Instruction Manual

DCF-CO

Lime, Fertilizer and Organic Fertilizer Spreader

BALDAN

Presentation

We 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 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 Manual

DCF-CO

Lime, Fertilizer and Organic Fertilizer Spreader

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 repairment 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 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, 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 running 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 FARMING, 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 NR-31 in full.
http://portal.mte.gov.br/legislacao/normas-regulamentadoras-1.htm

▪ Safety rules

• To the operator

THIS SYMBOL INDICATES IMPORTANTE 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 tolearn 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 on the tractor or over the equipment.

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.

ATTENTION

Careful when handling DCF-CO support since there is risk of accidents.

▪ 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. REMENBER, ACCIDENTS CAN BE AVOIDED!

⚠ ATTENTION

Do not perform adjustments while DCF-CO is running. When performing any service on DCF-CO, switch off the tractor first. Use appropriate tools.

⚠ ATTENTION

Avoid heating parts near the fluid lines.

Heating may generate fragility in the material, rupture and exit of the pressurized fluid, causing burns and injuries.

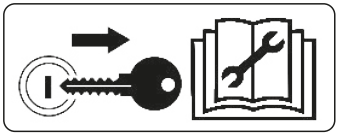
⚠ ATTENTION

When transporting the DCF-CO, do not exceed the speed of 25Km/h or 15 MPH in order to avoid risk of damage and accidents.

⚠ ATTENTION

When working with the DCF-CO, do not exceed the speed of 12Km/h or 7 MPH, avoiding risk of damages and accidents.

⚠ ATTENTION



Remove the ignition key before performing any type of maintenance in DCF-CO. Protect yourself against possible injuries or death caused by DCF-CO unexpected start-up.
Do not start up the tractor if DCF-CO is not properly coupled.

⚠ ATTENTION

Do not operate the DCF-CO if the transmission guard is not properly secured. Only remove the guard to replace the gear, replace it immediately.
Do not perform adjustments while DCF-CO is in motion.

▪ Safety rules

⚠ ATTENTION

Do not climb or remain on the distributor discs under any circumstance. Ignoring this warning may cause severe accidents or death.

⚠ ATTENTION

Do not climb or stand on the conveyor under any circumstance. Ignoring this warning may cause severe accidents or death.

⚠ ATTENTION

Keep clear from mechanisms in motion (cardans, gears, conveyors, and especially distributor discs).

⚠ ATTENTION

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

⚠ ATTENTION

Hydraulic oil works under pressure and may cause serious injuries if there are any leakages. Periodically check hoses for conservation. If there are any sign of leakage, replace them immediately. Before connecting or disconnecting hydraulic hoses, relief system pressure by activating the command with the tractor power switched off.

⚠ ATTENTION

When searching for a possible leakage on the hoses, use a piece of cardboard or wood, never use your hands. Avoid fluid incision into the skin.

⚠ ATTENTION

Before working on or transporting the DCF-CO, check for people or obstructions near the machine.

▪ Safety rules

⚠ ATTENTION

Never weld the wheel mounted with tire, the heat may cause air pressure increase and provoke the explosion of the tire.

When filling the tire, position yourself besides the tire, never in front of it. To inflate a tire, always use a containment device (inflation cage).

⚠ ATTENTION

Keep the articulation area free while the DCF-CO is in operation.

In closed curves, prevent tractor wheels from touching the head.

⚠ ATTENTION

There is risk of injuries or death to the DCF-CO operator and bystanders during operations due to the following reasons:

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

⚠ ATTENTION

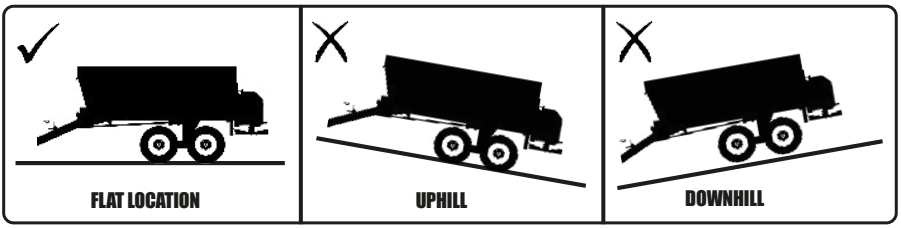
Dispose residues inappropriately affects the environment and the ecology since you will be polluting rivers, canals or the soil.

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

PROTECT THE ENVIRONMENT!

⚠ ATTENTION

Only stop the DCF-CO on a flat location. Do not park the DCF-CO uphill or downhill.



▪ Safety rules

⚠ ATTENTION

To prevent intoxications, injuries or death when the DCF-CO is running and rotating discs are spinning, proceed as follows:

- Stop and turn the equipment off if there are people within 50 meters.
- Do not be exposed to product drift.

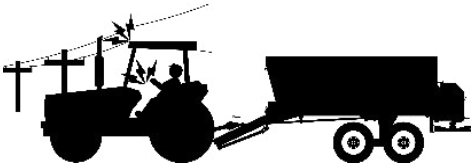
- Do not place hands or feet under the rotatinf discs.

- Never allow people on or under the DCF-CO.

⚠ ATTENTION | **The DCF-CO may release fragments or throw objects at high speeds that can cause serious injury or death to bystanders.**

⚠ ATTENTION

Be careful when driving or working with DCF-CO under power lines, low tree branches and other high obstructions, avoiding serious injury or even death.



⚠ ATTENTION

Do not get exposed to the air coming out of rotating discs. Use protection.
- During handle and application, use PPE.
- Read the product's label carefully.
- Wash your hands thoroughly after handling the products.
- In case of intoxication by inhalation or arpiration, keep the person in a ventilated area and immediately seek medical advice, taking the label or the packaging of the product.

INTOXICATION SYMPTOMS:
Weakness, headache, chest pressure, chest tightness, blurred vision, unresponsive pupils, abundant salivation, sweating, nausea, vomiting and abdominal cramps.

▪ Safety rules

• PPE Equipament

⚠ ATTENTION | **DO NOT WORK WITH DCF-CO WITHOUT FIRST WEARING PPES (SAFETY EQUIPMENT). IGNORING THIS WARNING MAY CAUSE DAMAGES TO HEALTH, SEVERE ACCIDENTS OR DEATH.**

When performing certain procedures with the **DCF-CO**, place the following Safety Equipment (PPE) below:

❗ IMPORTANT

The safety practice must be performed in all stages of working with the DCF-CO, thus avoiding accidents such as impact of objects, fall, noise, cuts and ergonomics, ie the person responsible for operating the DCF-CO is subject to internal and external damage to your body.

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

▪ Warnings

⚠ When operating with the DCF-CO, do not let people stand near to or on the machine.

⚠ When operating the DCF-CO, check that there are no people in the line of launch of the distributor discs.

⚠ When performing any maintenance service, use PPEs equipment.

⚠ When conducting checks inside the DCF-CO, do no lean on the distributor discs.

⚠ Do not wear loose clothing, as it may get caught in the DCF-CO.

⚠ Whe operating the tractor engine, properly sit in the operator's seat and be aware of the full knowledge of the correct and safe handling of both the tractor and the DCF-CO. 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 engine in a closed environment or with no proper ventilation since the exhaust gases are harmful to health.

⚠ When maneuvering the tractor to engage the DCF-CO, make sure you have enough space and no one around, always maneuver at idle and be prepared to brake in an emergency.

⚠ Do not perform adjustments while the DCF-CO is in operation.

⚠ When working in sloped terrains, proceed with precautions, always trying to maintain the required stability. In case of imbalance, reduce acceleration, turn the wheels to the slope side of the terrain and never lift the DCF-CO.

⚠ Always drive the tractor at speeds compatible to safety, especially during woks in bumpy terrains or slopes, keep the tractor always engaged.

⚠ When driving the tractor in highways, keep the brake pedals interconnected.

⚠ Do not work with the tractor in highways, keep the brake pedals interconnected.

⚠ When leaving the tractor, put the gear lever in neutral position and apply the parking brake. Never leave the DCF-CO engaged in the tractor when its hydraulic system is in the raised position.

⚠ All maintenance work in the DCF-CO must be carried out only after stopping and turning the tractor off.

⚠ Do not travel on highways especially at night. Use warnings signs throughout the route.

⚠ If you need to travel on highways with the DCF-CO, consult the transit authorities.

⚠ Do not allow people who have not been trained to use the DCF-CO, that is, that do not know how to operate it correctly.

⚠ Do not transport or work with the DCF-CO near obstacles, rivers or streams.

⚠ The transportation of people on self-propelled machines and implements is forbidden.

⚠ Changes in the original features of the DCF-CO are not allowed, as they may chance safety, operation, and useful life characteristics of the DCF-CO.

▪ Warnings

⚠ Please read all safety information contained in this manual and the DCF-CO carefully.

⚠ Always check that the DCF-CO is in perfect conditions of use. In the event of any irregularity the may interfere with the operation of the DCF-CO, ensure proper maintenance before any work or transportation.

⚠ Maintenance and especially inspection in risk areas of the DCF-CO must be done by qualified or trained workers only, observing all safety guidelines. Before starting maintance, disconnect all DCF-CO drive systems.

⚠ Periodically check all components of the DCF-CO before use.

⚠ Due to the equipment used and work conditions on field or in maintenance areas, precautions are required. Baldan has no direct control over precautions, so it is the owner's responsibility to implement safety procedures while working with the DCF-CO.

⚠ Check the recommended minimum tractor power for each DCF-CO model. Only use the tractor wit power and ballast compatible with the load and topography of the terrain.

⚠ When transporting the DCF-CO, travel at speeds compatible with the terrain and never exceed 16 km/h, as this reduces maintenance and consequently increases the useful life of the DCF-CO.

⚠ Do not approach the moving distributors discs.

⚠ Do not stay in the product throwing line.

⚠ Never uncouple the DCF-CO with product in the trolley. Ignoring this warning can cause risk of tipping over accidents.

⚠ Alcoholic beverage or some medications may cause loss of reflexes and change the operator's physical conditions. Therefore, never operate the DCF-CO under the influence of these substance.

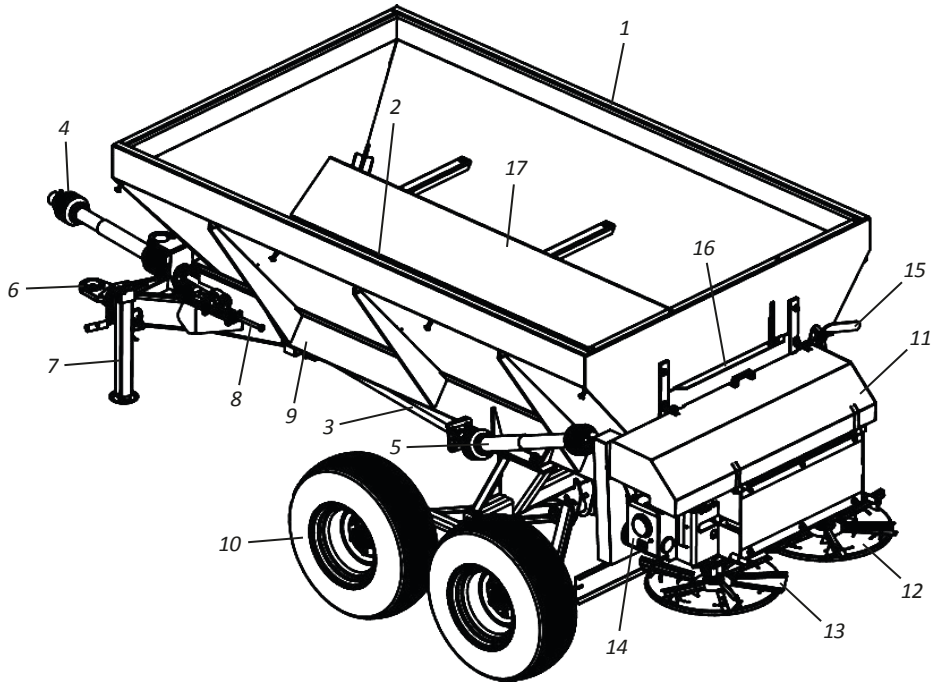
⚠ Read or explain all the procedures of this manual to the operator who cannot read.

In the case of doubts consult the After Sales.
Phone: 0800-152577 / E-mail: posvenda@baldan.com.br

▪ Components

• DCF-CO - Lime, Fertilizer and Organic Fertilizer Spreader (Cardan)

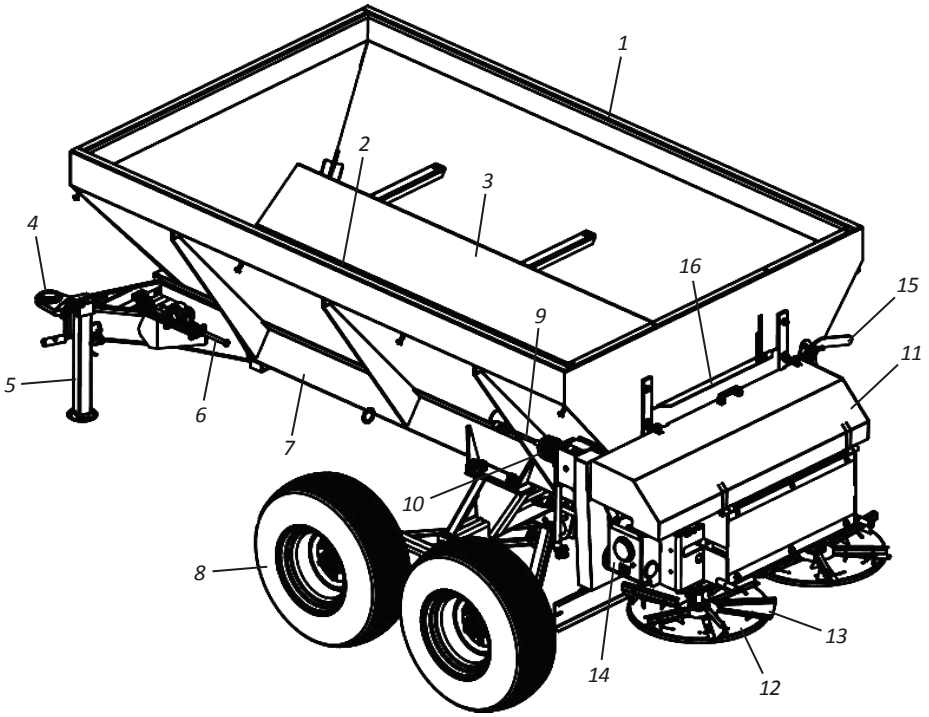
1. Bucket
2. Modulated Conveyor
3. Central Shaft
4. Central Cardan
5. Lateral Cardan
6. Hook Shackle
7. Support Bracket
8. Conveyor Turnbuckle
9. Framework
10. Tire
11. Transmission protection
12. Distributor discs
13. Adjustable vanes
14. Gearbox
15. Lever
16. Rear Cover
17. Deflector



▪ Components

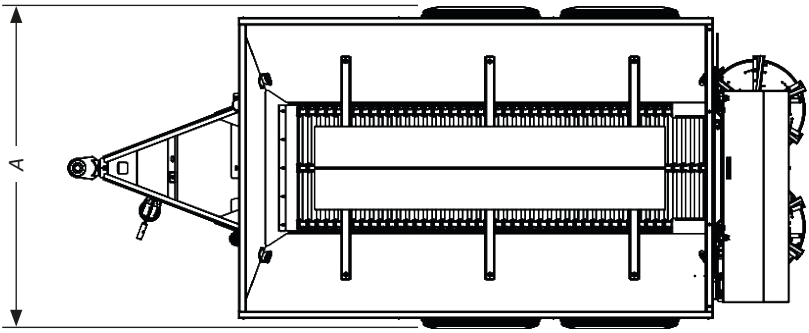
• DCF-CO - Lime, Fertilizer and Organic Fertilizer Spreader (Hydraulic Engine)

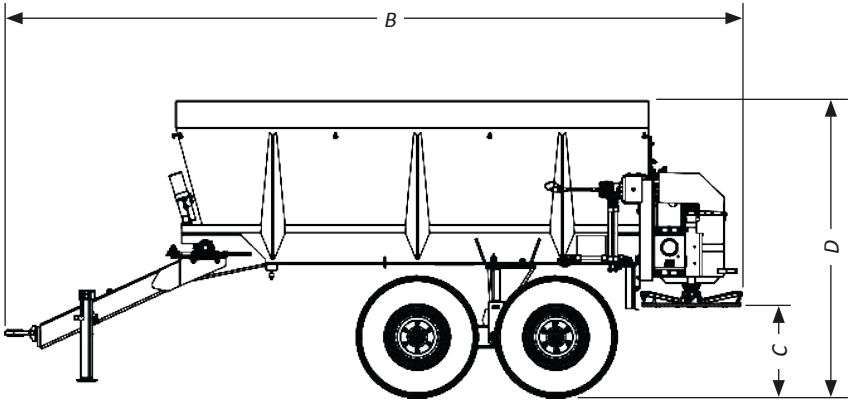
1. Bucket
2. Modulated Conveyor
3. Deflector
4. Hook Shackle
5. Support Bracket
6. Conveyor Turnbuckle
7. Framework
8. Tire
9. Hydraulic Hose
10. Hydraulic engine
11. Transmission Protection
12. Distributor Discs
13. Adjustable Vanes
14. Gearbox
15. Lever
16. Rear Cover



▪ Dimensions

• DCF-CO - Lime, Fertilizer and Organic Fertilizer Spreader





Model	Measurement A (mm)	Measurement B (mm)	Measurement C (mm)	Measurement D (mm)
DCF-CO 3000 (Cardan and Hydraulic Engine)	1800	3900	582	1700
DCF-CO 6000 (Cardan and Hydraulic Engine)	2000	4600	582	1800
DCF-CO 8000 (Cardan and Hydraulic Engine)	2000	4610	582	1900

▪ Specifications

- **DCF-CO - Lime, Fertilizer and Organic Fertilizer Spreader (Cardan)**
- **DCF-CO - Lime, Fertilizer and Organic Fertilizer Spreader (Hydraulic Engine)**

Model	Load Capacity (m^3)	Wheelset	Standard Tires	Approximate Weight (Kg)	Tractor Power (Hp)
DCF-CO 3000	1,60	Simple (2 Tires)	750x16 (2 Tires)	1070	50 - 70
DCF-CO 6000	2,80	Tandem (4 Tires)	750x16 (4 Tires)	1390	75 - 90
DCF-CO 8000	3,80	Tandem (4 Tires)	11L-15 (4 Tires)	1480	90 - 100

Approximate gauge ..... 1600 mm
PTO in RPM ..... 540 Rpm

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 USING OF THE DCF-CO

- The **DCF-CO** is a high strength equipment, whose special feature is greater load capacity and a thicker belt allowing better distribution of the organic compound.
- The **DCF-CO** muts be driven and operated by a properly instructed operator.

DCF-CO USE IS NOT ALLOWED

- The avoid damage, serious accidents or death, DO NOT transport people on any part of the **DCF-CO.**
- Using the **DCF-CO** to attach, tow, or push other implements or attachments is NOT allowed.
- The **DCF-CO** should NOT be used by an experienced operator who does not knows all the driving, command and operation techniques.

▪ Assembly

The **DCF-CO** leaves factory semi-assembled, only requiring the assembly of its tires, which were removed for easier loading and transportatin. To assembly it, follow the instructions bellow.

⚠ The **DCF-CO** must be assembled in the resale, by people trained, instructed and qualified for this work.

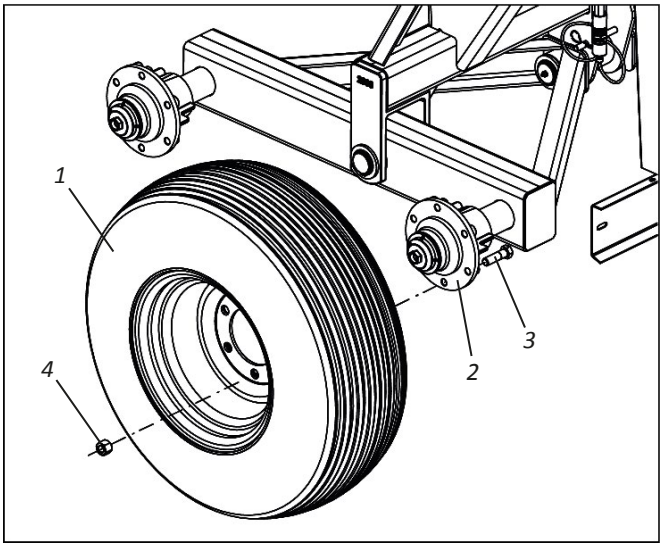
⚠ Before assembling the **DCF-CO**, look for a good place for easy identification of the parts and their assembly.

