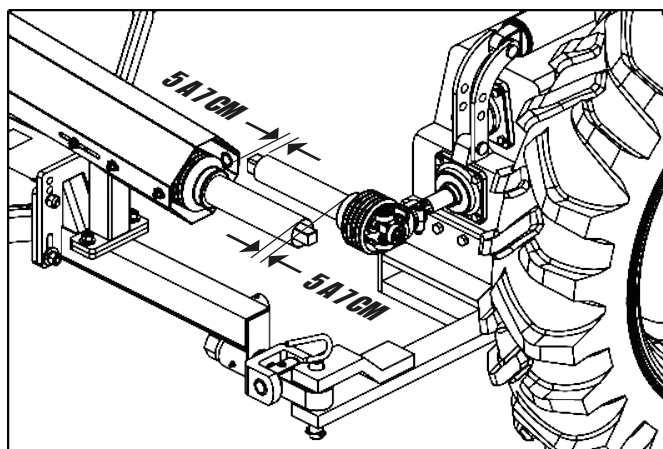
• Tractor hitch - Part II



• Cardan coupling to PTO

Before engaging the cardan, check its length in relation to the tractor model that will be used to pull the **RAC/RACD**, proceeding as follows:

1. Separate the cardan parts by coupling one part in the TDP and the other in the rotary cutter. Then, steer the tractor until one of the rear tires approaches the rotary cutter as much as possible. Place the cardan parts side by side and check for a minimum clearance of 5 to 7 cm between "male" and "female", otherwise cut the cardan according to the instructions on the following page.



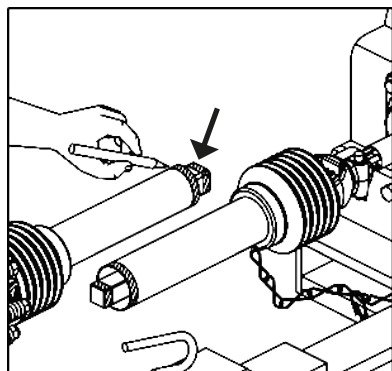
Before engaging the cardan, check the length of the tractor with respect to the tractor model that will pull the rotary cutter.

• Cardan length adjustment

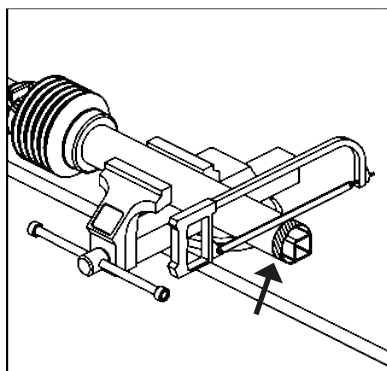
! IMPORTANT

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

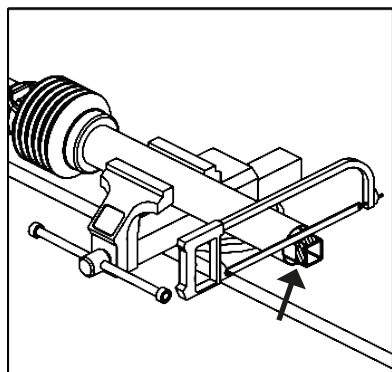
To perform the cardan cut, proceed as follows:



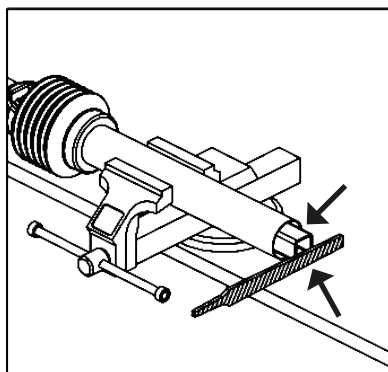
Secure the shaft halves from the shaft close to each other in the working position and mark the part to be cut.



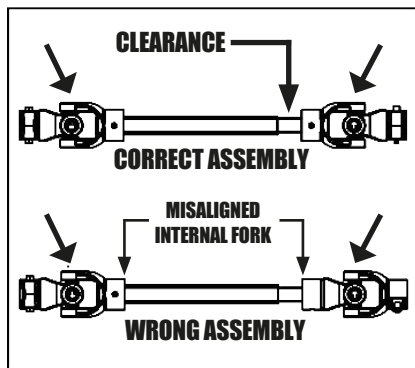
Shorten the inner and outer guards of the cardan proportionally.



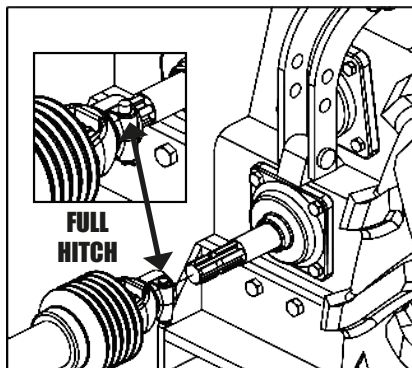
Cut the inner bars of the cardan in the same length as the protective tubes.