⚠ Do not wear loose clothing, as they may get caught in the **DCF-CO**.

• Tire Assembly

In order to assemble the tires, proceed as follows:

01 - Attach the tire (1) to the hub (2) securing it with screws (3) and nuts (4).



⚠ ATTENTION

Check the correct tire calibration on page 74.

NOTE

Repeat the procedure above to assemble the other discs.

▪ Assembly

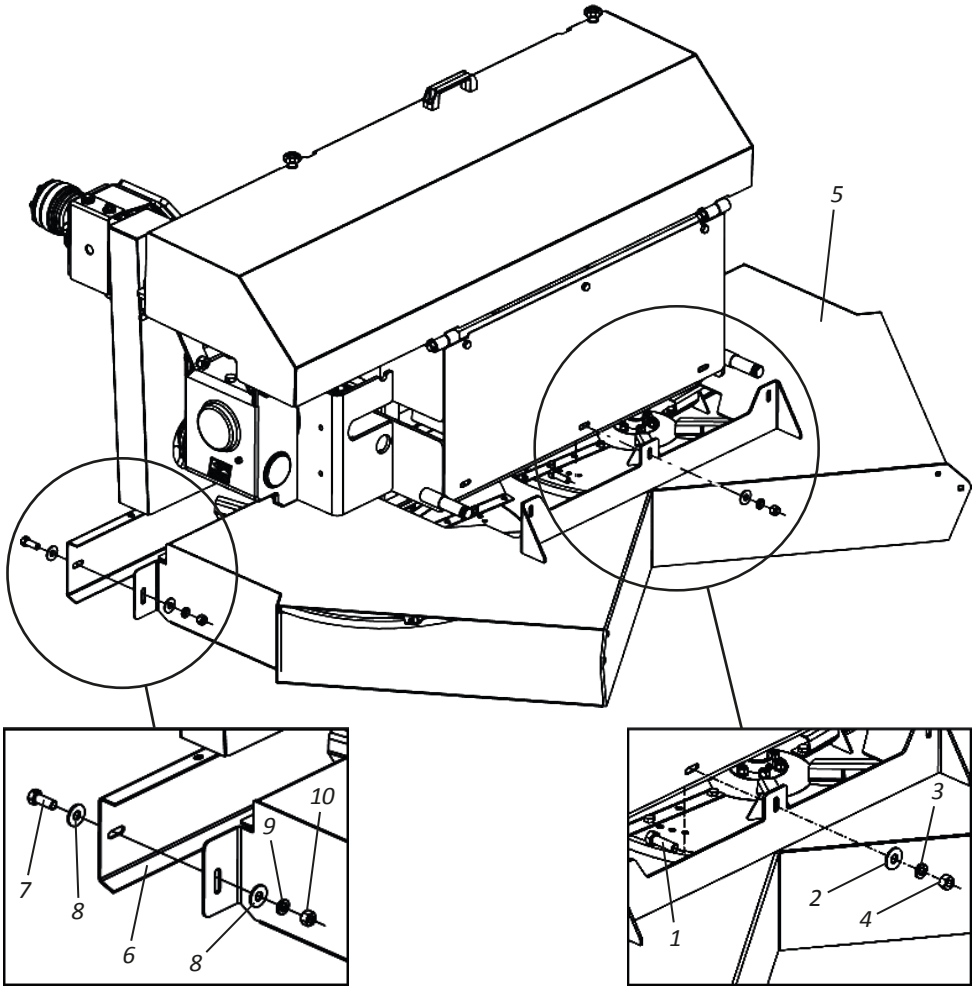
• Assembly the driver box (Optional) - Part I

To mount the driver box (1) proceed as follows:

01 - Loosen the screws (1), flat washers (2), pressure washers (3), and nuts (4).

02 - Then, attach the driver box (5) to the **DCF-CO** and use the same screws (1), plain washers (2), pressure washers (3) and nuts (4) for the central fixing of the driver box.

03 - The, secure the driver box (6), securing them through screws (7), plain washers (8), pressure washers (9), and nuts (10).

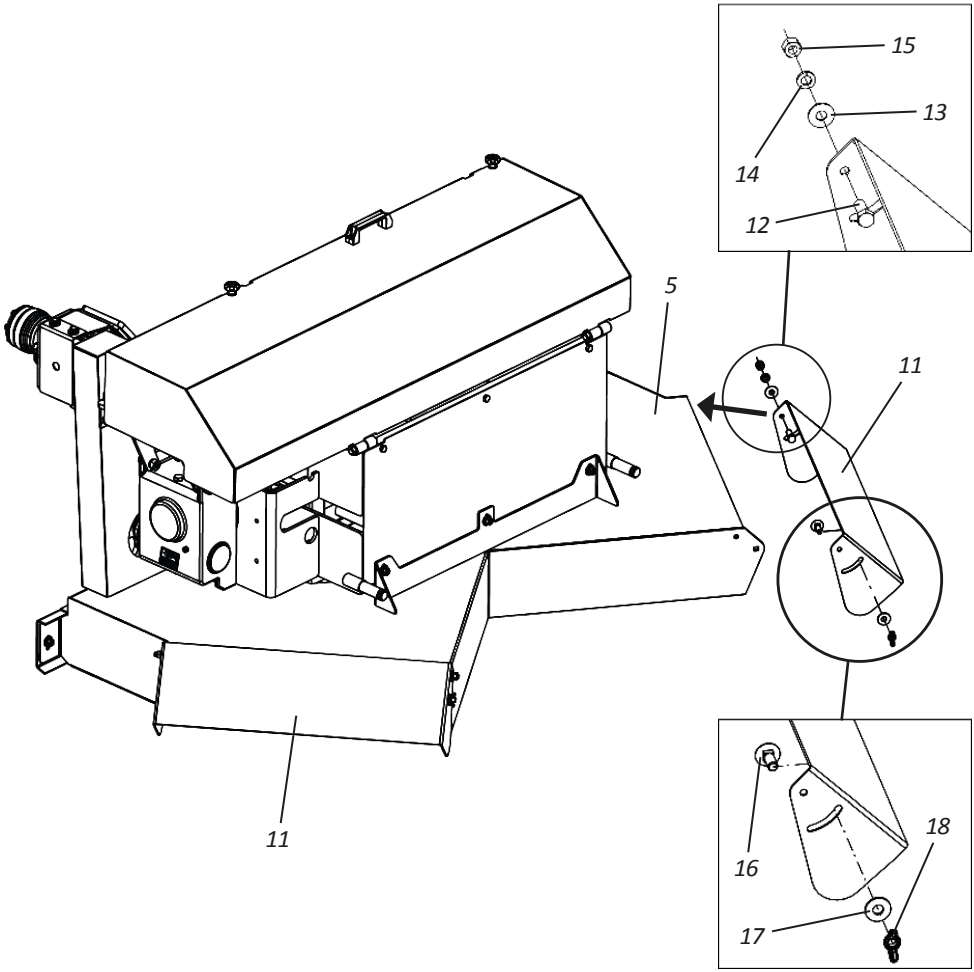


▪ Assembly

• Assembly the driver box (Optional) - Part II

04 - Then fasten the guide plates (11) to the guide plates (5) through the screws (12), plain washers (13), lock washers (14) and nuts (15).

05 - Finish by replacing the pin (16), flat washer (17), and wing nut (18).



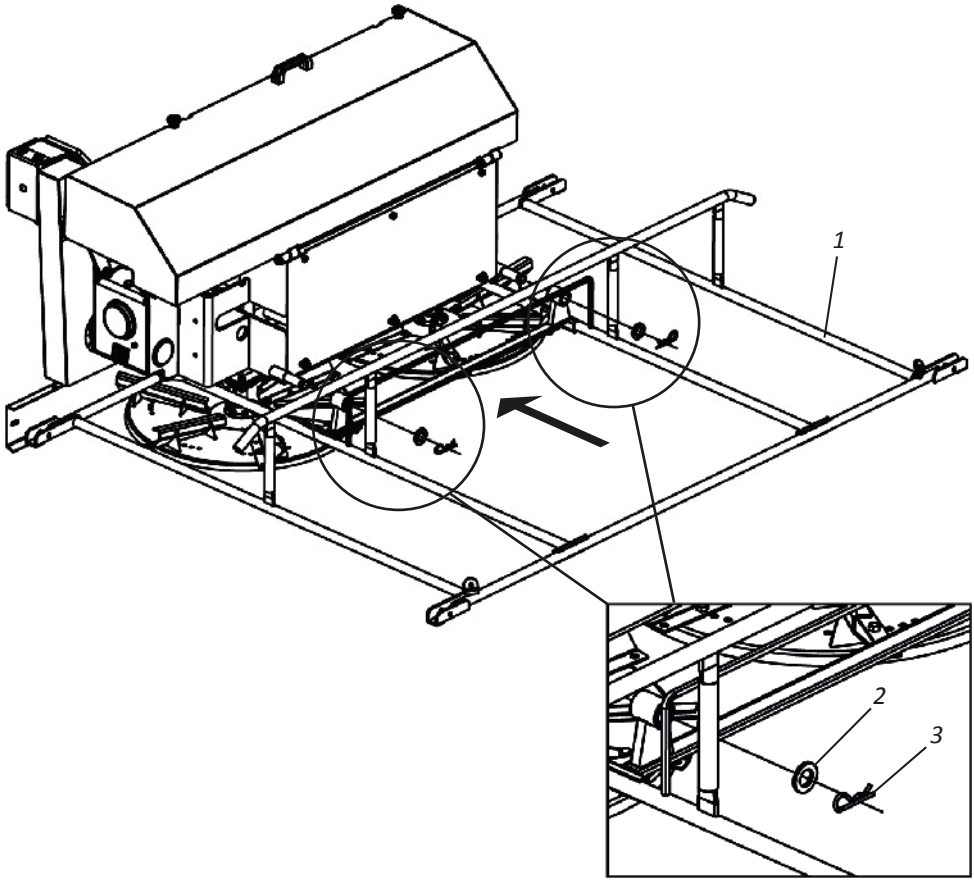
ATTENTION | **To adjust the guide plates (11), follow the instructions on page 59.**

▪ Assembly

• Assembling the canvas baffle (Optional) - Part I

Deflector assemble the canvas baffle, proceed as follows:

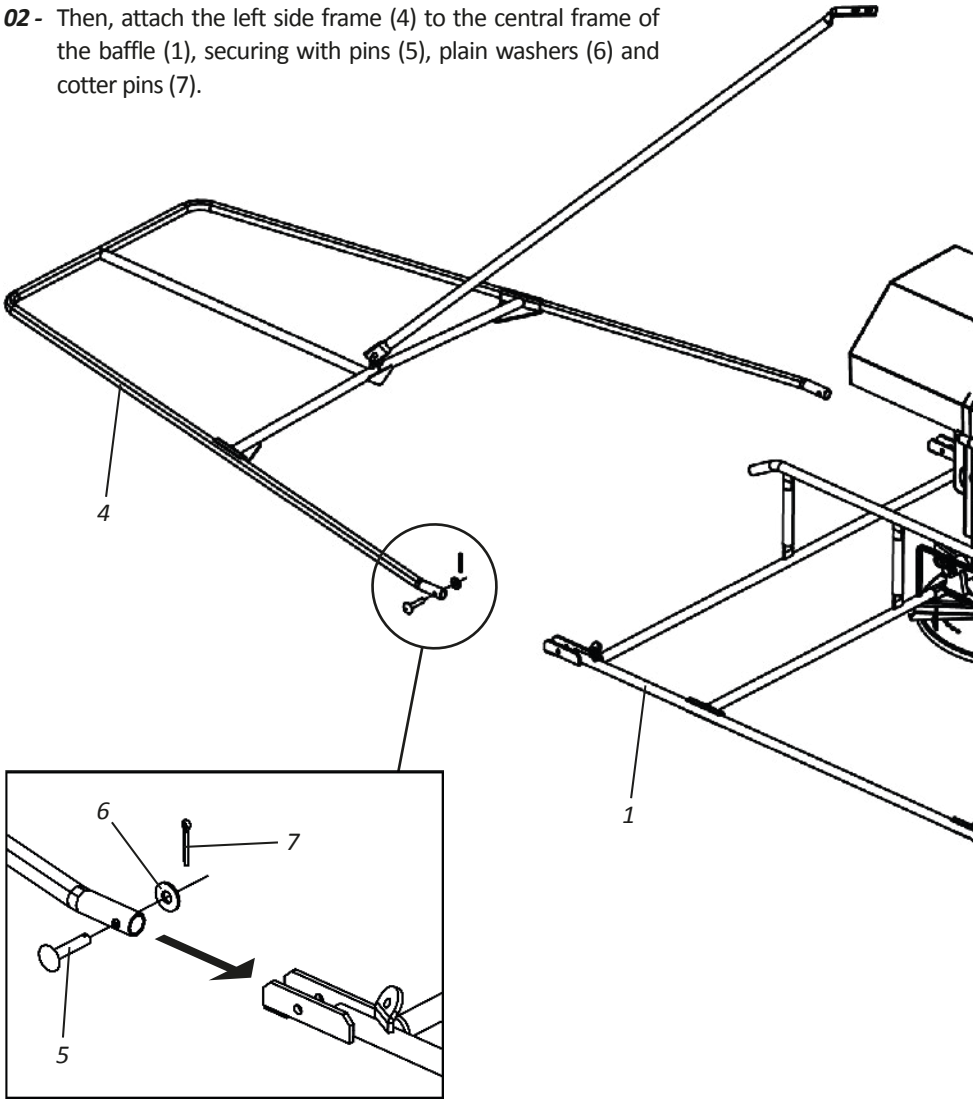
01 - Couple the central frame of the deflector (1) to the **DCF-CO** attaching it with flat washers (2) and locks (3).



▪ Assembly

• Assembling the canvas baffle (Optional) - Part II

02 - Then, attach the left side frame (4) to the central frame of the baffle (1), securing with pins (5), plain washers (6) and cotter pins (7).



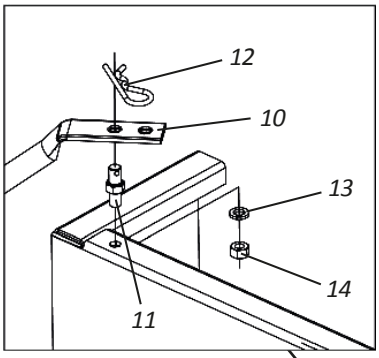
NOTE | **Repeat the procedure above to assembly the right side frame on the central frame of the baffle (1).**

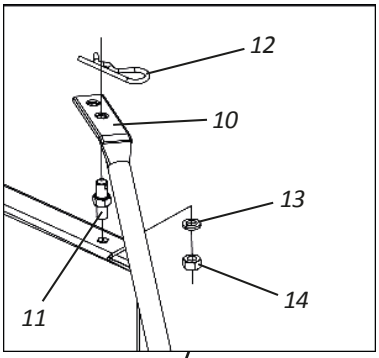
▪ Assembly

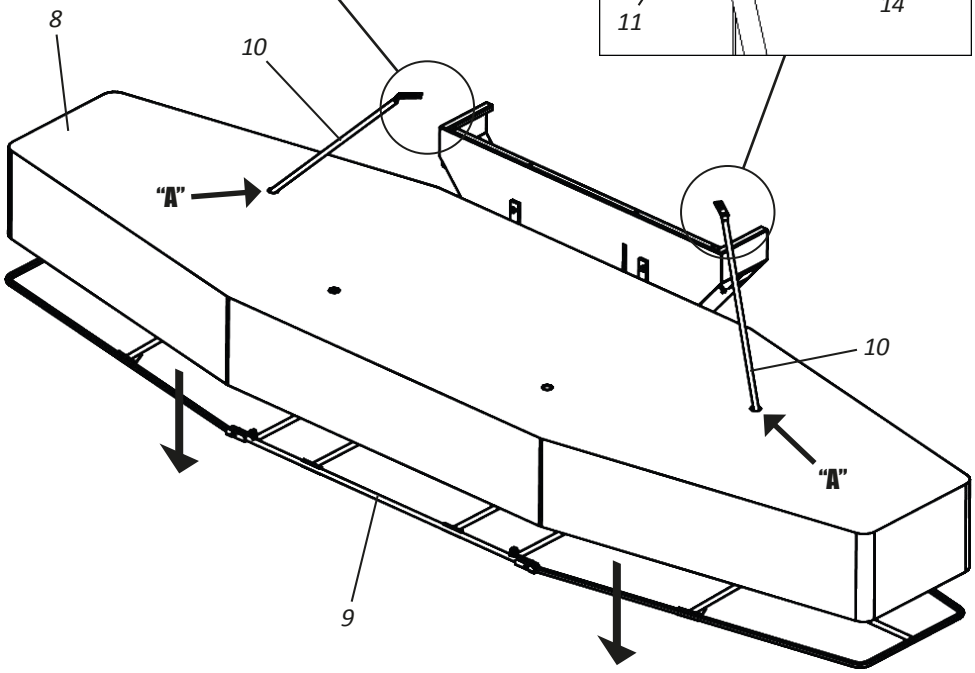
• Assembling the canvas baffle (Optional) - Part III

03 - Then, place the canvas (8) over the frames (9), passing the rods (10) inside holes **"A"**.

04 - Then, fasten the rods (10) in the **DCF-CO**, using the shaft (11), lock (12), pressure washers (13) and nut (14).





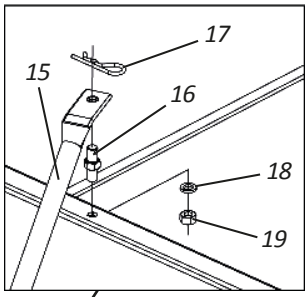


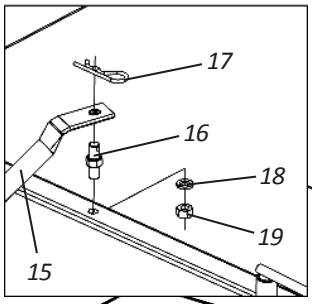
▪ Assembly

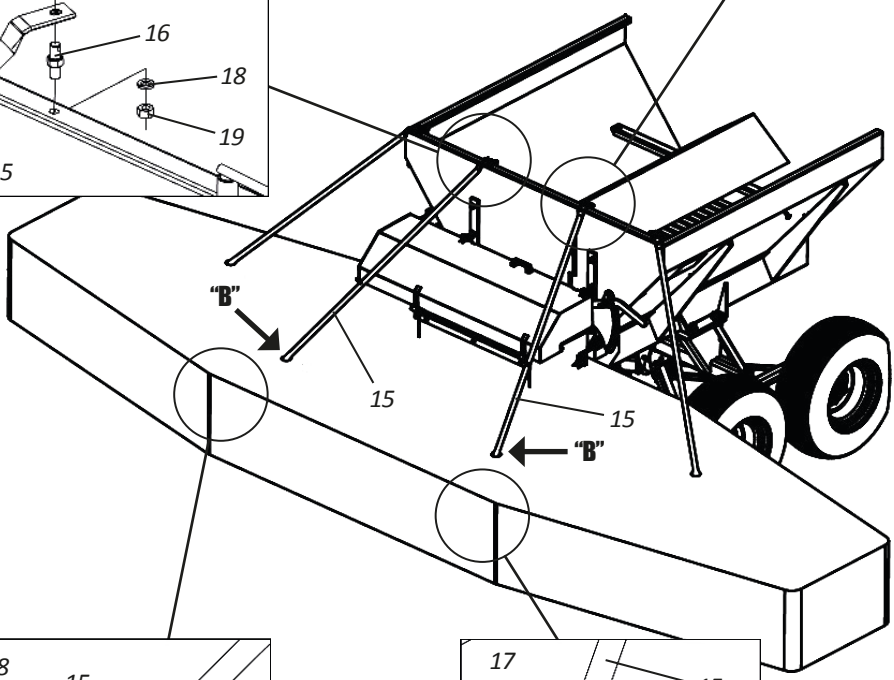
• Assembling the canvas baffle (Optional) - Part IV

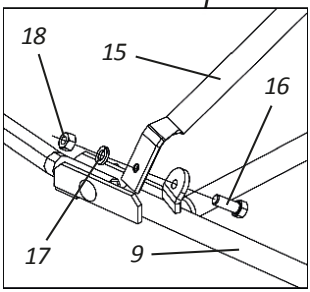
05 - Then, slide the rods (15) through holes **"B"** and secure them to the frames (9) through the screws (16), pressure washers (17) and nuts (18).

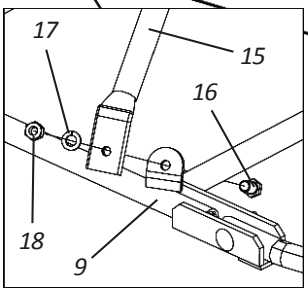
06 - Then, fasten the rods (15) in the **DCF-CO**, using the shaft (16), lock (17), pressure washers (18) and nuts (19).







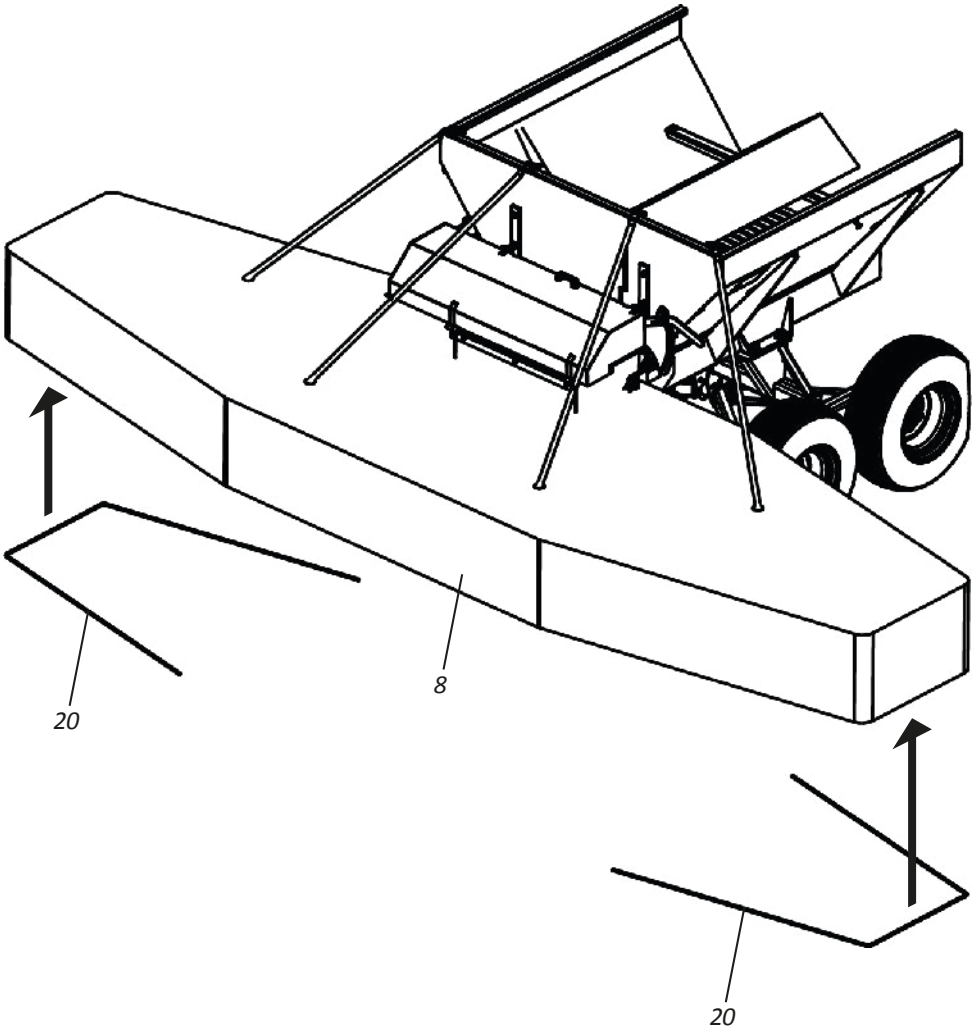




▪ Assembly

• Assembling the canvas baffle (Optional) - Part V

07 - Finish by placing the spacers (20) on the bar inside the canvas (8).



▪ Assembly

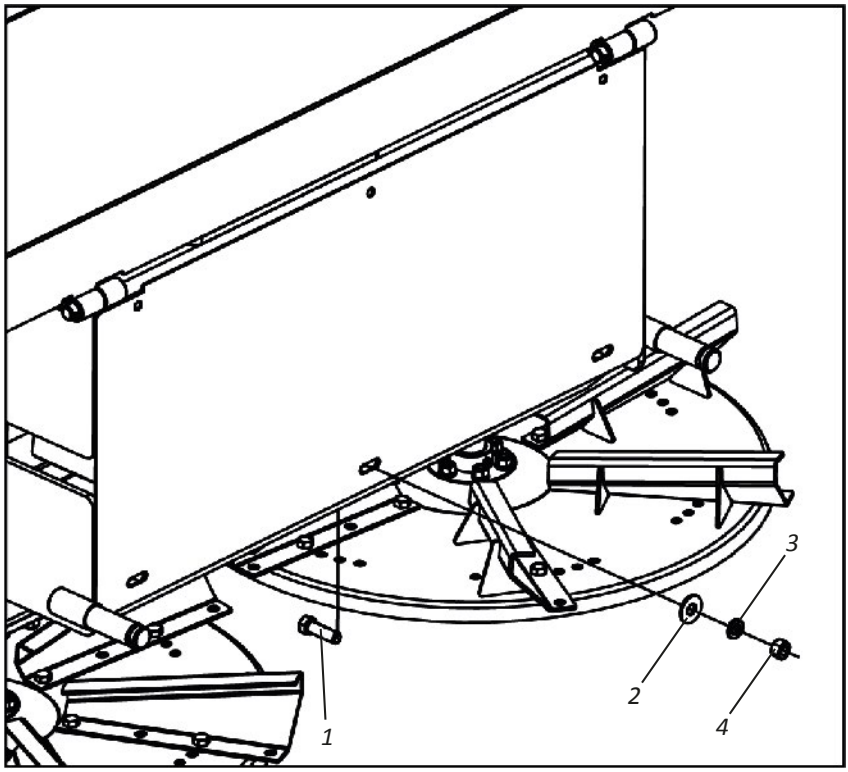
• Assembling the rubber baffle (Optional) - Part I

⚠ ATTENTION

Before beginning the rubber baffle assembly procedure (optional), make sure that the DCF-CO is engaged to the tractor. Ignoring this warning will make the DCF-CO tip, causing damage to the esquipment, serious injury or death.

To assemble the rubber baffle, proceed as follows:

01 - Remove screws (1), flat washers (2), pressure washers (3) and nuts (4).



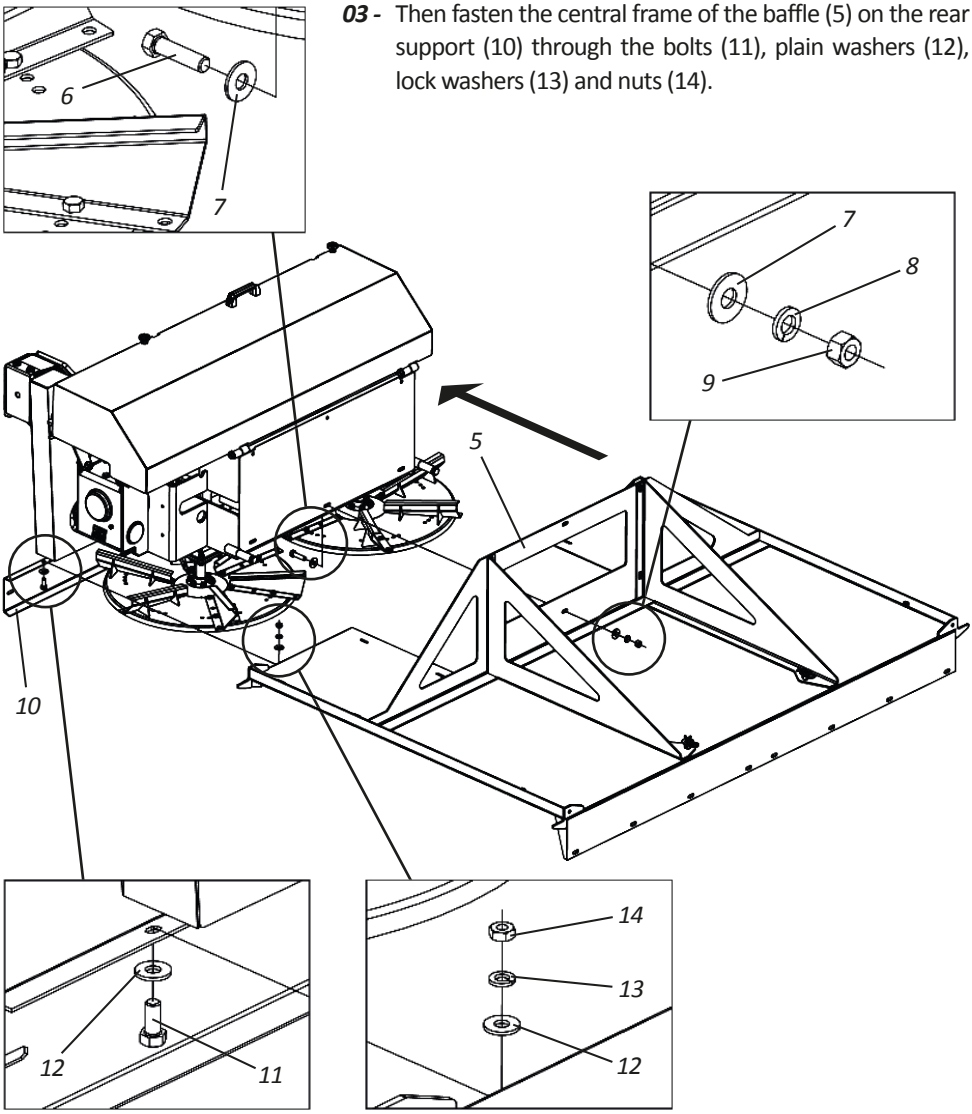
NOTE **Removed screws (1), plain washers (2), spring washers (3) and nuts (4) will be replaced by screws, washers and nuts acompanying the baffle.**

▪ Assembly

• Assembling the rubber baffle (Optional) - Part II

02 - Then, couple the central guard of the baffle (5) into the **DCF-CO** attaching it with screws (6), flat washers (7), pressure washers (8) and nuts (9).

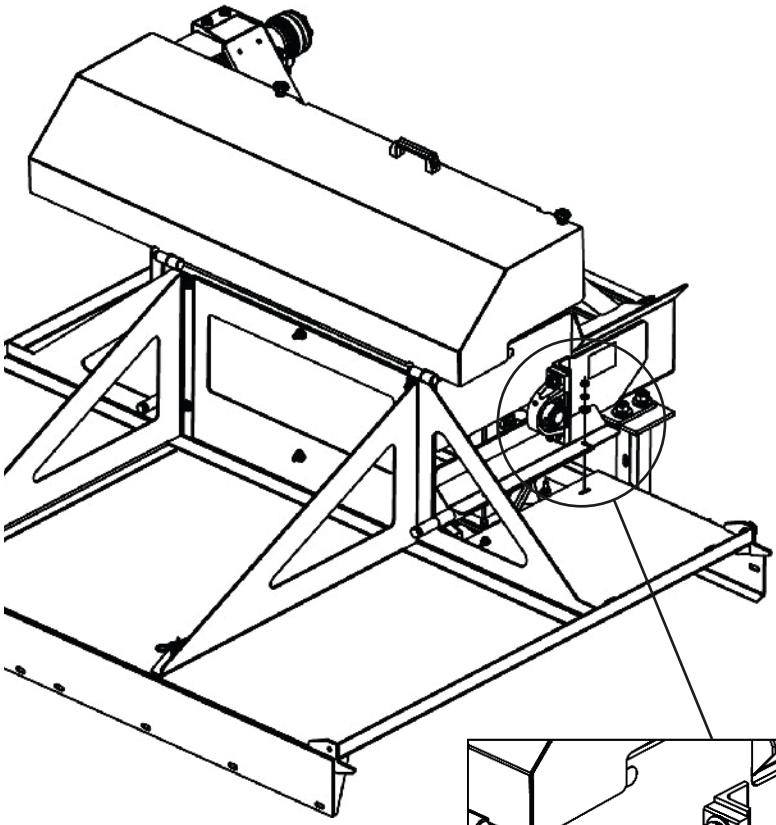
03 - Then fasten the central frame of the baffle (5) on the rear support (10) through the bolts (11), plain washers (12), lock washers (13) and nuts (14).

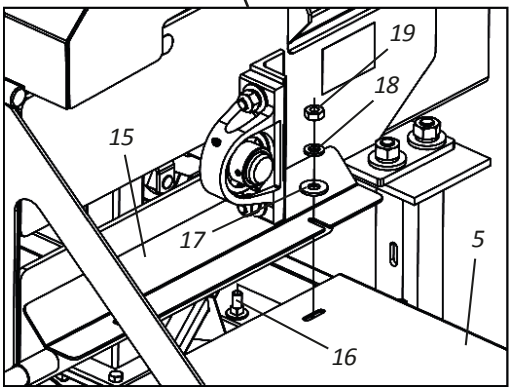


▪ Assembly

• Assembling the rubber baffle (Optional) - Part III

04 - Then attach the sealing plate (15) in the central frame of the baffle (5) using screws (16), flat washers (17), pressure washers (18) and nuts (19).





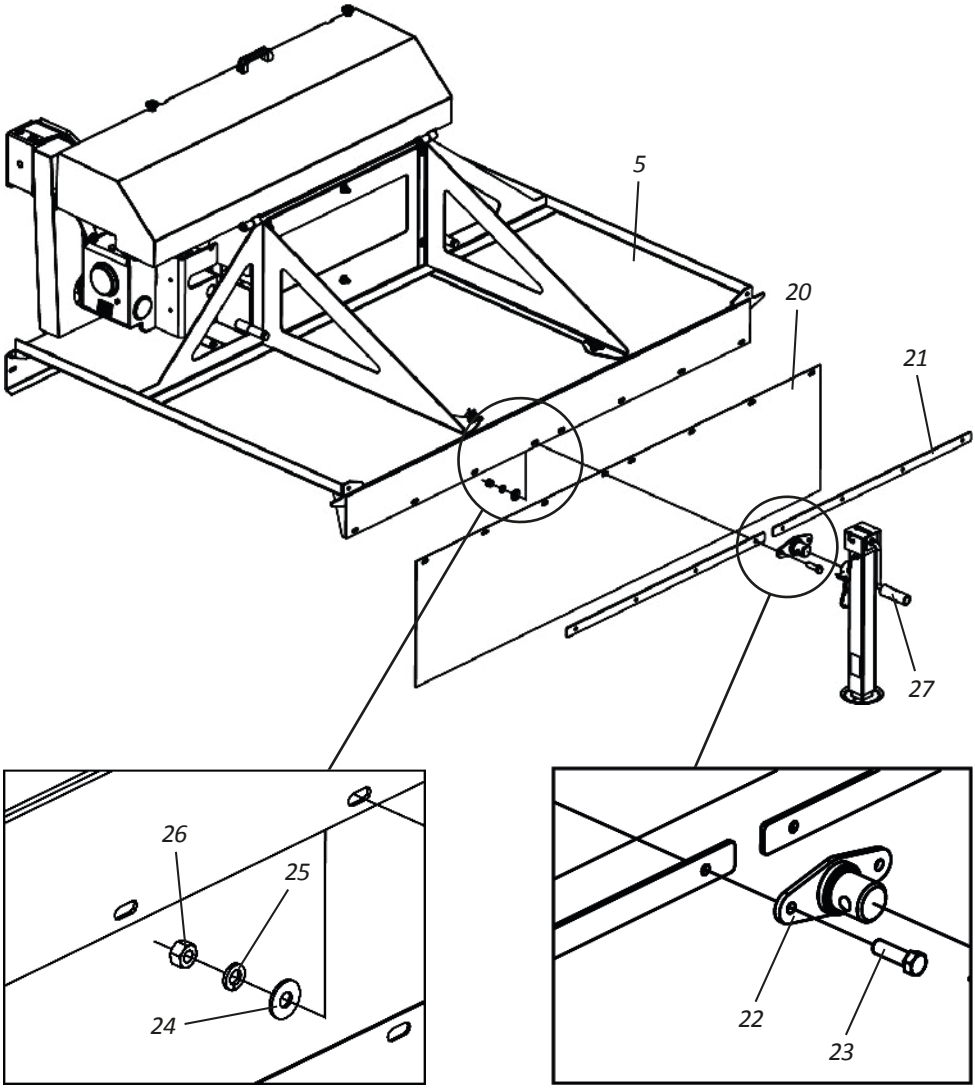
NOTE

The cover plate (15) must be mounted on both sides of the DCF-CO.

▪ Assembly

• Assembling the rubber baffle (Optional) - Part IV

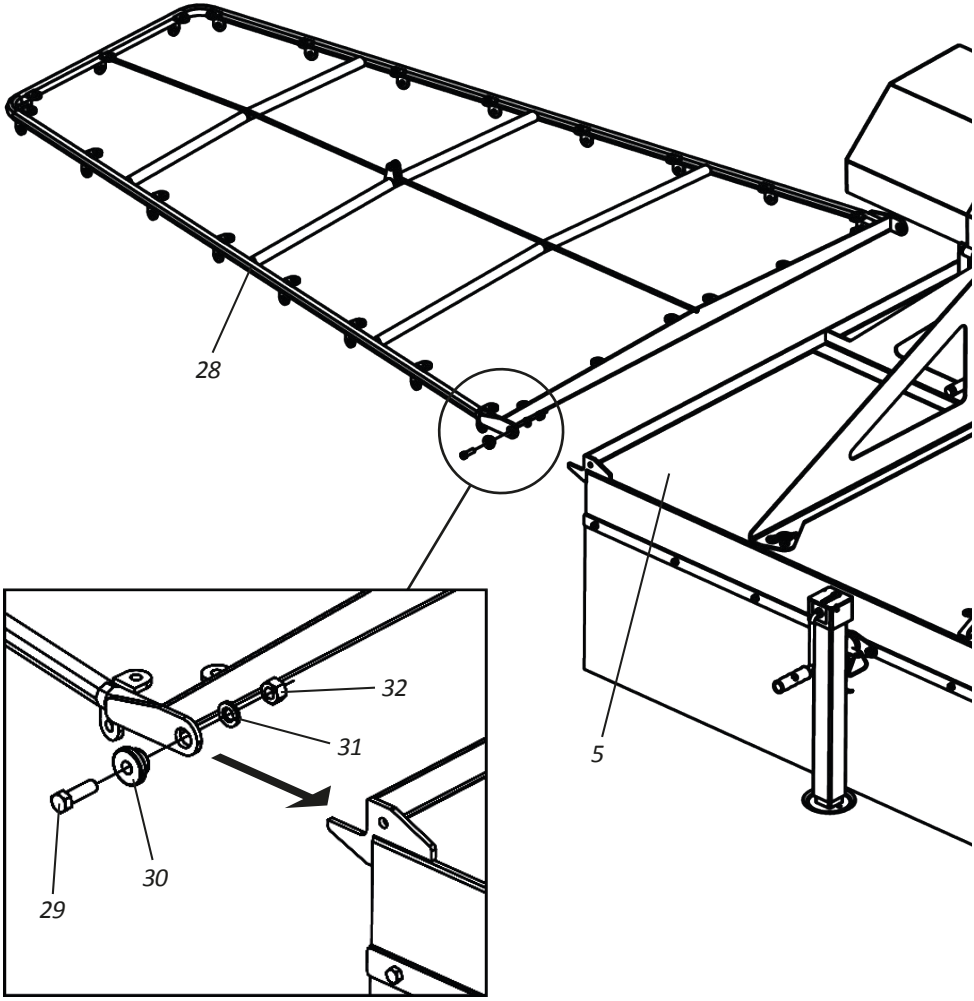
05 - The secure the rear guard (20) in the central frame of the baffle (5) using support bars (21), bearing (22), screws (23), plain washers (24), pressure washers (25) and nuts (26). Finish the assembly by attaching the support bracket (27).