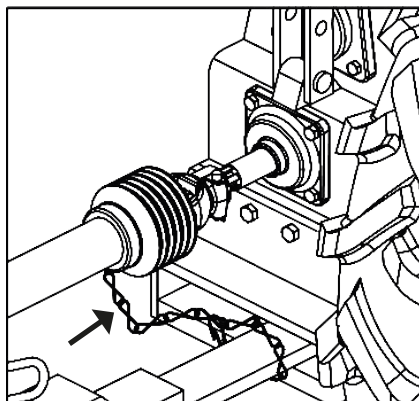
Remove all burrs and edges. Clean and grease the cardan bars.



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.



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



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

! IMPORTANT

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

🔍 OBSERVATION

Check the cardan joint angle on page 33 and other recommendations for using it.

! ATTENTION

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

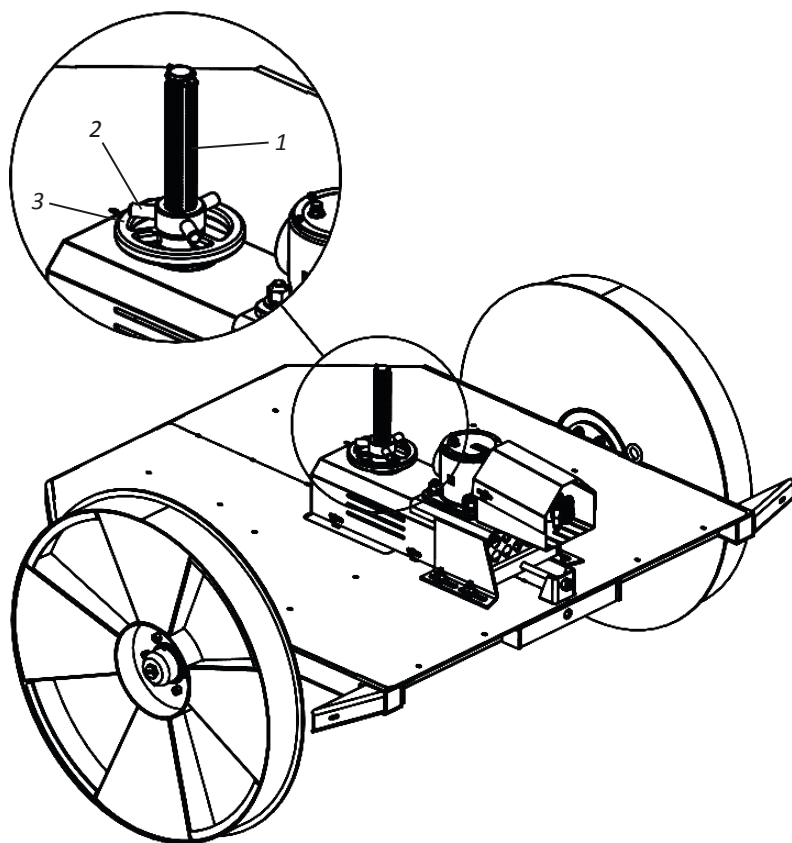
When engaging the cardan in the TDP, the tractor must be switched off with the parking brake applied.

▪ Adjustment

• Cutting height adjustment

Cutting height adjustment of blades is made through the shaft (1). To adjust the cutting height of the blades, proceed as follows:

1. Release the lock (2) and turn the handwheel (3) to the desired height.
2. Then tighten the lock (2) again to lock the handwheel (3).



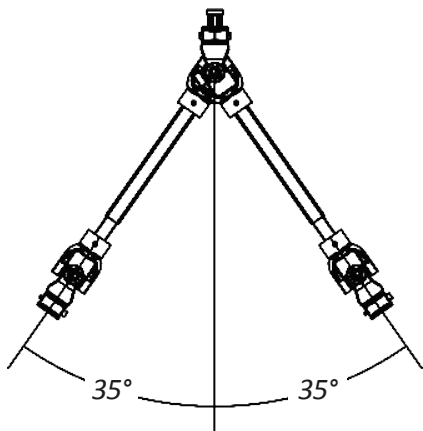
! ATTENTION | After adjusting the height of the blades, be sure to lock the handwheel (3) by securing the lock (2) again.

! IMPORTANT | The recommended cutting height should be at least 100 mm and the maximum of 320 mm from the ground for better RAC/RACD performance.

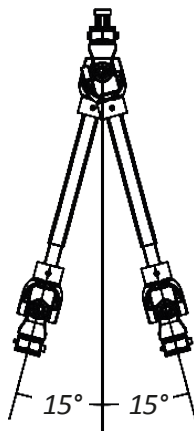
▪ Operations

• 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°.