▪ Assembly

• Assembling the rubber baffle (Optional) - Part V

06 - Then couple the left side frame (28) in the central frame of the baffle (5) securing it with screws (29), bushing (30), pressure washers (31) and nuts (32).



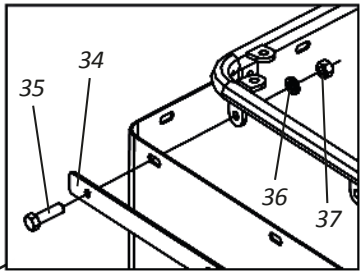
NOTE **Repeat the procedure above to assembly the right side frame on the central frame of the baffle (5).**

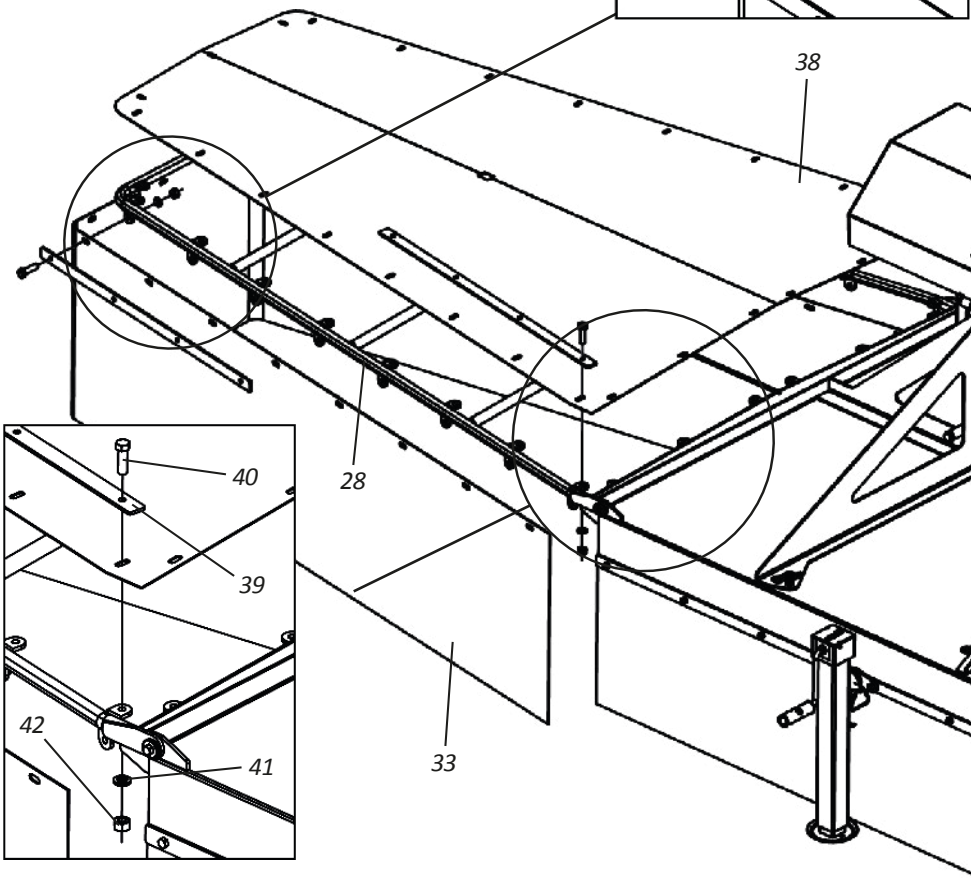
▪ Montagem

• Montagem do defletor de borracha (Opcional) - Parte VI

07 - The attach the side rubber guard (33) on the left side frame (28) using bars (34), screws (35), lock washers (36), and nuts (37).

08 - The place the upper rubber guard (38) on the left side frame (28), securing it through the bars (39), screws (40), pressure washers (41) and nuts (42).



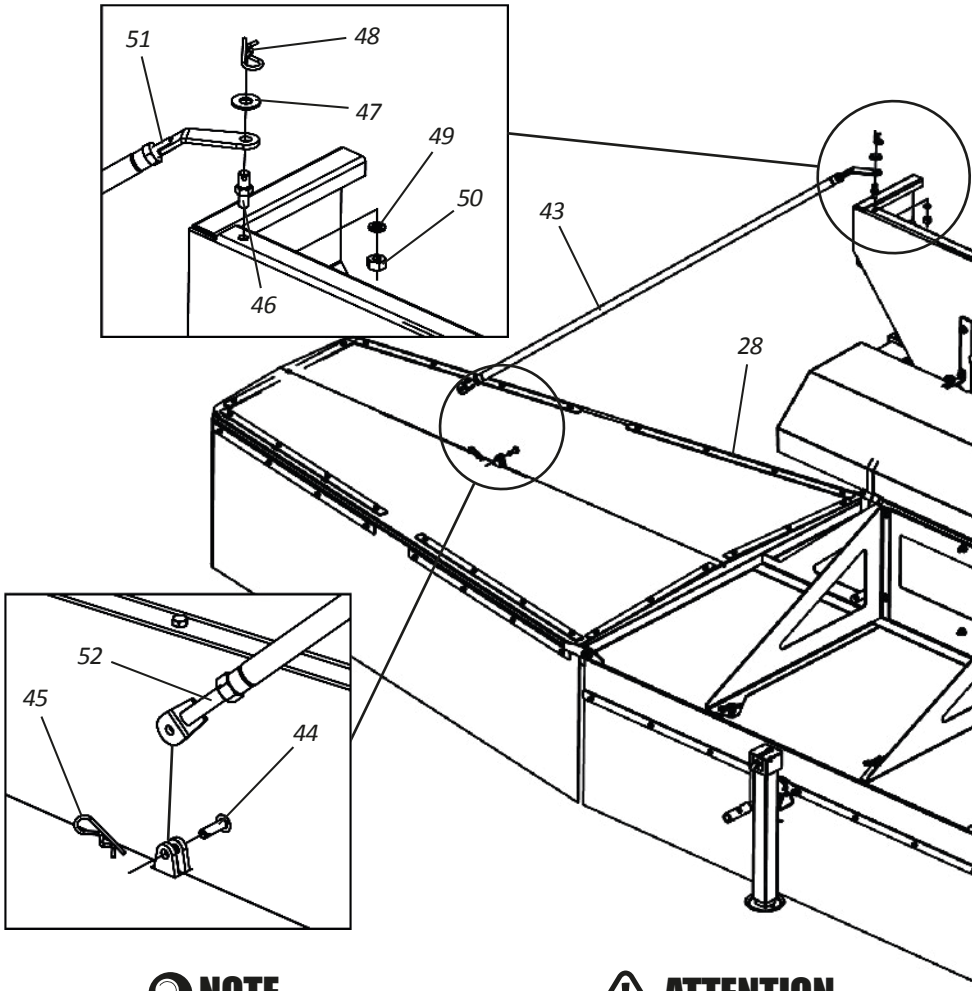


NOTE **Repeat the procedure above to assemble the side and upper rubber guards on the right side frame.**

▪ Assembly

• Assembling the rubber baffle (Optional) - Part VII

09 - Finish by fastening the adjuster (43) on the left side frame (28), throught the pin (44) and lock (45) and on the **DCF-CO**, using the shaft (46), a flat washer (47), a lock (48), washer (49) and nut (50).



NOTE

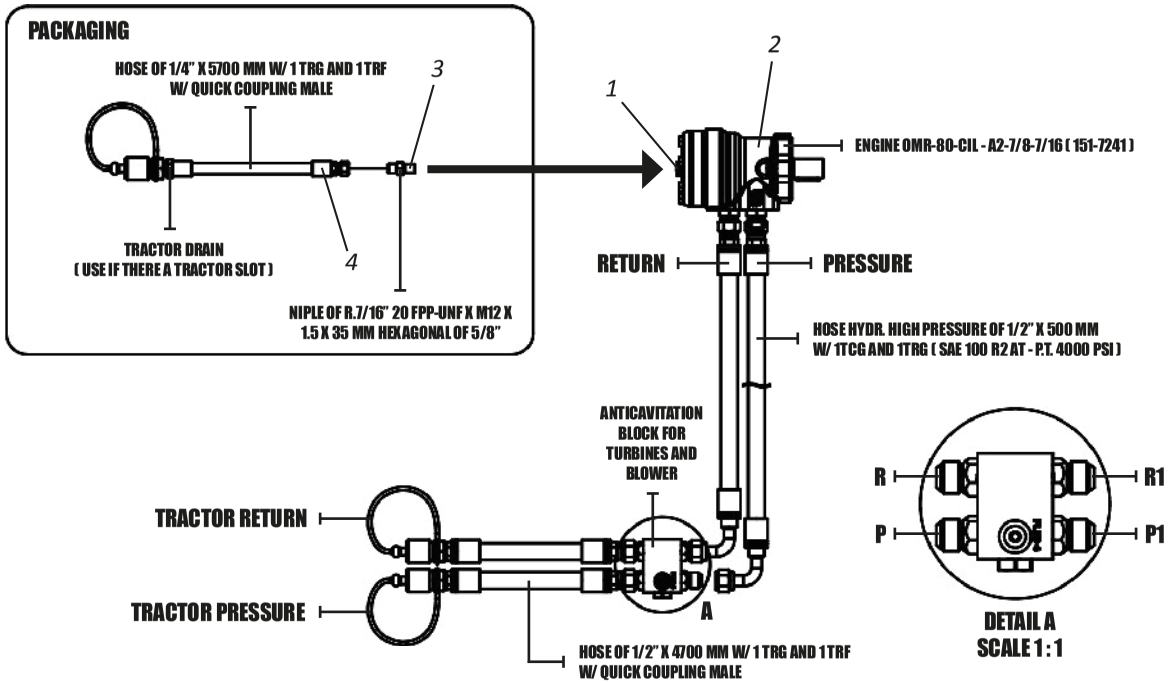
Repeat the procedure above to assemble the adjuster on left side frame.

ATTENTION

When fixing the adjuster (43) on the side frame, its length must be adjusted through the rods (51 and 52).

When purchased with a hydraulic engine, the **DCF-CO 3000** comes with PACKAGING containing:
- 1 1/4" x 5700 mm hose w/ 1 TRG and 1 TRF and 1 w/ male quick coupling
- 1 nipple of R.7/16" 20 FPP-UNF X M12 X 1.5 x 35 mm hexagonal of 5/8".

When engaging the **DCF-CO with hydraulic engine,** check that the tractor has a slot for a drain, if equipped, remove the cover (1) from the hydraulic engine (2) and attach the nipple (3) and the hydraulic hose (4) of the PACKAGING.



IMPORTANT | If the tractor has no drain slot, nipple (3) and hydraulic hose (4) will not be used.

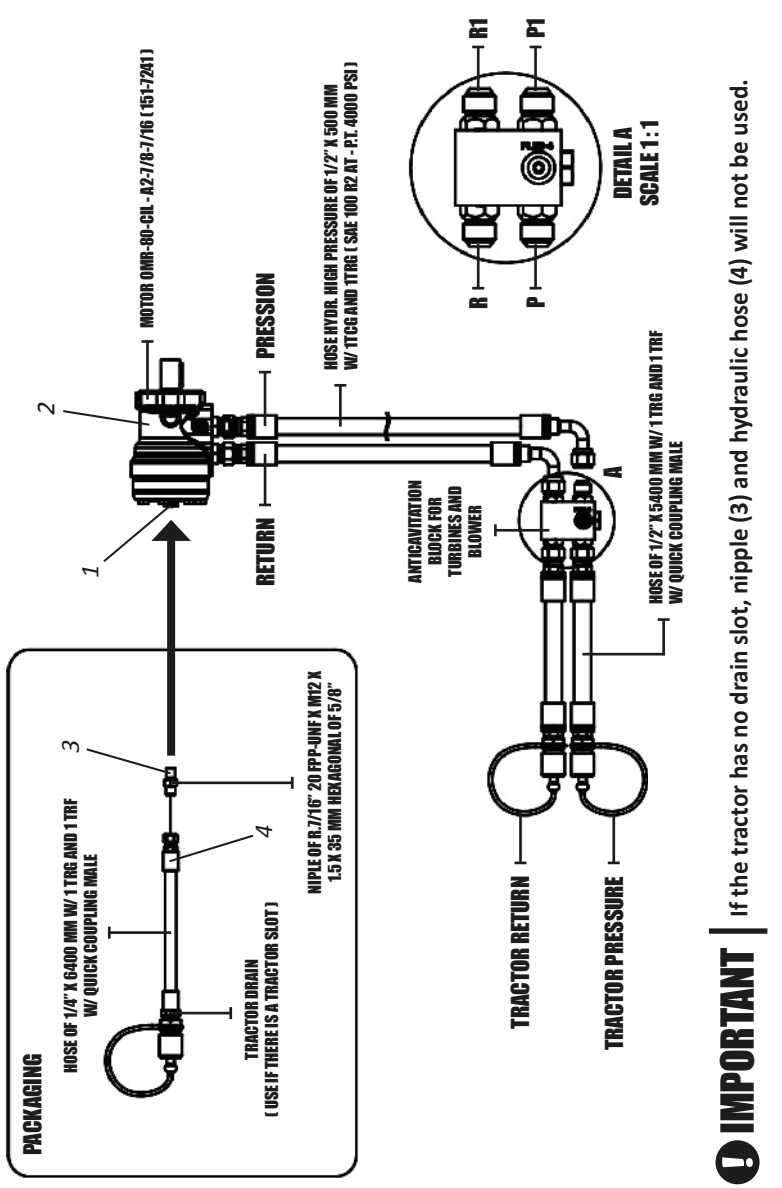
▪ Assembly

• Assembling the hydraulic system - DCF-CO 6000/8000 (Hydraulic Engine)

When purchased with a hydraulic engine, the **DCF-CO 6000/8000** comes with a PACKAGING, containing:

- 1 1/4" x 6400 mm w/ 1 TRG and 1 TRF and 1 w/ male quick coupling.
- 1 nipple of R.7/16" 20 FPP-UNF X M12 X 1.5 x 35 mm hexagonal of 5/8".

When engaging the **DCF-CO with hydraulic engine,** check that the tractor has a slot for a drain, if equipped, remove the cover (1) from the hydraulic engine (2) and attach the nipple (3) and hydraulic hose (4) of the PACKAGING.



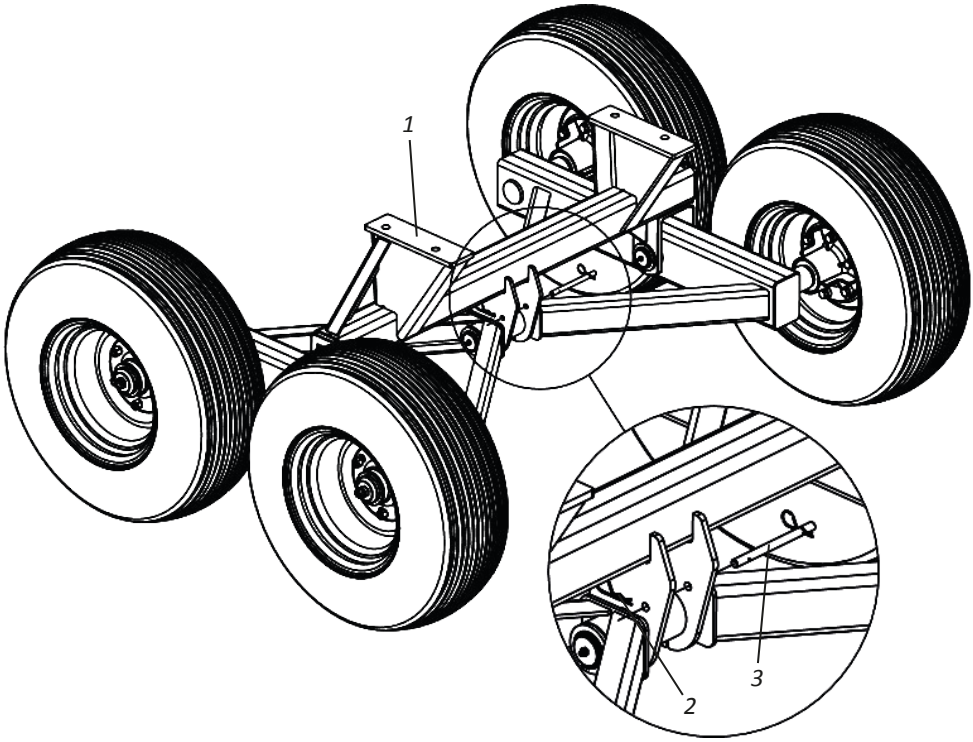
IMPORTANT | If the tractor has no drain slot, nipple (3) and hydraulic hose (4) will not be used.

▪ Unlock

• Unlocking the wheelset pin

For hoisting purposes, the **DCF-CO 6000** and **8000** are ex-factory with a locked wheel holder (1). When completing the tire assembly, unlock the wheel support (1) before work or transport and proceed as follows:

01 - Loosen the pin (2) and remove the pin (3).



ATENTION

Do not work or transport the DCF-CO 6000 and 8000 without removing the pin (3).

NOTE

The only function of the pin (3) is to level the wheel holder (1) when the dispenser is hoisted for loading.

▪ Hitch

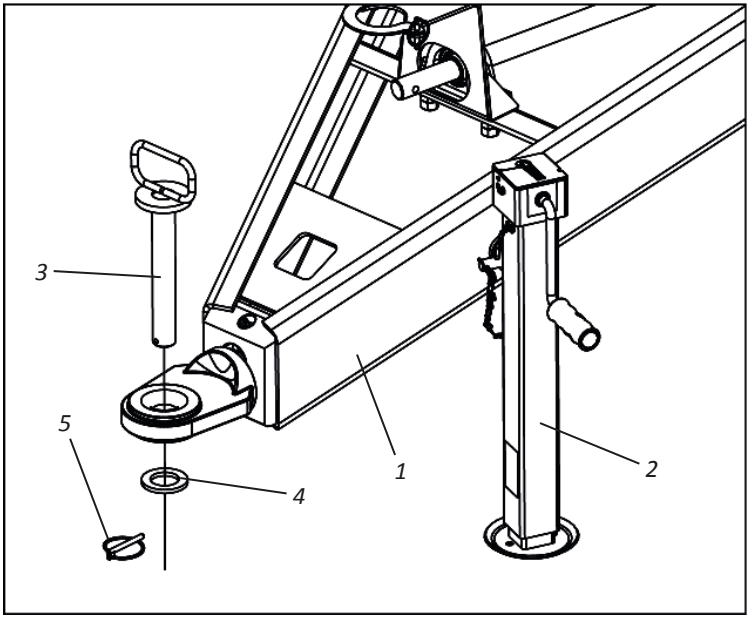
• Trator hitch - DCF-CO (Cardan)

Before hitching the **DCF-CO** to the tractor, make sure the tractor is ready for work by observing the following item:

- Check if the tractor has weight or ballast sets in the front wheels to grant the tractor greater stability and traction on the ground.

To couple the **DCF-CO**, proceed as follows:

01 - Level the coupling head (1) of the **DCF-CO** with the tractor's coupling through the adjuster (2).
02 - Then, slowly approach the tractor to the **DCF-CO** in reverse, paying attention when to use the brakes.
03 - Then couple the **DCF-CO** header (1) to the tractor by attaching it through the hitch pin (3), flat washer (4) and lock (5).



IMPORTANT | **When coupling the DCF-CO, look for a safe and accessible location. Always use low gear with low acceleration.**

▪ Hitch

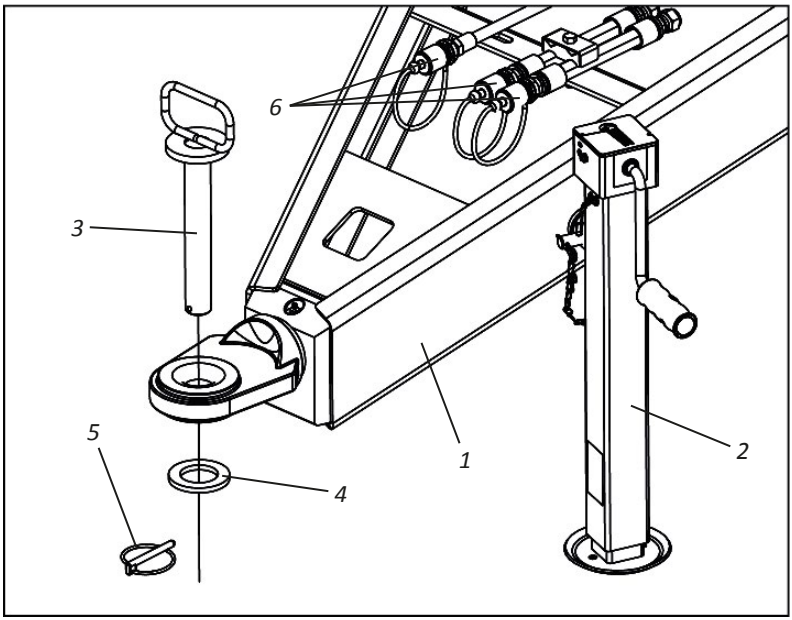
• Tractor hicth - DCF-CO (Hydraulic Engine)

Before hitching the **DCF-CO** to the tractor, make sure the tractor is ready for work by observing the following item:

- Check if the tractor has weight or ballast sets in the front wheels to grant the tractor greater stability and traction on the ground.

To couple the **DCF-CO**, proceed as follows:

01 - Level the coupling head (1) of the **DCF-CO** with the tractor's coupling through the adjuster (2).
02 - Then, slowly approach the tractor to the **DCF-CO** in reverse, paying attention when to use the brakes.
03 - Then, couple the **DCF-CO** header (1) to the tractor by attaching it through the hitch pin (3), flat washer (4) and lock (5).
04 - Then attach the hydraulic hoses (6) to the tractor.



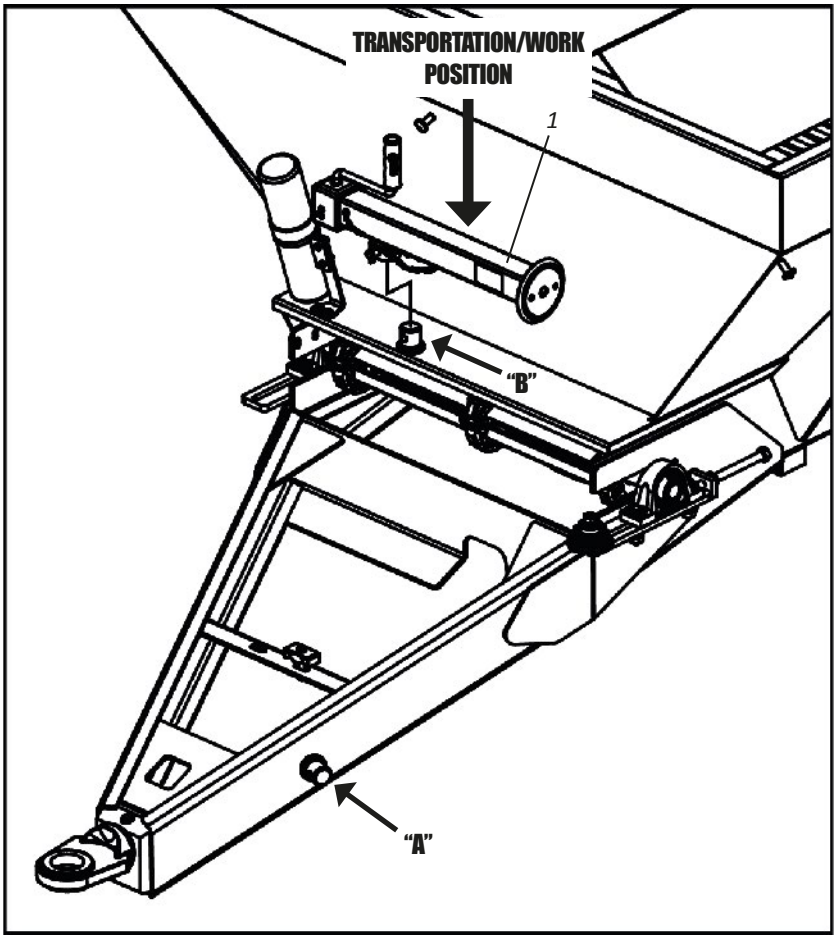
IMPORTANT **When coupling the DCF-CO, look for a safe and accessible location. Always use low gear with low acceleration.**

▪ Hitch

• Support bracket

After engaging the **DCF-CO** on the tractor, place the support bracket (1) in the transportation/ work position by proceeding as follows:

01 - Remove the support bracket (1) from point **"A"** and place it on **"B"**.



ATTENTION **Do not or transport the DCF-CO with the support bracket (1) at point "A". Ignoring this warning may cause severe accidents or damages.**

▪ Levelling

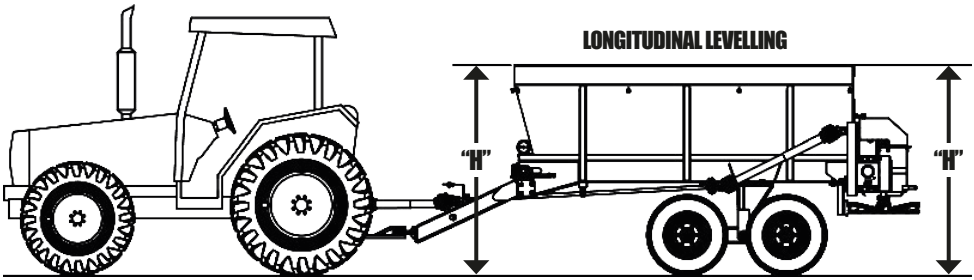
• Distributor levelling

To level the **DCF-CO**, proceed as follows:

01 **-** First, the tractor must be in a flat location.

02 **-** Then, level the distributor, watching the longitudinal levelling (length) in relation to the ground, from the side.

03 **-** Otherwise, level it through the tractor's drawbar, using the height that results in the best **DCF-CO** levelling.



ATTENTION | **Read the instructions manual of the tractor and make sure of the positions in which you can work with the drawbar.**

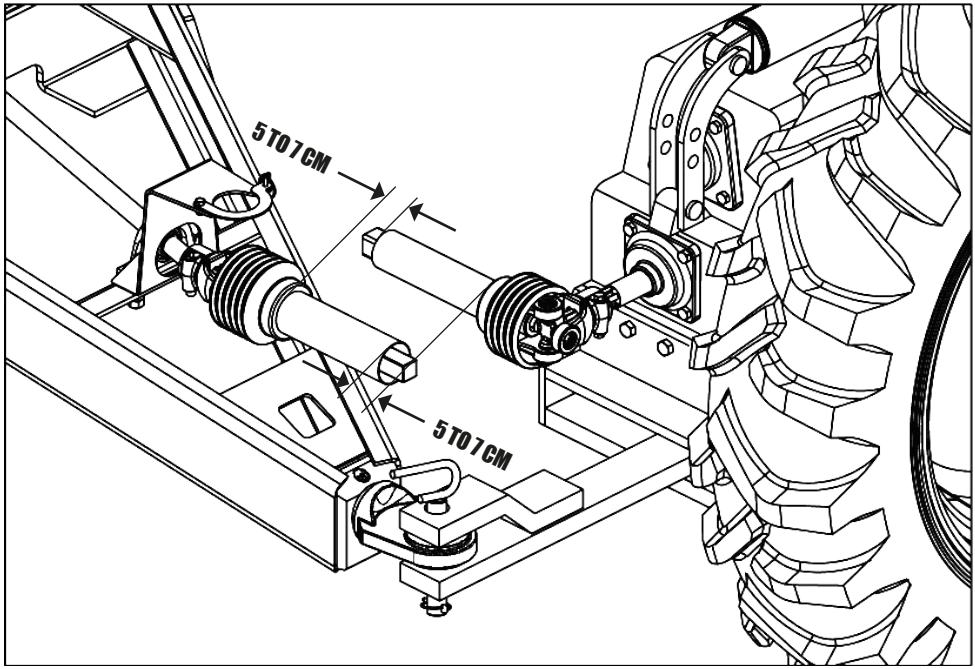
▪ Adjustment

• Cardan coupling to the TDP - DCF-CO (Cardan)

Before coupling the cardan, check the length of the tractor with respect to the tractor model that will pull the **DCF-CO**, proceeding as follows:

01 - First, the tractor must be in a flat location.

02 - Separate the cardan parts by coupling one part in the TDP and the other in the **DCF-CO.** Then, steer the tractor until one of its rear tires approaches the **DCF-CO.** Place the cardan parts side by side and check for a minimum clearance of 5 to 7 cm between the “male” and “female” parts, otherwise cut the cardan according to the instructions on the following page.



IMPORTANT | **When coupling the DCF-CO, look for a safe and accessible location. Always use low gear with low acceleration.**

Before coupling the cardan, check the length of the tractor with respect to the model of the tractor that will pull the **DCF-CO (Cardan)**.

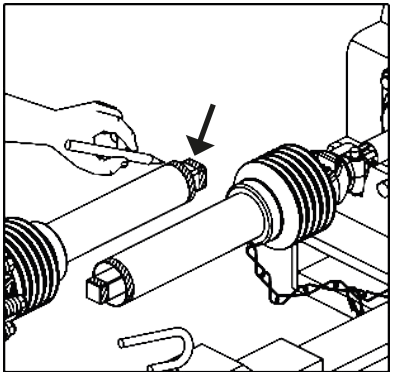
- **Cardan length adjustment - DCF-CO (Cardan) - Part I**

IMPORTANT

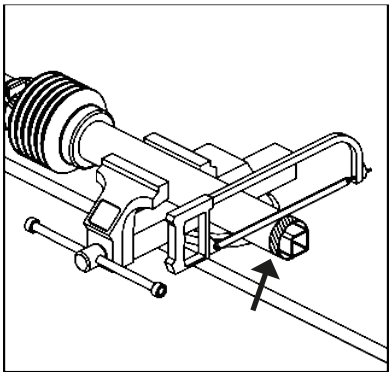
Before cutting the cardan, check the adjustment of the tractor's drawbar, which can increase or decrease its compliance, avoiding the cardan cut.

To perform the cardan cut, proceed as follows:

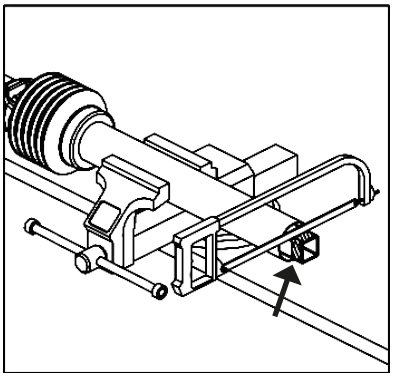
DCF-CO (Cardan)



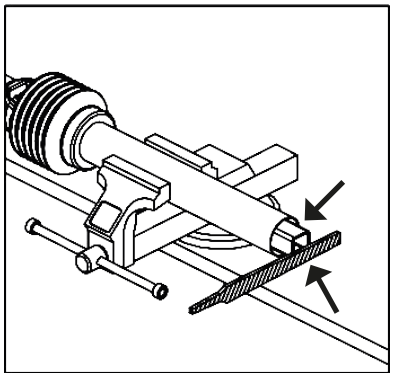
Secure the shaft halves from the shaft close to each other in the working position and mark the part to be cut.



Shorten the inner and outer guards of the cardan proportionally.

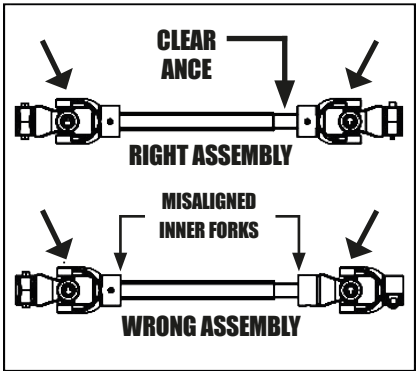


Cut the inner bars of the cardan in the same length as the protective tubes.

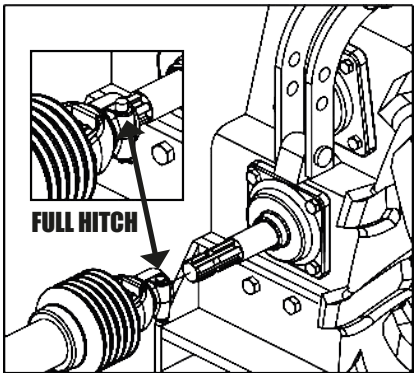


Remove all burrs and edges. Clean and grease the cardan bars.

• Cardan length adjustment - DCF-CO (Cardan) - Part II

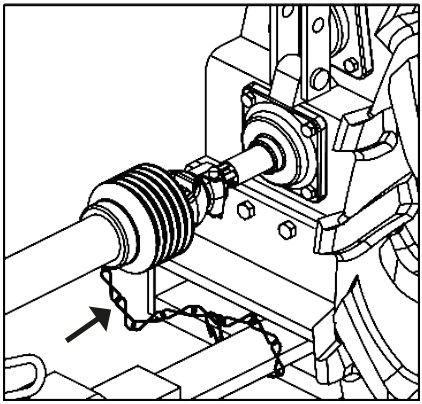


When assembling, observe that the internal and external terminals are always in the same plane, aligned. Also check the clearance on the telescopic axle, which should be of 5 to 7 cm.

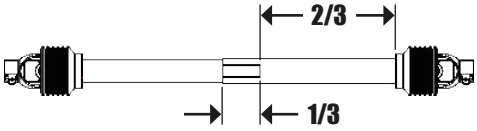


Attach the flange to TDP shaft of the tractor observing that the engagement will only be completed when lock (1) springs out.

DCF-CO (Cardan)



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



IMPORTANT

The contact surface between the pipe and the bar must never be smaller than 1/3 of the total length.
Every time you change the tractor, check the cardan shaft lenght again.

NOTE

Check the cardan joint angle on page 58 and other recommendations for using it.

ATENTION

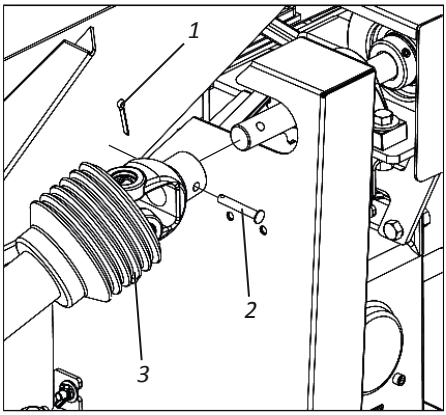
Incorrect mounting of the cardan causes excessive vibration, which is harmful to the transmission.
When engaging the cardan in the TDP, the tractor must be switched off with the parking brake applied.

▪ Adjustments

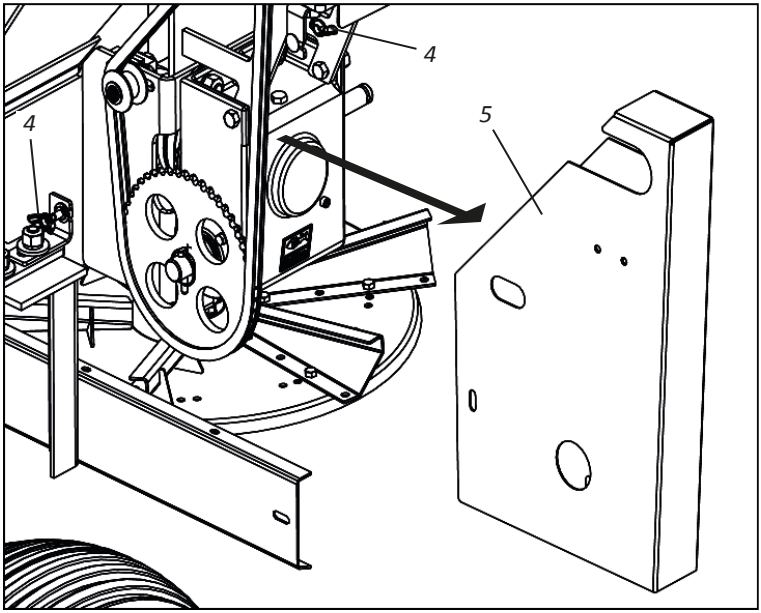
• Belt speed - DCF-CO (Cardan) - Part I

When engaging the cardan in the TDP, the tractor must be switched off with the parking brake applied. This speed's function is feeding the discs for a uniform distribution. The **DCF-CO (Cardan)** is shipped with a **16/48** gear combination, for other combinations, proceed as follows:

01 - Loosen the lock (1), the pin (2) and remove the cardan (3).



02 - Then, loose the wing nut (4) and remove cover guard (5).



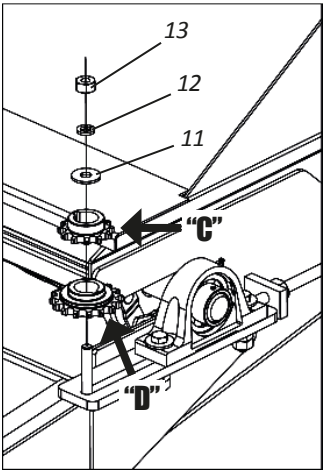
▪ Adjustments

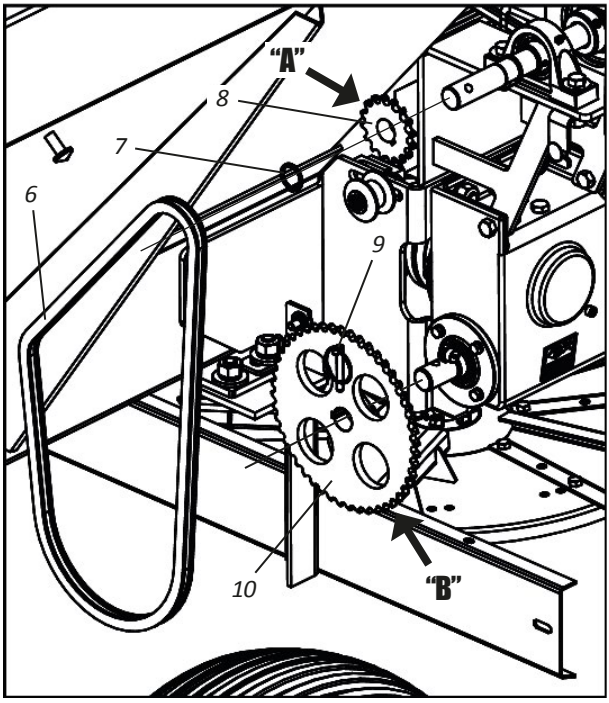
• Belt speed - DCF-CO (Cardan) - Part II

03 - Then, remove the chain (6), loosen the retaining ring (7), remove the gear (8), release the ring lock (9) and remove the gear (10).

04 - Then, according to your need, replace gears **"A"** and **"B"** with gears **"C"** and **"D"** which are fastened to the front of the **DCF-CO (Cardan)** through the nut (11), washer (12) and flat washer (13).

05 - After replacing the gears, reassemble all components.