IN A SHORT PERIOD OF TIME



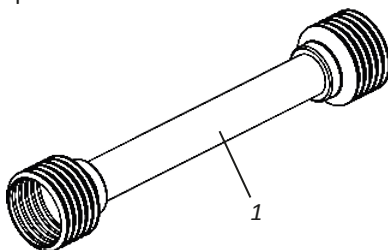
IN CONTINUOUS WORK



ATTENTION

Never engage to PTO when the joint is at an angle greater than 15°. When maneuvering with PTO 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.



IMPORTANT

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

■ Operations

• Recommendations for operation

1. Before starting to work, thorough review the **RAC/RACD**. The oil level of the multiplier must be filled, and nuts and screws must be retightened. Also check the locking of pins and cotters.
2. The ideal work rotation is **540 rpm for PTO**. Check the corresponding rotation on the motor, in the tractor manual. This rotation on the traction motor changes from tractor to tractor.
3. For best performance, we recommend a cutting height of **at least 50 mm** above ground.
4. To ensure a good work result, the terrain to be cleared must be free of stones and stumps.
5. First, put the blades in operation and then start cutting the vegetation.
6. Do not connect to PTO with blades caught in dirt mounds, sticks, or stumps, as objects may be projected and cause serious injury.
7. During work, maintain a constant motor rotation, avoiding the average speed variation of the tractors in order to prevent inefficiency or product distribution failures.
8. To engage or uncouple the cardan, PTO must be switched off.
9. During work do not vary the speed of the tractor, as this causes inefficient cutting. Keep the average speed and keep it in the middle of 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. In high density vegetation, we recommend the use of reduced gear, maintaining the rotation in the **PTO at constant 540 rpm**.
12. When transporting or performing maintenance/inspection, keep the power outlet off.
13. Stop and turn the equipment off if there are people within **50 meters**.

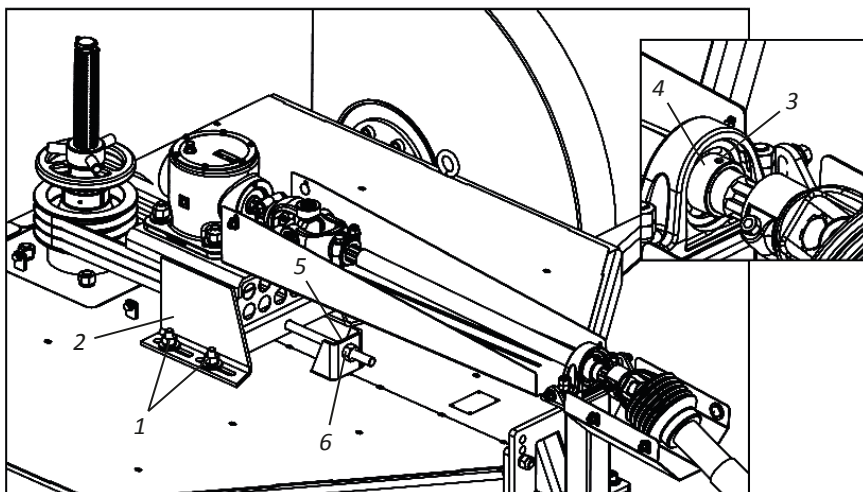
In case of doubts, never operate or handle the RAC/RACD, refer to After-Sales.
Telephone: 0800-152577 / E-mail: posvenda@baldan.com.br

▪ Maintenance

• Belt tension

The **RAC/RACD** have belts that should be checked daily for their tension. To adjust belt tension, proceed as follows:

1. Loosen the nuts (1) from the bracket (2).
2. Then, loosen the allen screw (3) from the bearing (4).
3. Then, loosen the nut (5), tighten the lock nut (6) of the tensioner.
4. Finish by refastening the nut (5).



ATTENTION

Check the belt tension in the first hours of work, then perform a daily check.

If the belts wear out, replace them immediately.

Do not operate the **RAC/RACD** with loose belts.

Regular clearance should be 1 cm from its center.



IMPORTANT

Before adjusting the tensioning of the belts, make sure that the tractor is switched off, if it is not, switch it off and remove the ignition key.



OBSERVATION

Adjusting the tension of the belts must be done to avoid excessive slippage during work.

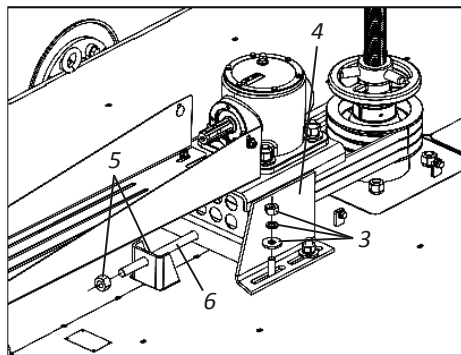
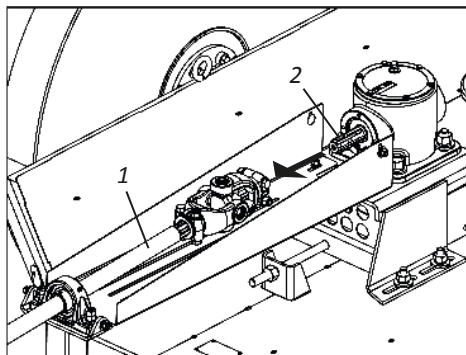
If a large volume of vegetation is encountered or if there is excessive cutting resistance, decrease the working speed or try to cut on a narrower range.

■ Maintenance

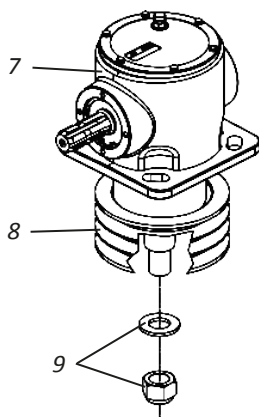
• Pulley nut adjustment

After 50 to 70 hours of operation, check if the pulley nut of the **RAC/RACD** is properly tightened, to do this, proceed as follows:

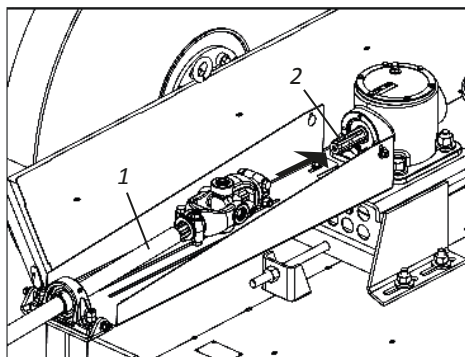
01. Disengage the cardan (1) from the gearbox (2).
02. Then, loosen washers and nuts (3) from the support (4) and the nut and locknut (5) together with the tensioner (6).



03. Then, remove the gearbox (7) together with the pulley (8). Then, loosen the washer and nut (9), lock the pulley (8) and tighten the washer and nut (9) as necessary.



04. Then reassemble all the components and finish fitting the cardan (1) in the gearbox (2).



ATTENTION

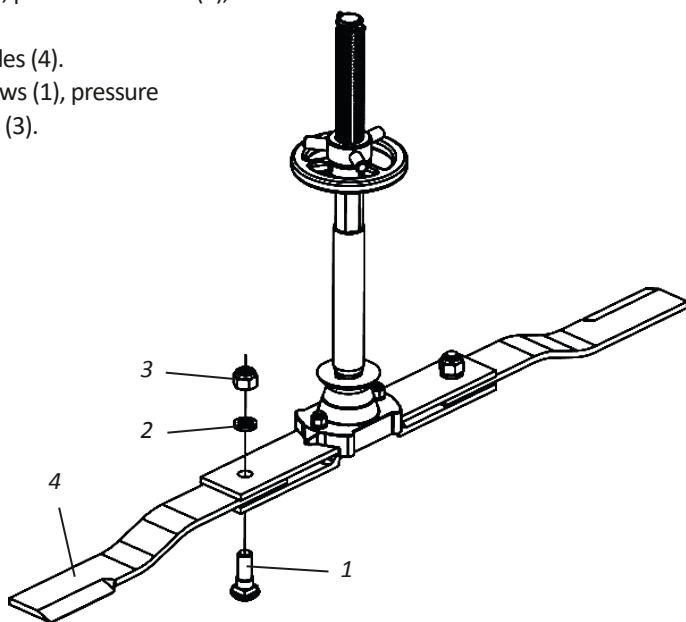
Check the pulley setting when changing the belt set.

▪ Maintenance

• Blade replacement - Part I

Before each use of the **RAC/RACD**, inspect the blades for proper conditions and 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 the blades, proceed as follows:

1. Loosen the screws (1), pressure washers (2), and nuts (3).
2. Then replace the blades (4).
3. Then, loosen the screws (1), pressure washers (2), and nuts (3).



⚠ ATTENTION

When blades break (4), replace them immediately. Ignoring these warnings may cause severe accidents or death.

⚠ IMPORTANT

When changing blades, always change torque avoiding damage to the **RAC/RACD** due to unbalance. Always use original Baldan blades.

🔍 OBSERVATION

Always keep blades sharp to increase performance and require less tractor effort.