Assembly	Gears Combination	
	Motor	Moving
1	16 Teeth	48 Teeth
2	16 Teeth	16 Teeth
3	16 Teeth	12 Teeth
4	12 Teeth	48 Teeth
5	12 Teeth	16 Teeth

⚠ ATTENTION

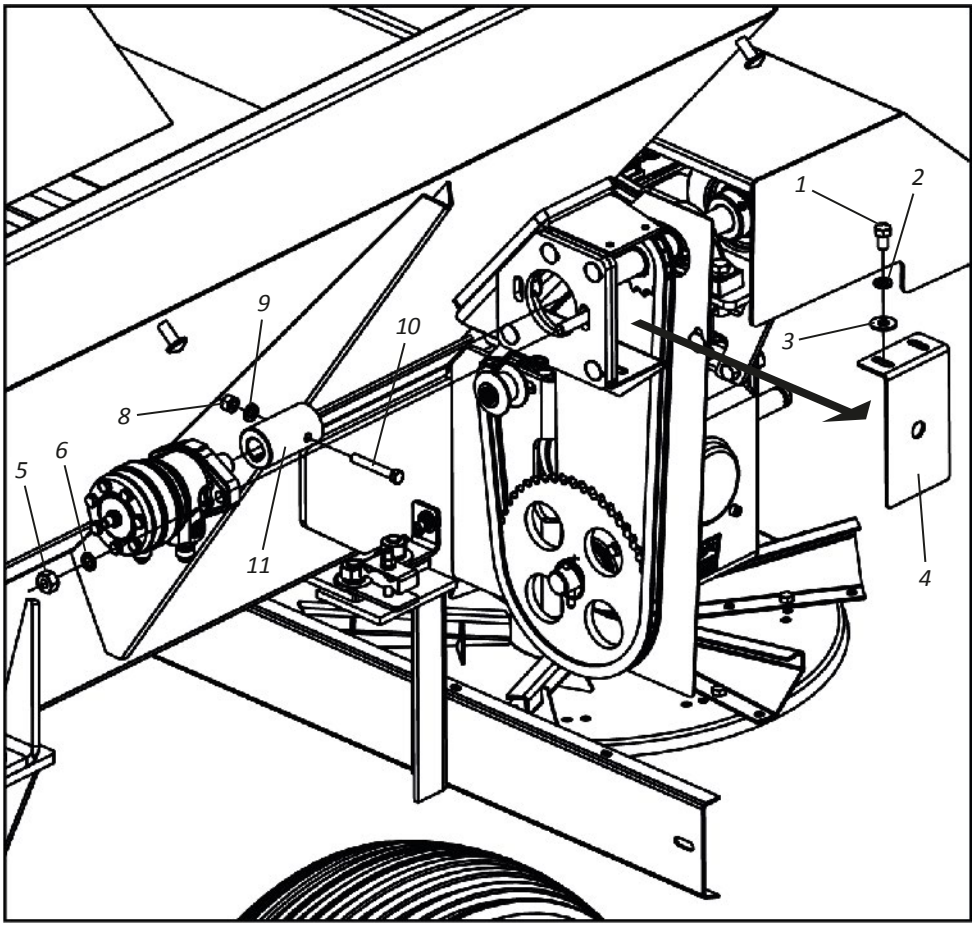
Depending on the combination of mounted gears, decreasing the current using its splice will be necessary. Do not work with a loose chain.

▪ Adjustments

• Belt speed - DCF-CO (Hydraulic Engine) - Part I

When engaging the cardan in the TDP, the tractor must be switched off with the parking brake applied. This speed's function is feeding the discs for a uniform distribution. The **DCF-CO (Hydraulic Engine)** is shipped with a **16/48** gear combination, for the other combinations, proceed as follows:

01 - Loose the nut (1), lock washer (2), flat washer (3) and remove the screw (4).
02 - Loose the nut (5), lock washer (6), flat washer (3) and take out the screw (7).
03 - Then, loose the nut (8), lock washer (9), screw (10) and remove the bushing (11).



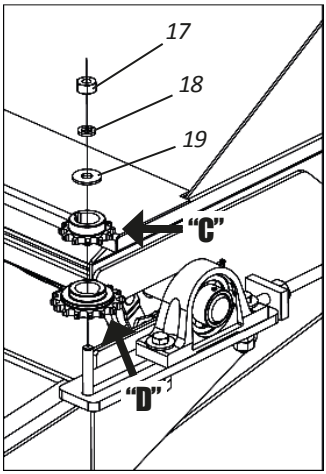
▪ Adjustments

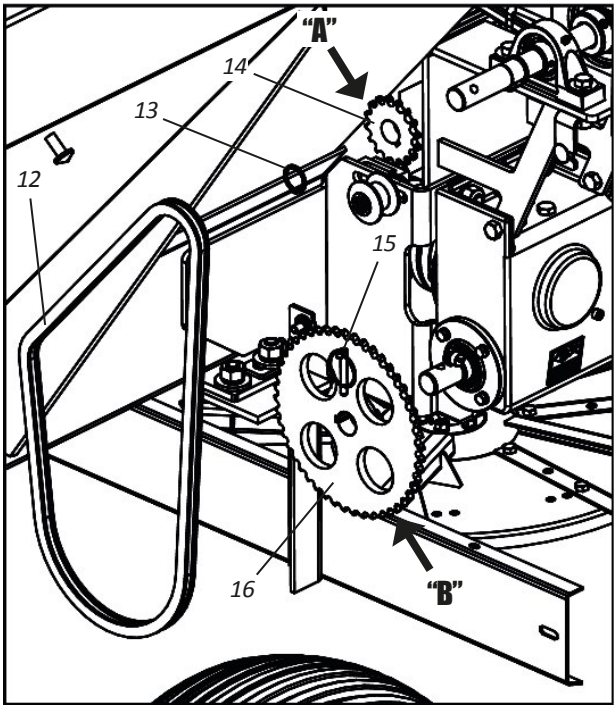
• Belt speed - DCF-CO (Hydraulic Engine) - Part II

04 - Then, remove the chain (12), loosen the retaining ring (13), remove the gear (14), release the ring lock (15) and remove the gear (16).

05 - Then, according to your work needs, replace gears **"A"** and **"B"** with gears **"C"** and **"D"** that are attached to the front of the **DCF-CO (Hydraulic Engine)** through the nut (17), washer (18) and flat washer (19).

06 - After replacing the gears, reassemble all components.





Assembly	Gears Combination	
	Motor	Moving
1	16 Dentes	48 Dentes
2	16 Dentes	16 Dentes
3	16 Dentes	12 Dentes
4	12 Dentes	48 Dentes
5	12 Dentes	16 Dentes

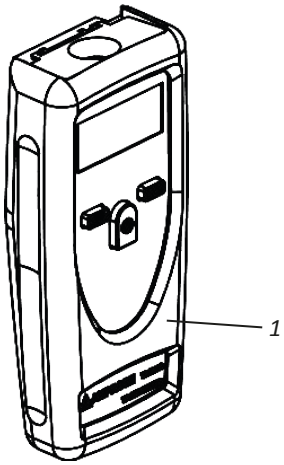
⚠ ATTENTION

Depending on the combination of mounted gears, decreasing the current using its splice will be necessary. Do not work with a loose chain.

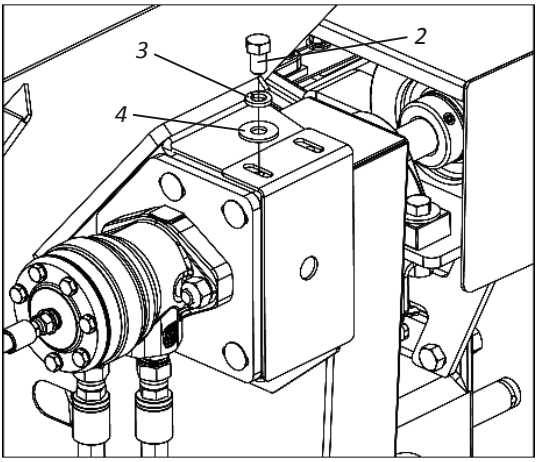
▪ Adjustments

• Calibration RPM (Hydraulic Engine) - Part I

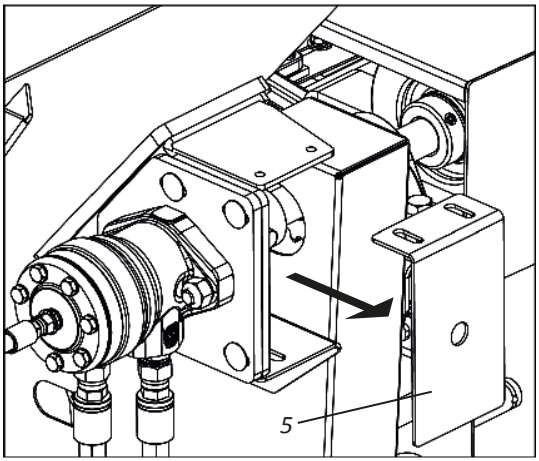
When equipped with hydraulic engine, the **DCF-CO** is accompanied by a tachometer (1). The tachometer (1) is used to calibrate the RPM of the hydraulic engine. Before the RPM calibration, proceed as follows:



01 - Loosen the screws (2), pressure washers (3) and nuts (4).



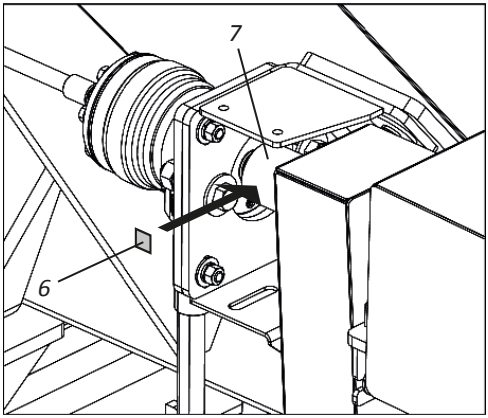
02 - Then, remove the protection plate (5).



▪ Adjustments

• Calibration RPM (Hydraulic Engine) - Part II

03 - Then cut the sticker (6) at the size of 1 cm and glue it to the shaft (7). Finish by reinstalling the protection plate (5).



IMPORTANT

It is necessary to glue the sticker (6) on the shaft (7) so that the tachometer (1) can perform the calibration.

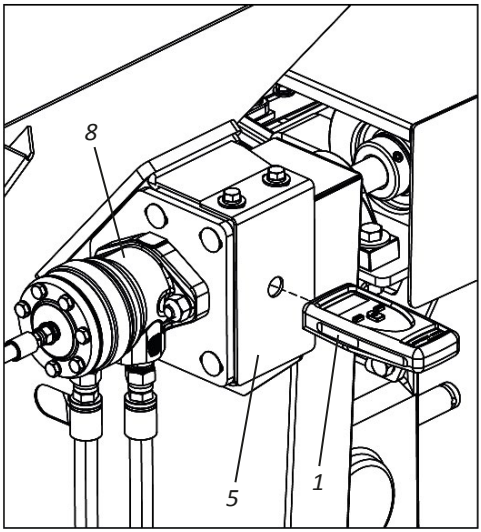
ATTENTION **Only perform the calibration after fixing the protection plate (5). Ignoring this warning may cause severe accidents or death.**

Before starting work, calibrate the RPM of the hydraulic engine (8) as follows:

01 - First start the tractor.

02 - Then, approach the tachometer (1) to the hole of the guard plate (5).

03 - Then turn the tachometer (1) in the optical function and measure the RPM. If the result is not 540 RPM, adjust the RPM on the tractor and redo the measurement to the recommended 540 RPM for the work.



▪ Adjustments

• Conveyor tension

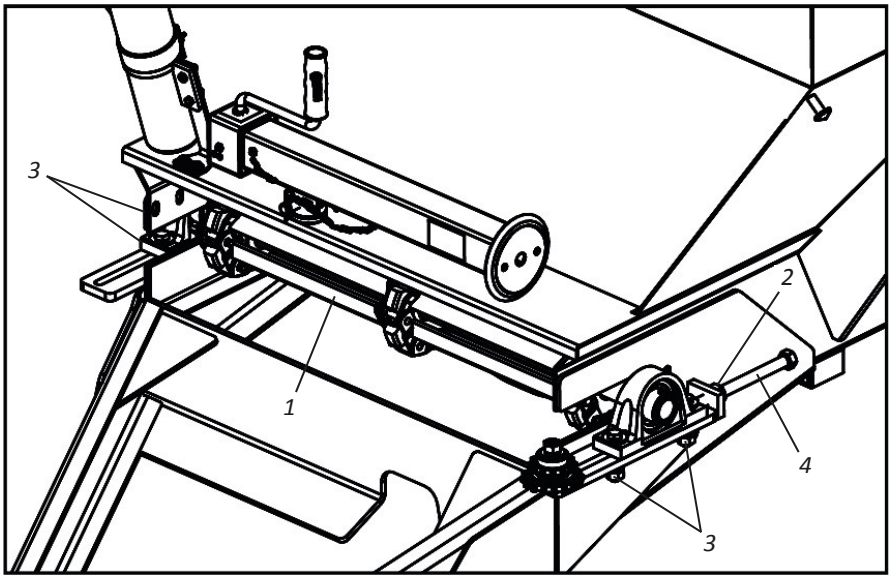
To adjust the conveyor (1) tension, proceed as follows:

01 - First, pull the power plug and turn the tractor's engine off.

02 - Then, make sure that the **DCF-CO** is empty, is not, empty it.

03 - Then, press under the belt and check for a gap of up to 50 mm from the bottom of the **DCF-CO**.

04 - If there is greater clearance, adjust the belt tension (1) for this, loosen the locknut (2), the nuts and locknuts (3) and adjust the tensioner (4). When adjustment is complete, retighten the nuts and locknuts (3) and the locknut (2).



⚠ ATTENTION

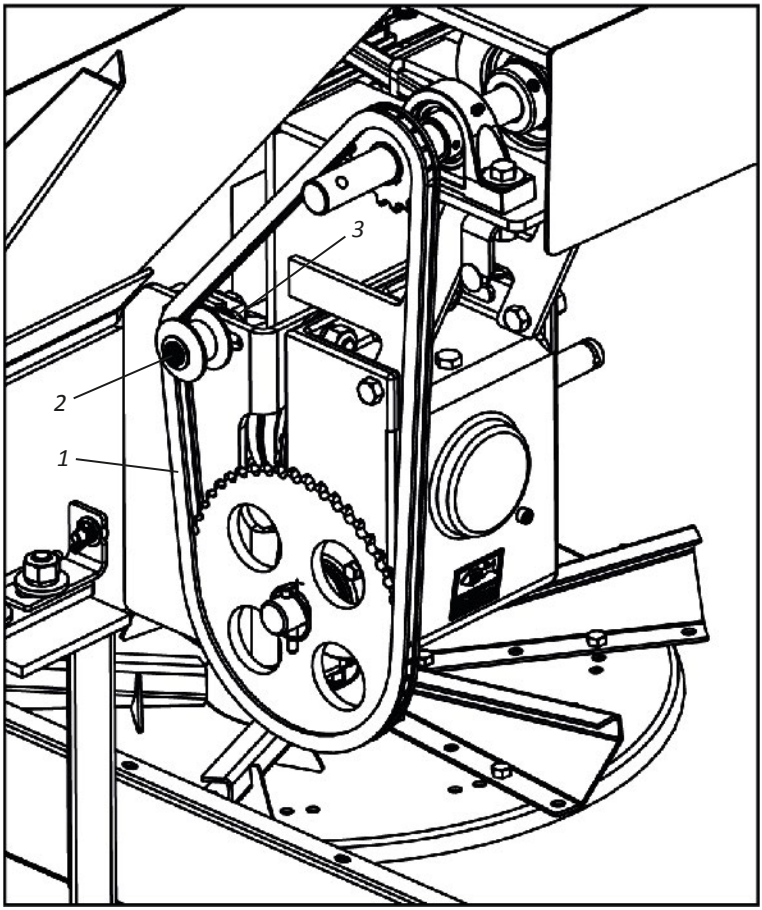
When adjusting the conveyor tension, adjust both sides evenly, avoiding the conveyor misalignment. In the first hours of work, check the conveyor tension. Then, perform a daily check. When the belt tension adjustment reaches the end, one or more links must be removed, returning the tensioner to its starting position.

▪ Adjustments

• Belt tension

The chain tension (1) is performed through the tensioner (2). To adjust chain (1) tension, proceed as follows:

01 - Loosen the nut (3), slide the tensioner (2) by adjusting the chain tension (1).
02 - Then, retighten the screw (3), securing the tensioner (2).



ATTENTION **Check chain tension daily, normal clearance should be + - 1 cm at its center.**

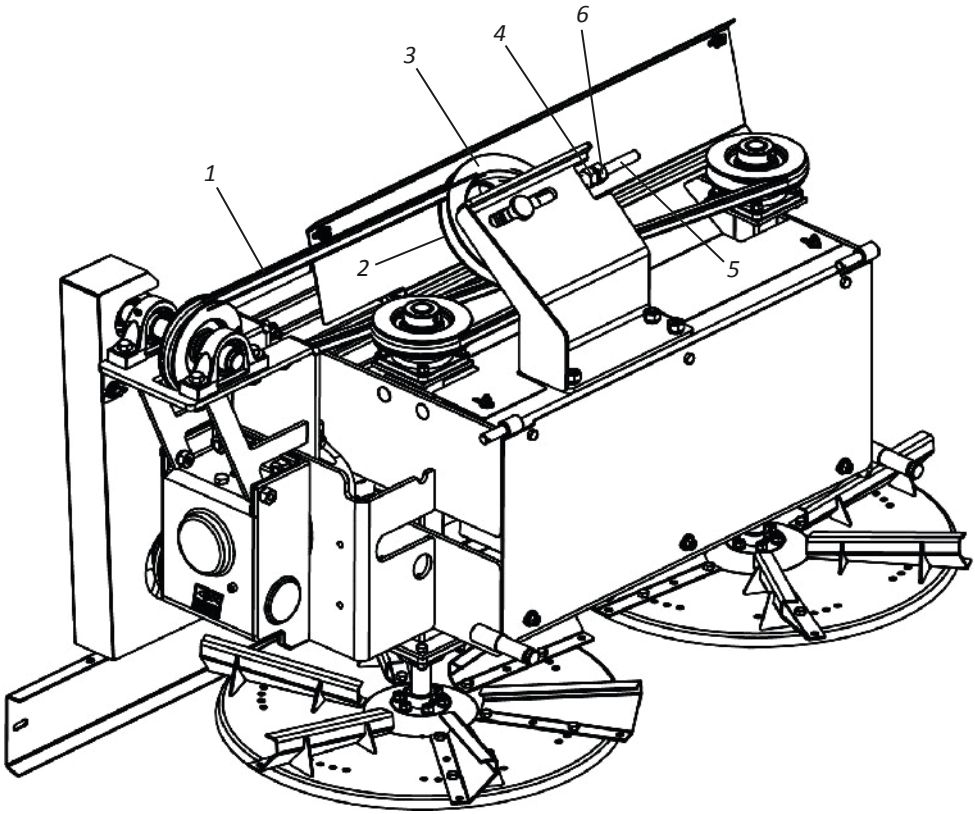
▪ Adjustments

• Belt tension

To adjust the belt (1) tension, proceed as follows:

01 - Loosen the nut (2) of the pulley (3), along with the inner nut (4) of the tensioner (5).

02 - Then adjust belt tension (1) through the outer nut (6) of the tensioner (5) and then retighten the inner nut (4) and the nut (2) of the pulley (3).



⚠ ATTENTION

In the first hours of work, check the chain tension. Then, perform a daily check. Do not run the DCF-CO with loose chains.

❗ IMPORTANT

The allowed clearance is 3.5 cm.

▪ Adjustments

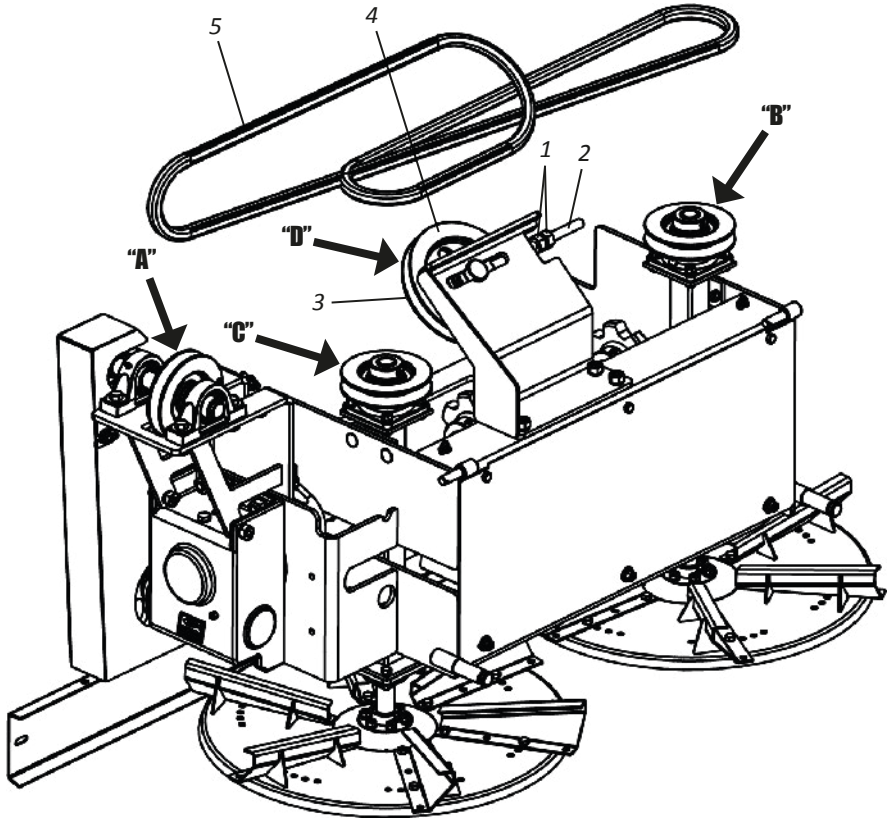
• Belt Replacement

TO REPLACE THE BELT, PROCEED AS FOLLOWS:

01 - Loosen the nuts (1) of the tensioner (2), and the nut (3) of the pulley (4). Then, remove the chain (5).