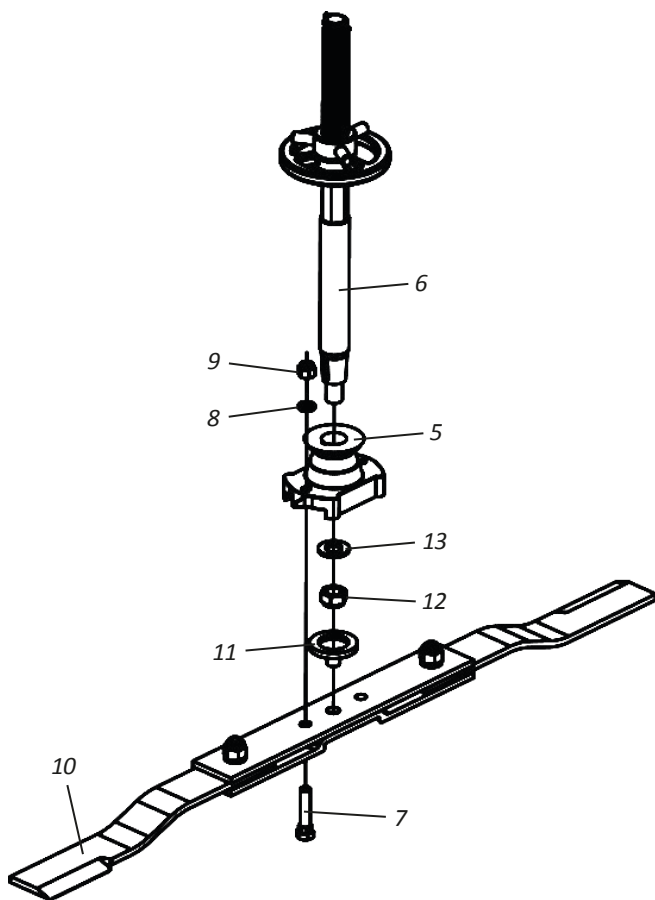
In the event of any loss or breakage of any of the rotating elements, they must be replaced immediately to avoid vibrations and consequently damage to the cutter and work failure.

▪ Maintenance

• Blade replacement - Part II

In order to remove the support (5) from the shaft (6), proceed as follows:

1. Loosen the screws (7), pressure washers (8), and nuts (9).
2. Then remove the blade assembly (10), flange (11), loosen the nut (12) and washer (13).
3. Then use the puller device to remove the bracket (5).

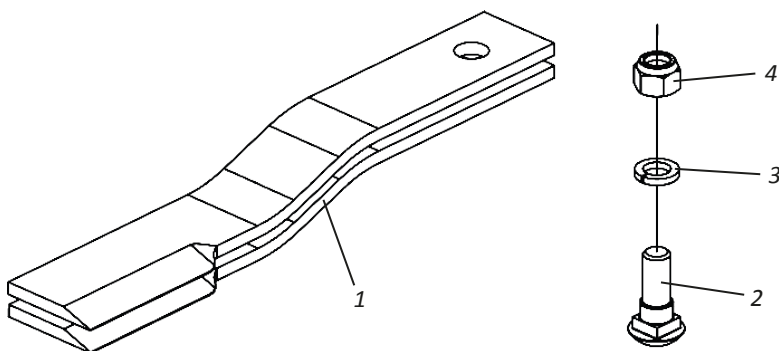


ATTENTION

Periodically check the condition and tightness of the blades' set screws and nuts. Ignoring this warning may cause severe accidents or death.

▪ Maintenance

• Blade replacement - Part III



OBSERVATION

When replacing blades (1), replace screws (2), pressure washers (3), and nuts (4).



ATTENTION

When replacing the blades (1), note that they are supplied in pairs, which must be retained until they are mounted to the RAC/RACD cube. Unbalanced blades can cause excessive vibration and damage bearings, retainers and the transmission case. The weight variation between these blades (1) is within the tolerance limit.

▪ Maintenance

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



ATTENTION

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

• Lubrication

Lubrication is critical for good performance and greater durability of **RAC/RACD** moving parts, helping with 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
Petronas	Tutela Jota MP 2 EP
	Tutela Alfa 2K
	Tutela KP 2K

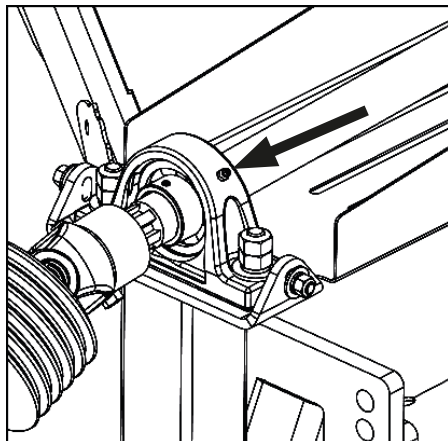
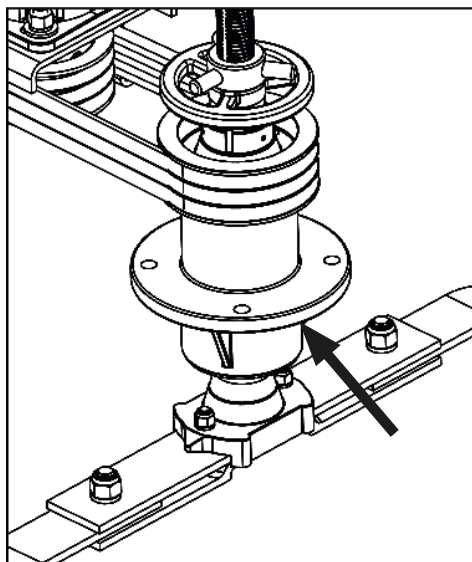


ATTENTION

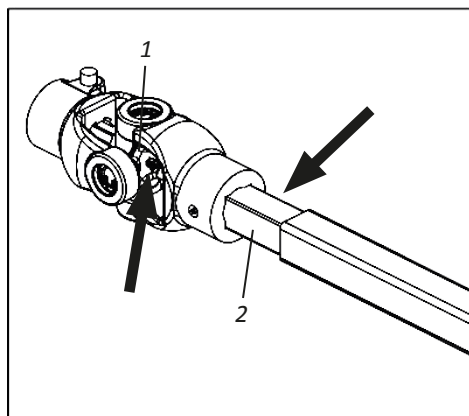
If there are equivalent manufacturers and/or brands that are not listed in the table, consult the manufacturer's technical manual.

▪ Maintenance

- Lubricate every 8 hours of work



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

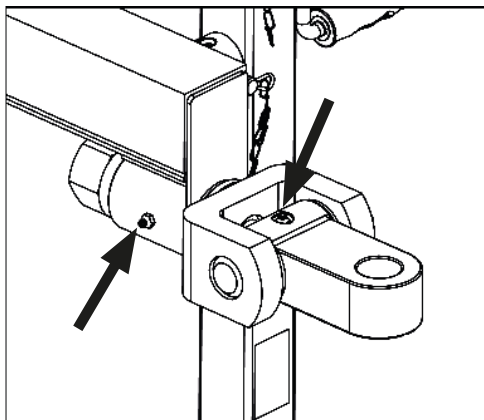


⚠ ATTENTION

When lubricating the RAC/RACD, do not exceed the amount of new grease. Put an enough amount.

▪ Maintenance

- Lubricate every 30 hours of work

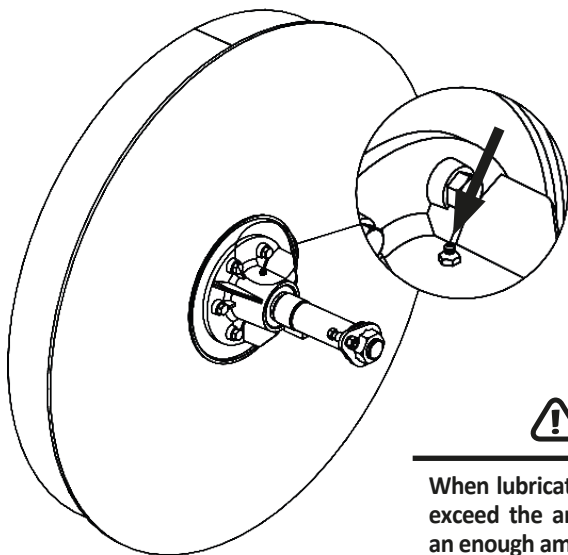


ATTENTION

When lubricating the RAC/RACD, do not exceed the amount of new grease. Put an enough amount.

- Lubrication every 60 hours of work

Lubricate the wheel hubs approximately every 60 hours and at the end of the duty cycle.



ATTENTION

When lubricating the RAC/RACD, do not exceed the amount of new grease. Put an enough amount.

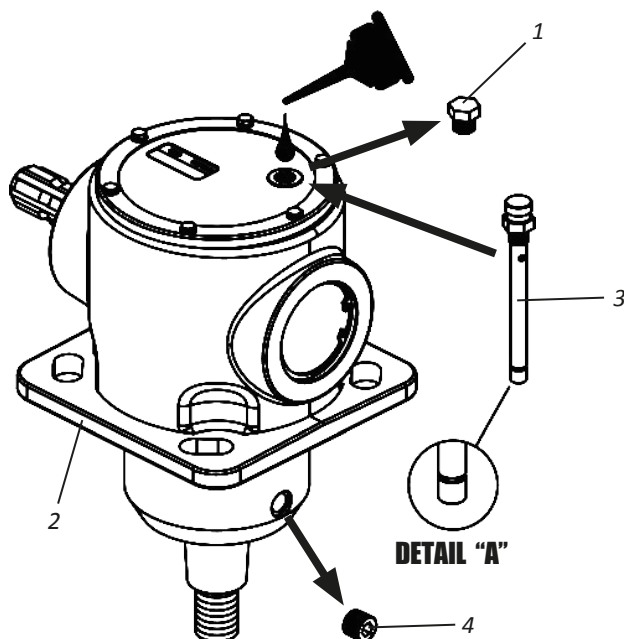
▪ Maintenance

• Oil change

Before putting the **RAC/RACD** into operation, remove the plug (1) from the gearbox (2) and replace with the vent with dipstick (3).