TO PLACE THE BELT, PROCEED AS FOLLOWS:

01 - Start placing the belt (5), positioning it on the **"A"** pulley.
02 - Then, slide the lower part of the bel (5) onto the **"B"** pulley from the right distributor disc.
03 - Then twist the belt (5) and thread it into the **"C"** pulley of the left distributor disc.
04 - Finally, pass the belt (5) through the **"D"** pulley of the tensioner (2).
05 - After finishing placing the belt (5), tension it, adjusting the tensioner (2) and retighten the nut (3) of the pulley (4).

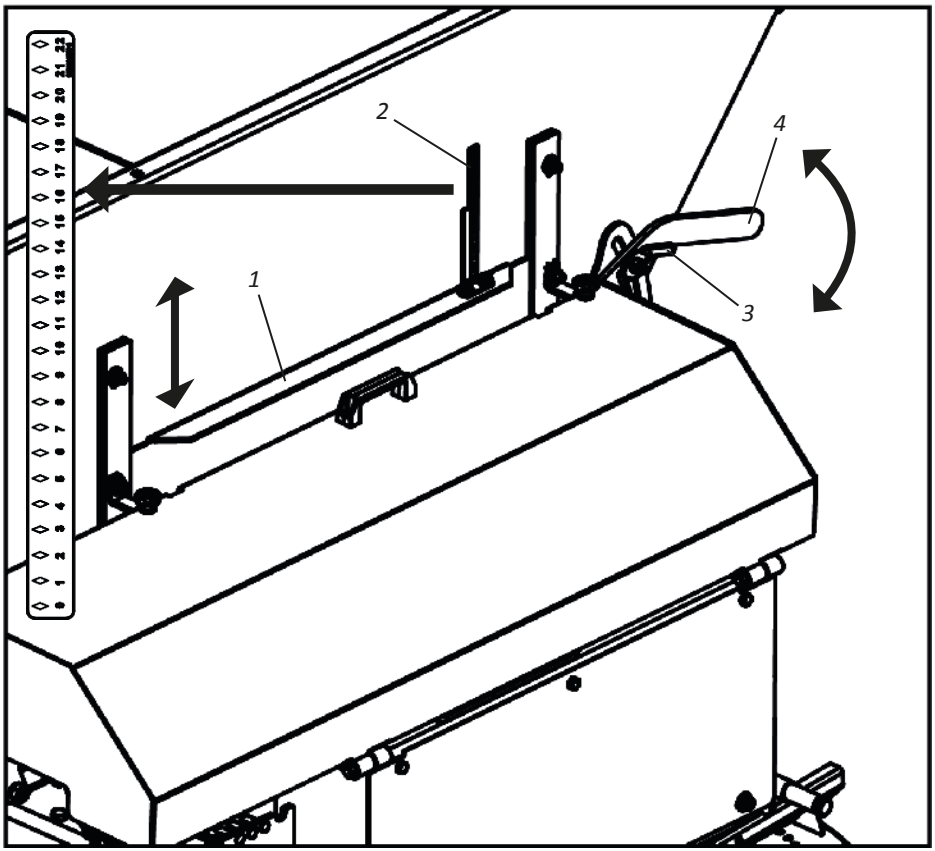


▪ Adjustments

• Shut-off gate adjustment

The **DCF-CO** has a gate (1) that, through a graduation scale (2), adjusts the amount of product to be distributed. To adjust the product flow, proceed as follows:

01 - Loosen the wing nut (3).
02 - Then pull the lever (4) adjusting the opening or closing of the gate (1) according to the graduated scale (2) from (0 to 22).
03 - Then retighten the wing nut (3).



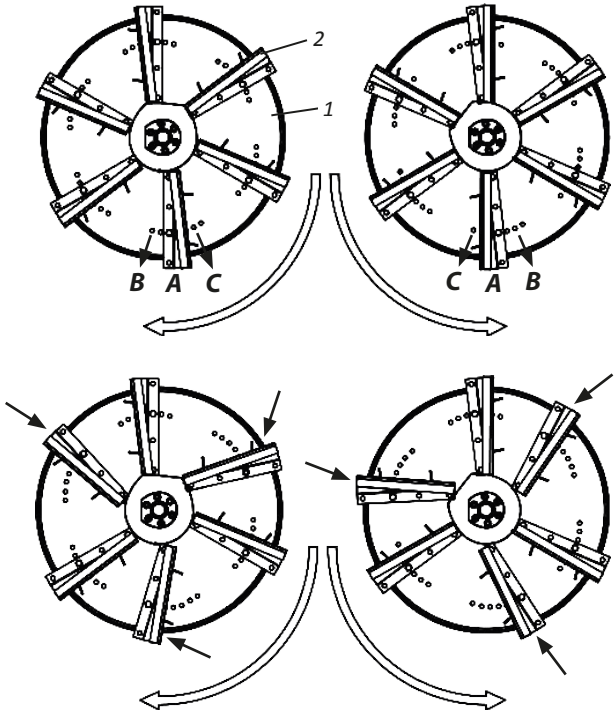
IMPORTANT **See pages 68 to 73 for distribution tables to regulate the gate (1) and graduation scale (2).**

▪ Adjustments

• Position of fins in the distributor discs

Distributor discs (1) have adjustable fins (2) for uniform distribution both ah high and low dosages.

By changing the fins (2) angles, the application range with and the product direction change. To adjust the vanes (2), proceed as follows:



POSITION "A"

Medium distribution width and intermediate product direction.

POSITION "B"

Smaller distribution width and more centralized product direction.

POSITION "C"

Greater distribution width and product directed to the edges.

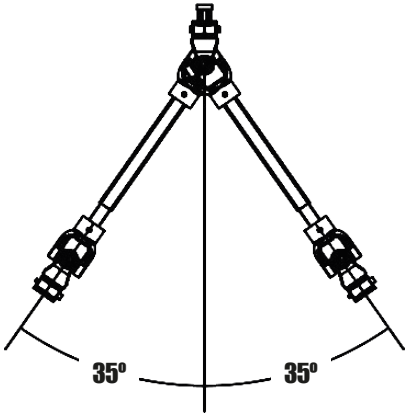
⚠ ATTENTION

If it is required to change the procedure for a part of the product for better distribution uniformity, only 3 fins may be adjusted at different angles from the others, interchangeably, changing the positions on the disc.

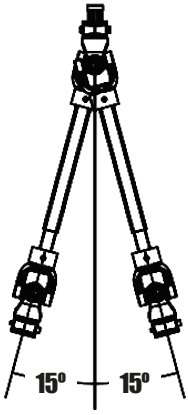
▪ Adjustments

• Cardan recommendations

The cardan is limited in its maximum angle of articulation. This angle, with the cardan in operation, 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

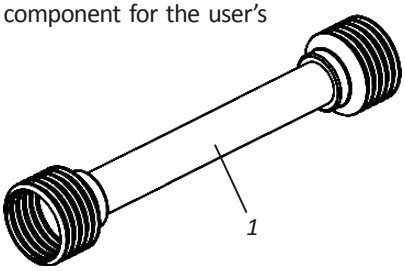


IN CONTINUOUS WORK

⚠ ATTENTION

Never engage to TDP 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.

Sagety 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 DCF-CO if the cardan is not with its guard (1). Ignoring this warning may case severe accidents or cardan damages.

NOTE | **The information on this page has been taken from the cardan manufacturer's catalog.**

▪ Adjustments

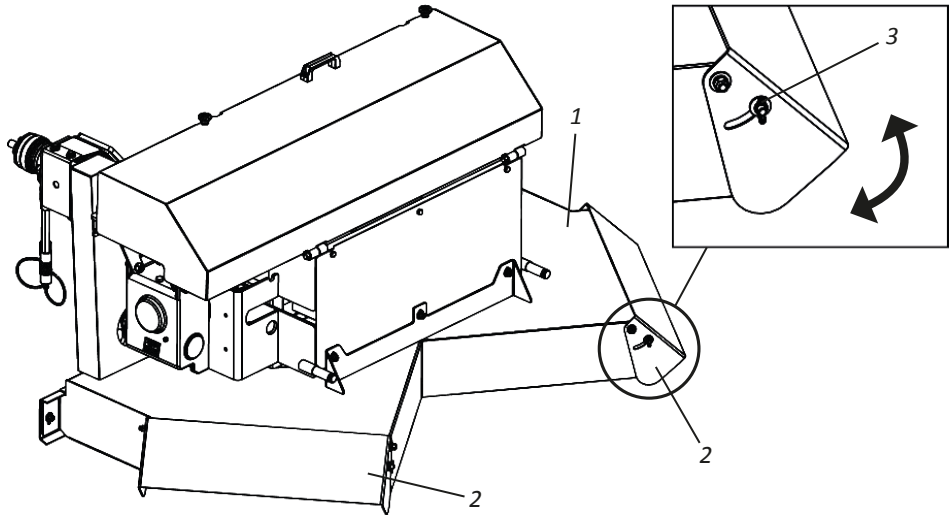
• Adjustment of guide plates (Optional)

Before starting work with the driver box (1), adjust the guide plates (2) as they determine the height, i.e the distance the fertilizer will reach. To adjust the guide plates (2), proceed as follows:

01 - Loose te wing nut (3).
02 - Then adjust the guide plates (2) according to the working requirement.

- **LOWER** guide plates: The limestone, fertilizer or organic compound jet has shorter reach.
- **HIGHER** guide plates: The limestone, fertilizer or organic compound jet has longer reach.

03 - Then retighten the wing nuts (3).



⚠ ATTENTION

VERY LOW guide plates: They can prevent the fertilizer from reaching the base of the plants, spreading along the way.
VERY HIGH guide plates: They can realease fertilizer against branches, damaging the plants.

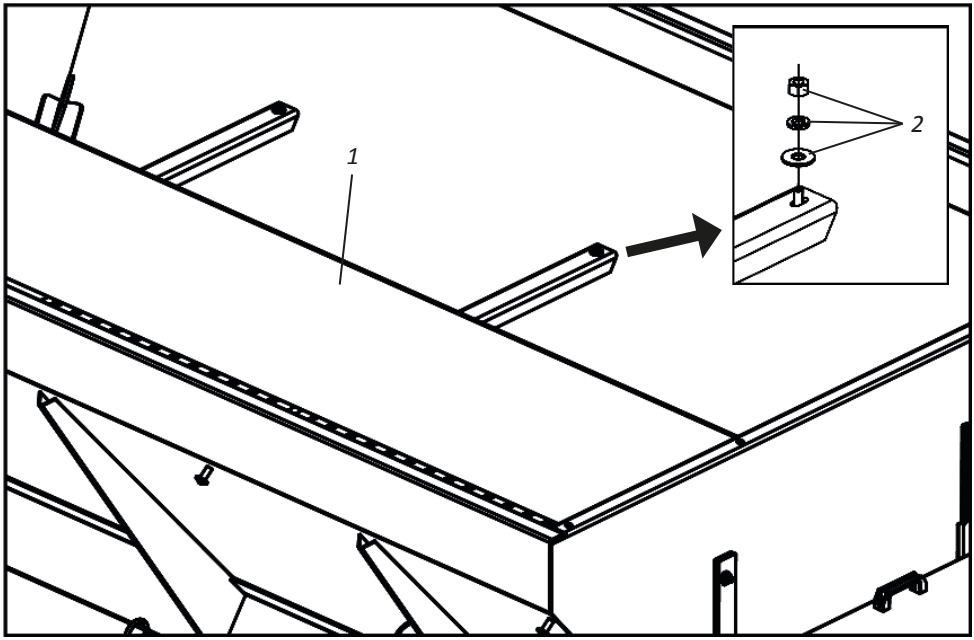
IMPORTANT | **When adjusting the guide plates (2), try to leave them in the same position (slope).**

▪ Operations

• Using the baffle

The **DCF-CO** is shipped assembled with a baffle (1). This baffle prevents the belt from overloading, allowing smoother work.

Before starting the works with **DCF-CO**, check if its baffle (1) is properly secured, tightening the washers and nuts (2) preventing the baffle (1) from coming off, damaging the conveyor and the **DCF-CO**.



NOTE

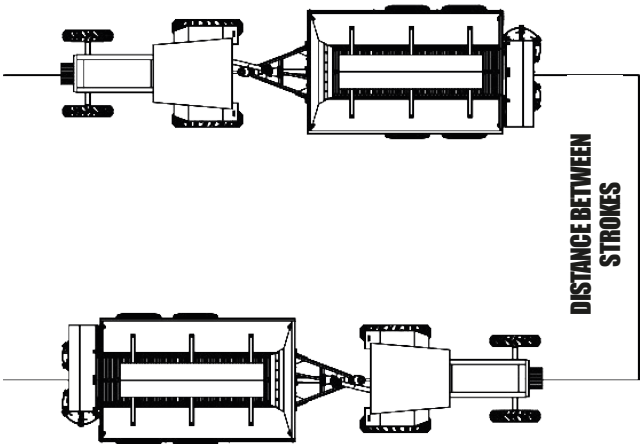
When working with limestone, gypsum, etc., never remove the baffle (1).
When working with organic compound, the baffle (1) can be removed if necessary.

▪ Operations

• Distance between strokes

The distance between strokes must be well observed by the operator for a homogeneous distribution throughout the area. However, during the work, a variation up to 25% in the amount distributed between strokes is accepted.

We recommend a distance of 7 meters between strokes for the distribution og dry limestone and gypsum. For organic compound, the distance between strokes may vary according to the type of organic compound.



⚠ ATTENTION

Keep people and animals clear during work.

❗ IMPORTANT

We do not recommend increasing the distance between strokes.

• Overlapping

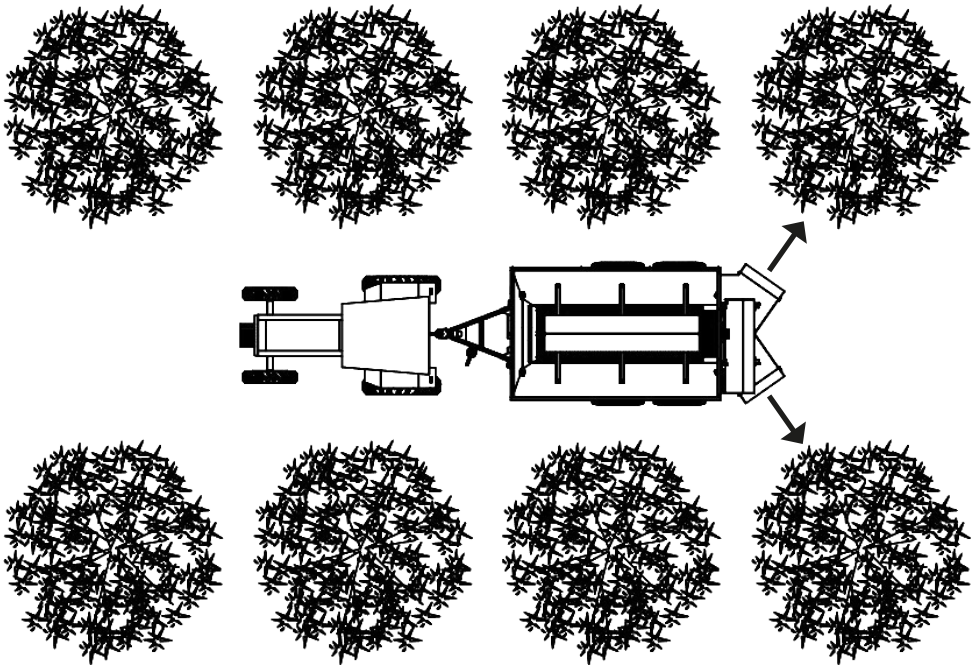
Overlapping is covering a product being distributed to the edge of the track immediately before the current track, this is done to compensate for the distribution deficiency tha occurs naturally at the edges.

⚠ ATTENTION | **Do not perform adjustments while the DCF-CO is in motion or with an active transmission.**

▪ Operations

• Working with the driver box (Optional)

The standard version of the **DCF-CO** releases limestone, fertilizer, and organic compound in several directions through the distribution discs, delivering a uniform application throughout the area. Optionally, the **DCF-CO** can be acquired with a driving box for in line fertilizer application, for example under the base of the trees.

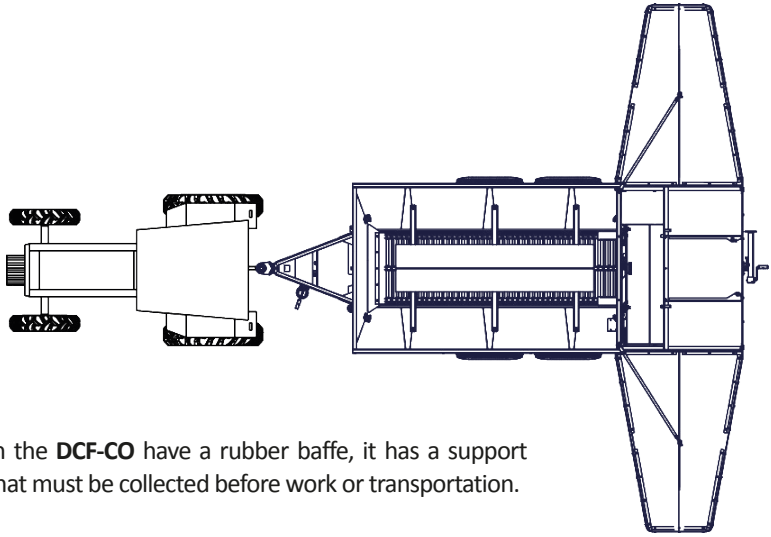


ATTENTION | **To regulate the distribution of the driver box, proceed as per page 59.**

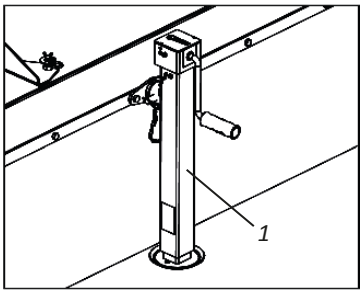
▪ Operations

• Working with canvas or rubber baffle (Optional)

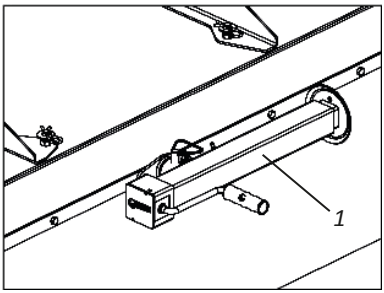
The standard version of the **DCF-CO** releases limestone, fertilizer and organic compound in several directions through the distribution discs, providing a uniform application throughout the area. Optionally the **DCF-CO** may be purchased with a baffle (canvas or rubber) for the distribution of powdered products mainly when there are occurences of winds. Using a baffle (canvas or rubber), ensures greater uniformity in the distribution, retaining the product.



When the **DCF-CO** have a rubber baffe, it has a support bracket that must be collected before work or transportation.