Periodically check the level of the gearbox (2) for this, proceed as follows:

1. Place the **RAC/RACD** in a flat location.
2. Then place the vent with dipstick (3) into the hole without threading it.
3. Then remove the vent with dipstick (3) and check the level marker as shown in detail "A", if necessary, fill or change the oil.



⚠ ATTENTION

Replace the oil every 600 hours of work using 1.65 liters. Only use the specified oil: SAE 90EP.

❗ IMPORTANT

To drain all the gearbox oil (2), remove the drain plug (4).

🔍 OBSERVATION

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

▪ Maintenance

• Storage

Before storing the **RAC/RACD**, 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 returning work with the **RAC/RACD**, lubricate all components and check the oil level.

• Operational Maintenance

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
No cutting	Blades worn or broken	Replace blades (pairs only) as instructed on pages 37 and 39
	PTO rotation is incorrect	Correct rotation 540 Rpm
	Excessive speed	Reduce work speed
	Blades do not spin when PTO 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 (pairs only) as instructed on pages 37 and 39
	Excessive speed	Reduce work speed
	Excessive cutting height	Lower cutting height
	Vegetation of great density and of excessive height	Use reduced speed
Noisy Rotary Cutter	Loose components	Check all the screws and tighten
	Low oil of the multiplier box	Check oil level as instructed on page 43

▪ Maintenance**• Operational maintenance**

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
Vibration	Broken blades	Replace blades (pairs only) as instructed on pages 37 and 39
	Incorrect cardan length	Check the length of the cardan
	Cardan shaft crosshead assembly	Check the correct mounting of the cardan brackets
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 PTO speed	Keep the correct PTO speed

▪ Maintenance

• Precautions

1. Before each work, check the condition of all pins, screws, gear box, and blades. Where necessary, retighten or replace them.
2. At every 8 hours of work, retighten screws and nuts.
3. The displacement speed should be carefully controlled according to the land's conditions.
4. **RAC/RACD** are used in many applications, requiring knowledge and attention during its handling.
5. Only local conditions can determine the best method of operation of **RAC/RACD**.
6. When assembling or disassembling any part of the **RAC/RACD**, employ proper methods and tools.
7. Observe the lubrication intervals carefully in the various lubrication points of the **RAC/RACD**.
8. Always check if the parts presents wear and tear, specially the blades. If there is a need for replacement, **always demand Baldan original parts**.



IMPORTANT

Proper and periodical maintenance are necessary to guarantee a long useful life of RAC/RACD.

▪ **Maintenance**

• **General cleaning**

1. When storing **RAC/RACD**, perform a general cleaning and thoroughly wash it with water only. Make sure the paint has not worn out, if this has happened, give it a overall coat, apply protective oil and fully lubricate the **RAC/RACD**.
2. Completely lubricate the rotary cutter. Check all moving parts of the **RAC/RACD**, if they present wears or gaps, perform the required adjustment or replace the parts, leaving the machine ready for the next work.
3. During the period you are not using the **RAC/RACD**, clean any remaining residues after use such as grass, dirt, crop residues, etc.
4. Spray the entire **RAC/RACD** with preservation oil, never use burned oil.
5. 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.
6. Clean the cardan every 15 days or sooner if necessary.
7. Remove the protective caps, separate "male" from "female" threads, wash and remove crusts, dry and lubricate the sliding parts with grease and reassemble.
8. After all maintenance precautions, store your **RAC/RACD** in a plain surface, covered and dried location, away from animals and children.
9. We recommend to wash the **RAC/RACD** with only water on the beginning of works.



ATTENTION

Do not use chemical products to wash the **RAC/RACD** as it may damage its painting.

• **Rotary cutter conservation - Part I**

To extend the service life and appearance of the **RAC/RACD** longer, follow the instructions below:

1. Wash and clean all components of the **RAC/RAC** during and after the work season.
2. Use neutral products to clean the **RAC/RACD** following the safety and handling guidelines provided by the manufacturer.
3. Always carry out maintenance during the periods indicated in this manual.

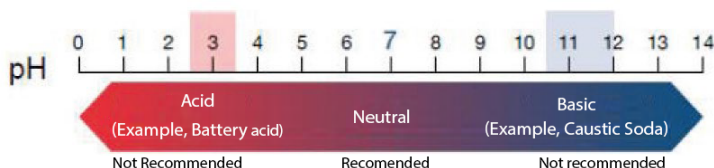
• **Rotary cutter conservation - Part II**

The practices and precautions below if adopted by the owner or operator make a difference for the conservation of the **RAC/RACD**.

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

■ ? S[fWS` UW

2. Use only NEUTRAL detergent and water (pH equal to 7);
3. 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;
4. Stains and dirt not removed with the products should be removed with the aid of a sponge.
5. Rinse the machine with clean water to remove any chemical residues.
6. Do not use:
 - Detergents with a basic active ingredient (7+ pH) may damage/stain the rotary cutter's painting.
 - **Detergents with acid active ingredient (pH less than 7), act as stripper/remover of zinc coating (the protection of parts against oxidation).**



7. Allow the machine to dry in shade so that it does not accumulate water in its components. Very fast drying can cause stains on your paint.
8. After drying, lubricate all chains and greases according to the recommendations in the operator's manual.
9. Spray all the 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 time (absorption) and application intervals as recommended by the manufacturer.

⚠ ATTENTION

Do not use any other type of oil to protect the planer (used hydraulic oil, "burnt" oil, diesel oil, castor oil, kerosene, etc.).

❗ IMPORTANT

We recommend the following protective oils:

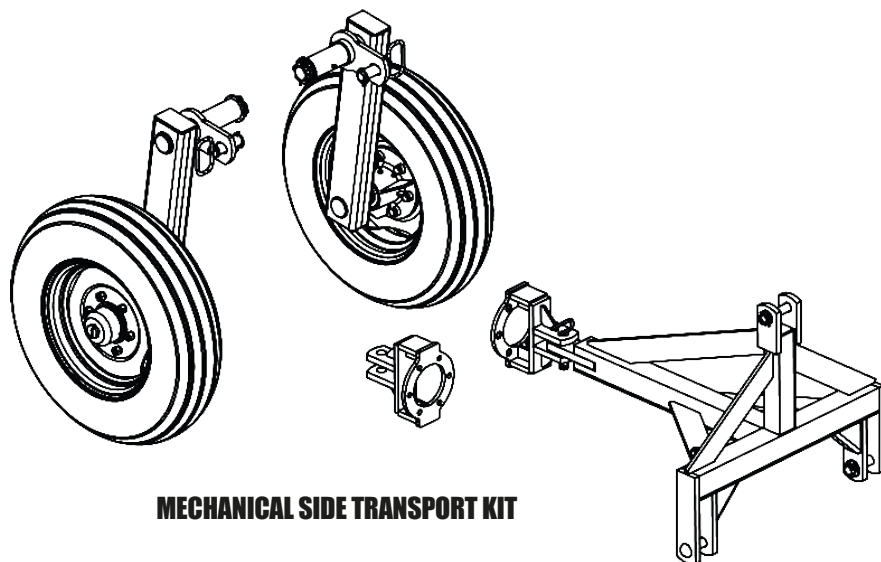
- Bardahl: Agro protective 200 or 300
- ITWChemical: Zoxol DW - Series 4000

🔍 OBSERVATION

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

▪ Optional**• Optional accessories**

The RACD 3400 can be optionally purchased with the **Mechanical Side Transport Kit**.



MECHANICAL SIDE TRANSPORT KIT

■ Identification

• Identification plate

To consult the parts catalogue or request Baldan technical assistance, always identify the model (1), serial number (2) and manufacturing date (3), which can be found on the identification plate of your RAC/RACD.



ATTENTION

The drawings in this Instruction Manual are merely illustrative.

CONTACT

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

Telephone: 0800-152577

email: posvenda@baldan.com.br



PUBLICATIONS

Code: 60550104396 | CPT: RAC00615



▪ 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: _____

City: _____

State: _____

Certificate of Warranty no. : _____

Implement: _____

Serial No.: _____

Purchase Date: _____

Invoice: _____

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■ Notes

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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 to **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 the user has been informed about the current warranty terms and instructed on the usage maintenance precautions.

Implement: _____ Serial Number: _____

Date: _____ Invoice No.: _____

Dealer: _____

Telephone: _____ ZIP: _____

City: _____ State: _____

Owner: _____

Telephone: _____

Address: _____ Number: _____

City: _____ State: _____

Email: _____

Sale date: _____

Signature / Dealer Stamp _____

1st copy - Owner

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Date: _____ Invoice No.: _____

Dealer: _____

Telephone: _____ ZIP: _____

City: _____ State: _____

Owner: _____

Telephone: _____

Address: _____ Number: _____

City: _____ State: _____

Email: _____

Sale date: _____

Signature / Dealer Stamp _____

2nd copy - Dealer

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

Implement: _____ Serial Number: _____

Date: _____ Invoice No.: _____

Dealer: _____

Telephone: _____ ZIP: _____

City: _____ State: _____

Owner: _____

Telephone: _____

Address: _____ Number: _____

City: _____ State: _____

Email: _____

Sale date: _____

Signature / Dealer Stamp _____

3rd copy - Manufacturer (Please fill and send it within 15 days)

1.74.05.0059-5

AC MATÃO
ECT/DR/SP

REPLY MAIL

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 | Brasil

Phone (16) 3221-6500 | Fax: (16) 3382-6500

www.baldan.com.br | email: sac@baldan.com.br

Export: Phone: +55 (16) 3221-6500 | Fax: +55 (16) 3382-4212 | 3382-2480

email: export@baldan.com.br



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