OFF POSITION



WORK OR TRANSPORT POSTION

⚠ ATENTION **Do not work or transport the DCF-CO with a rubber baffle without first pulling the support bracket (1). Ignoring this warning may cause severe accidents or damages.**

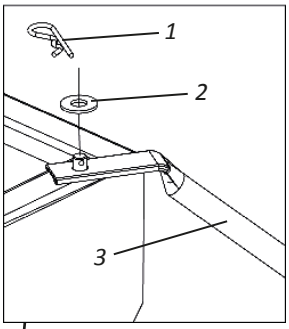
▪ Operations

• Transport with canvas or rubber baffle (Optional)

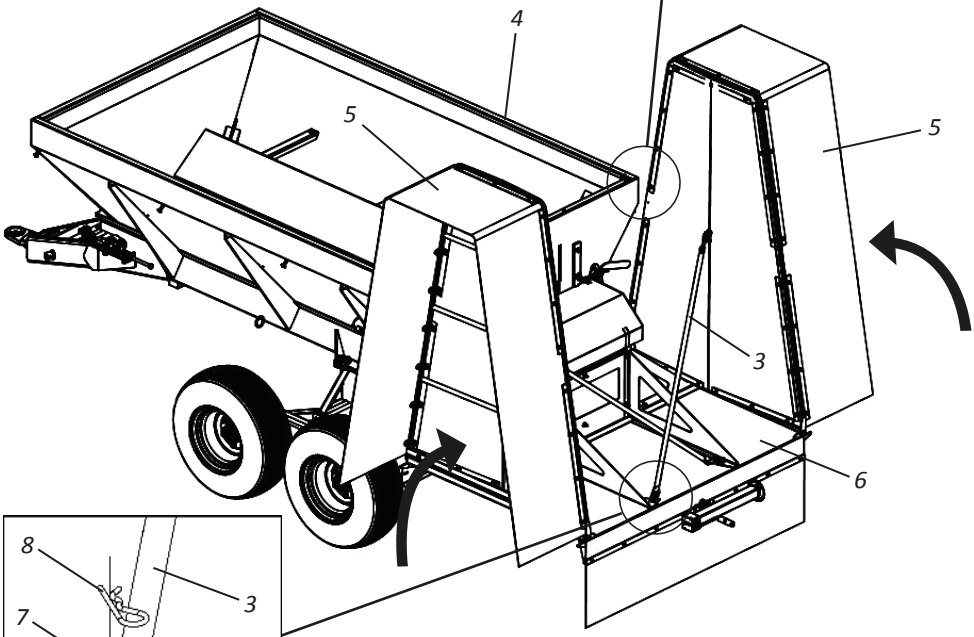
To transport the **DCF-CO** with a baffle (canvas or rubber), lift the side frames of the baffle as follows:

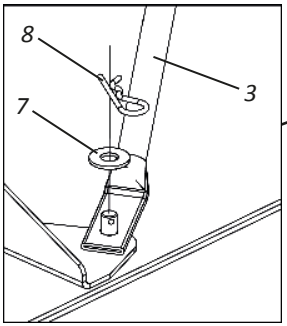
01 - Remove the locks (1), flat washers (2) and uncouple the regulator (3) from the trolley (4).

02 - Then, lift the side frames (5), couple the adjuster (3) to the central frame (6) and fix it through plain washers (7) and lock (8).



TRANSPORTATION POSITION





⚠ ATTENTION

Do not transport the DCF-CO with a baffle (canvas or rubber) without first lifting the side frames. Ignoring this warning may cause severe accidents or damages.

▪ Operations

• Recomendations for the operation

Preparing the **DCF-CO** and tractor will save you time and provide a better result in field work. The following suggestions may be useful for you.

GENERAL RECOMMENDATION - PART I

01 - Adjust the tractor according to the content of the instruction manual, always using front and rear weights to stabilize the equipment.
02 - Always couple to the tractor in low gear and very carefully.
03 - Check that the **DCF-CO** coupling is complete and leveled. Place the support bracket in the transport position and maintain the drawbar of the tractor fastened.
04 - After hitching, the next adjustments will be made directly in the field of work, analyzing the terrain for its texture, humidity, and types of operations to be performed with the **DCF-CO**.
05 - Observe the working and transport speeds specifield on page 10. We do not recommend exceeding speeds to maintain service efficiency and avoid damage to the **DCF-CO**.
06 - During work or transport, the tractor's drawbar must remain fastened.
07 - Never transport or work with an overloaded **DCF-CO.**
08 - Before starting work, do a thorough review in the **DCF-CO**. Crossheads should be lubrificated, check the oil level of the multiplier box and retighten nuts and screws. Also check the locking of pins and cotters.
09 - The ideal rotation is 540 rpm in TDP. Check the corresponding rotation on the engine, in the tractor manual. This traction engine rotation changes from tractor to tractor.
10 - Always observe the operation of the limestone distributing mechanisms and the settings established at the start of the work as well.
11 - When performing any maintenance in the **DCF-CO**, its engine must be switched off.
12 - Check the conveyor and transmission belt tension.
13 - Do not make sharp turns with the **DCF-CO** during work.
14 - The **DCF-CO** has several settings, but only local conditions can determine the best setting.
15 - Check the correct tire calibration of the **DCF-CO** according to tire model on page 74.
16 - Before fueling the **DCF-CO**, check that there are no objects inside the trolley, such as sticks, stones, sack, canvas, parts, etc. Make sure the product you are using does not contain foreign objects.
17 - Observe the lubrification interval.
18 - During the whole work, maintain the engine at constant rotation, avoiding an average speed variation in the tractor to prevent inefficiency or product distribution failure.
19 - The distance between strokes should be constant so that the distibution uniformity is not compromised.

▪ Operations

GENERAL RECOMMENDATION - PART II

20 **-** To engage or uncouple the cardan, the TDP must be switched off.
21 **-** The weight of the product is related to its granulometry and density.
22 **-** The distributor operates more efficiently within the 5-7 km/h range.

When in doubt, never operate or handle the DCF-CO, contact After Sales.
Telephone: 0800-152577 / E-mail: posvenda@baldan.com.br

▪ Calculation

• Work speed calculation

In order to calculate the speed, proceed as follows:

01 - Fill the **DCF-CO's** tank up to half capacity with the product to be applied.
02 - Then place two spaced marks at 100 meters in the application area.
03 - Then, calculate the time the tractor took to travel the distance while the **DCF-CO** is coupled.
04 - The calculated the measured time in kilometers (km) using the following formula:

Km/hr = distance travelled / time spent in seconds x 3,6 (conversion factor of m/s to Km/hr).
Example:
Km/hr = 100 / 60s x 3,6 = 6 Km/h

• Fertilizer dosage calculation per minute

To perform the calculation, turn off the distributor discs, remove the belt, start the **DCF-CO** at 540 rpm and keep it in place. Then collect the product by measuring the time.

Formula: $S = \frac{VT \times LT \times D}{600}$

Formula Data:
S = Product output (Kg/min).
VT = Work speed (Km/h).
LT = Working width (Application range).
D = Dosage (Kg/ha).
600 = Unit conversion factor.

Example: $S = \frac{6 \times 12 \times 300}{600} = 36$ **(Kg/min).**

▪ Distribution system

• Limestone distribution table - Kg/Ha - DCF-CO (Cardan and Hydraulic Engine)

Gears: Motor **16 teeth** Moving **48 teeth**		Rotation PTO 540 RPM						
Scale Opening	Amount of Kg/Second	Wind speed						
		4 km/h	5 km/h	6 km/h	7 km/h	8 km/h	9 km/h	10 km/h
		Amount of kg per Hectare						
0	0,40	360	288	240	206	180	160	144
1	0,78	702	562	468	401	351	312	281
2	0,88	792	634	528	453	396	352	317
3	0,95	855	684	570	489	428	380	342
4	1,14	1026	821	684	586	513	456	410
5	1,55	1395	1116	930	797	698	620	558
6	1,65	1485	1188	990	849	743	660	594
7	1,86	1674	1339	1116	957	837	744	670
8	1,92	1728	1382	1152	987	864	768	691
9	2,11	1899	1519	1266	1085	950	844	760
10	2,24	2016	1613	1344	1152	1008	896	806
11	2,43	2187	1750	1458	1250	1094	972	875
12	2,50	2250	1800	1500	1286	1125	1000	900
13	2,62	2358	1886	1572	1347	1179	1048	943
14	2,89	2601	2081	1734	1486	1301	1156	1040
15	3,12	2808	2246	1872	1605	1404	1248	1123
16	3,40	3060	2448	2040	1749	1530	1360	1224
17	3,63	3267	2614	2178	1867	1634	1452	1307
18	3,81	3429	2743	2286	1959	1715	1524	1372
19	4,11	3699	2959	2466	2114	1850	1644	1480
20	4,37	3933	3146	2622	2247	1967	1748	1573
21	4,59	4131	3305	2754	2361	2066	1836	1652
22	4,79	4311	3449	2874	2463	2156	1916	1724

ATTENTION **Due to different granulometry and specific weights from the applied products, variations can be observed in relation to the presented table. We recommend performing the practical tests described in page 67 before application.**

NOTE **The table was elaborated with 540 rpm in the PTO and transmission ratio (motor/moving).**

▪ Distribution system

• Limestone distribution table - Kg/Ha - DCF-CO (Cardan and Hydraulic Engine)

Gears: Motor **12 teeth** Moving **48 teeth**		Rotation PTO 540 RPM						
Scale Opening	Amount of Kg/Second	Wind speed						
		4 km/h	5 km/h	6 km/h	7 km/h	8 km/h	9 km/h	10 km/h
		Amount of kg per Hectare						
0	0,30	270	216	180	154	135	120	108
1	0,59	527	421	351	301	263	234	211
2	0,66	594	475	396	339	297	264	238
3	0,71	641	513	428	366	321	285	257
4	0,86	770	616	513	440	385	342	308
5	1,16	1046	837	698	598	523	465	419
6	1,24	1114	891	743	636	557	495	446
7	1,40	1256	1004	837	717	628	558	502
8	1,44	1296	1037	864	741	648	576	518
9	1,58	1424	1139	950	814	712	633	570
10	1,68	1512	1210	1008	864	756	672	605
11	1,82	1640	1312	1094	937	820	729	656
12	1,88	1688	1350	1125	964	844	750	675
13	1,97	1769	1415	1179	1011	884	786	707
14	2,17	1951	1561	1301	1115	975	867	780
15	2,34	2106	1685	1404	1203	1053	936	842
16	2,55	2295	1836	1530	1311	1148	1020	918
17	2,72	2450	1960	1634	1400	1225	1089	980
18	2,86	2572	2057	1715	1470	1286	1143	1029
19	3,08	2774	2219	1850	1585	1387	1233	1110
20	3,28	2950	2360	1967	1686	1475	1311	1180
21	3,44	3098	2479	2066	1770	1549	1377	1239
22	3,59	3233	2587	2156	1848	1617	1437	1293

ATTENTION

Due to different granulometry and specific weights from the applied products, variations can be observed in relation to the presented table. We recommend performing the practical tests described in page 67 before application.

NOTE

The table was elaborated with 540 rpm in the PTO and transmission ratio (motor/moving).

▪ Distribution system

• Limestone distribution table - Kg/Ha - DCF-CO (Cardan and Hydraulic Engine)

Gears: Motor **12 teeth** Moving **16 teeth**		Rotation PTO 540 RPM						
Scale Opening	Amount of kg/Second	Wind speed						
		4 km/h	5 km/h	6 km/h	7 km/h	8 km/h	9 km/h	10 km/h
		Amount of Kg per Hectare						
0	0,90	810	648	540	463	405	360	324
1	1,76	1580	1264	1053	903	790	702	632
2	1,98	1782	1426	1188	1018	891	792	713
3	2,14	1924	1539	1283	1099	962	855	770
4	2,57	2309	1847	1539	1319	1154	1026	923
5	3,49	3139	2511	2093	1794	1569	1395	1256
6	3,71	3341	2673	2228	1909	1671	1485	1337
7	4,19	3767	3013	2511	2152	1883	1674	1507
8	4,32	3888	3110	2592	2222	1944	1728	1555
9	4,75	4273	3418	2849	2442	2136	1899	1709
10	5,04	4536	3629	3024	2592	2268	2016	1814
11	5,47	4921	3937	3281	2812	2460	2187	1968
12	5,63	5063	4050	3375	2893	2531	2250	2025
13	5,90	5306	4244	3537	3032	2653	2358	2122
14	6,50	5852	4682	3902	3344	2926	2601	2341
15	7,02	6318	5054	4212	3610	3159	2808	2527
16	7,65	6885	5508	4590	3934	3443	3060	2754
17	8,17	7351	5881	4901	4200	3675	3267	2940
18	8,57	7715	6172	5144	4409	3858	3429	3086
19	9,25	8323	6658	5549	4756	4161	3699	3329
20	9,83	8849	7079	5900	5057	4425	3933	3540
21	10,33	9295	7436	6197	5311	4647	4131	3718
22	10,78	9700	7760	6467	5543	4850	4311	3880

ATTENTION

Due to different granulometry and specific weights from the applied products, variations can be observed in relation to the presented table. We recommend performing the practical tests described in page 67 before application.

NOTE

The table was elaborated with 540 rpm in the PTO and transmission ratio (motor/moving).

▪ Distribution system

• Limestone distribution table - Kg/Ha - DCF-CO (Cardan and Hydraulic Engine)

Gears: Motor **12 teeth** Moving **16 teeth**		Rotation PTO 540 RPM						
Scale Opening	Amount of kg/Second	Wind speed						
		4 km/h	5 km/h	6 km/h	7 km/h	8 km/h	9 km/h	10 km/h
		Amount of Kg per Hectare						
0	1,20	1080	864	720	617	540	480	432
1	2,34	2106	1685	1404	1203	1053	936	842
2	2,64	2376	1901	1584	1358	1188	1056	950
3	2,85	2565	2052	1710	1466	1283	1140	1026
4	3,42	3078	2462	2052	1759	1539	1368	1231
5	4,65	4185	3348	2790	2391	2093	1860	1674
6	4,95	4455	3564	2970	2546	2228	1980	1782
7	5,58	5022	4018	3348	2870	2511	2232	2009
8	5,76	5184	4147	3456	2962	2592	2304	2074
9	6,33	5697	4558	3798	3255	2849	2532	2279
10	6,72	6048	4838	4032	3456	3024	2688	2419
11	7,29	6561	5249	4374	3749	3281	2916	2624
12	7,50	6750	5400	4500	3857	3375	3000	2700
13	7,86	7074	5659	4716	4042	3537	3144	2830
14	8,67	7803	6242	5202	4459	3902	3468	3121
15	9,36	8424	6739	5616	4814	4212	3744	3370
16	10,20	9180	7344	6120	5246	4590	4080	3672
17	10,89	9801	7841	6534	5601	4901	4356	3920
18	11,43	10287	8230	6858	5878	5144	4572	4115
19	12,33	11097	8878	7398	6341	5549	4932	4439
20	13,11	11799	9439	7866	6742	5900	5244	4720
21	13,77	12393	9914	8262	7082	6197	5508	4957
22	14,37	12933	10346	8622	7390	6467	5748	5173

ATTENTION

Due to different granulometry and specific weights from the applied products, variations can be observed in relation to the presented table. We recommend performing the practical tests described in page 67 before application.

NOTE

The table was elaborated with 540 rpm in the PTO and transmission ratio (motor/moving).

▪ Distribution system

• Limestone distribution table - Kg/Ha - DCF-CO (Cardan and Hydraulic Engine)

Gears: Motor **16 teeth** Moving **12 teeth**		Rotation PTO 540 RPM						
Scale Opening	Amount of kg/Second	Wind speed						
		4 km/h	5 km/h	6 km/h	7 km/h	8 km/h	9 km/h	10 km/h
		Amount of Kg per Hectare						
0	1,60	1440	1152	960	823	720	640	576
1	3,12	2808	2246	1872	1605	1404	1248	1123
2	3,52	3168	2534	2112	1810	1584	1408	1267
3	3,80	3420	2736	2280	1954	1710	1520	1368
4	4,56	4104	3283	2736	2345	2052	1824	1642
5	6,20	5580	4464	3720	3189	2790	2480	2232
6	6,60	5940	4752	3960	3394	2970	2640	2376
7	7,44	6696	5357	4464	3826	3348	2976	2678
8	7,68	6912	5530	4608	3950	3456	3072	2765
9	8,44	7596	6077	5064	4341	3798	3376	3038
10	8,96	8064	6451	5376	4608	4032	3584	3226
11	9,72	8748	6998	5832	4999	4374	3888	3499
12	10,00	9000	7200	6000	5143	4500	4000	3600
13	10,48	9432	7546	6288	5390	4716	4192	3773
14	11,56	10404	8323	6936	5945	5202	4624	4162
15	12,48	11232	8986	7488	6418	5616	4992	4493
16	13,60	12240	9792	8160	6994	6120	5440	4896
17	14,52	13068	10454	8712	7467	6534	5808	5227
18	15,24	13716	10973	9144	7838	6858	6096	5486
19	16,44	14796	11837	9864	8455	7398	6576	5918
20	17,48	15732	12586	10488	8990	7866	6992	6293
21	18,36	16524	13219	11016	9442	8262	7344	6610
22	19,16	17244	13795	11496	9854	8622	7664	6898

ATTENTION

Due to different granulometry and specific weights from the applied products, variations can be observed in relation to the presented table. We recommend performing the practical tests described in page 67 before application.

NOTE

The table was elaborated with 540 rpm in the PTO and transmission ratio (motor/moving).

▪ Distribution system

• Gypsum distribution table - Kg/Ha - DCF-CO (Cardan and Hydraulic Engine)

Gears: Motor **16 teeth** Moving **48 teeth**		Rotation PTO 540 RPM						
Scale Opening	Amount of kg/Second	Wind speed						
		4 km/h	5 km/h	6 km/h	7 km/h	8 km/h	9 km/h	10 km/h
		Amount of Kg per Hectare						
0	0,22	198	158	132	113	99	88	79
1	0,34	306	245	204	175	153	136	122
2	0,46	414	331	276	237	207	184	166
3	0,58	522	418	348	298	261	232	209
4	0,70	630	504	420	360	315	280	252
5	0,82	738	590	492	422	369	328	295
6	0,94	846	677	564	483	423	376	338
7	1,060	954	763	636	545	477	424	382
8	1,180	1062	850	708	607	531	472	425
9	1,300	1170	936	780	669	585	520	468
10	1,420	1278	1022	852	730	639	568	511
11	1,540	1386	1109	924	792	693	616	554
12	1,660	1494	1195	996	854	747	664	598
13	1,780	1602	1282	1068	915	801	712	641
14	1,900	1710	1368	1140	977	855	760	684
15	2,020	1818	1454	1212	1039	909	808	727
16	2,140	1926	1541	1284	1101	963	856	770
17	2,226	2003	1603	1336	1145	1002	890,4	801
18	2,380	2142	1714	1428	1224	1071	952	857
19	2,500	2250	1800	1500	1286	1125	1000	900
20	2,620	2358	1886	1572	1347	1179	1048	943
21	2,740	2466	1973	1644	1409	1233	1096	986
22	2,860	2574	2059	1716	1471	1287	1144	1030

ATTENTION

Due to different granulometry and specific weights from the applied products, variations can be observed in relation to the presented table. We recommend performing the practical tests described in page 67 before application.

NOTE

The table was elaborated with 540 rpm in the PTO and transmission ratio (motor/moving).

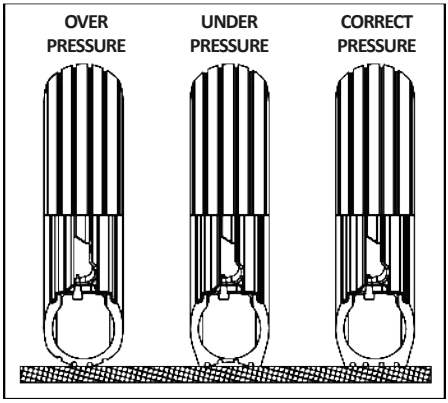
▪ Maintenance

The **DCF-CO** has been developed to provide you with maximum yield under land conditions. Experience has shown that periodic maintenance of certain parts of the **DCF-CO** is the best way to avoid problems, so we suggest checks.

• Tires pressure

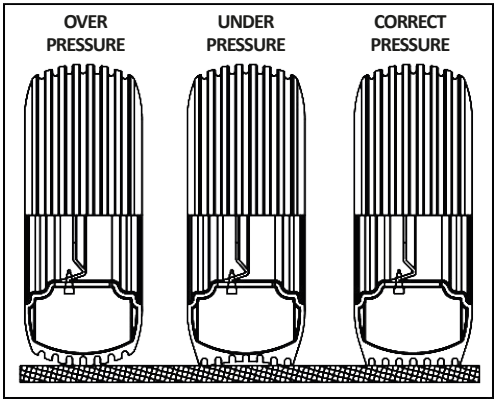
The tires should always be properly calibrated avoiding early wear due to excess or lack or pressure.

STANDARD: TIRES 750 X 16 PLY



USE: 60 LBS/POL²

OPTIONAL: TIRES 11 L 15



USE: 52 LBS/POL²

Model	Standard Tires	Optinal Tires
DCF-CO 3000	750x16	11L-15
DCF-CO 6000	750x16	11L-15
DCF-CO 8000	11L-15	-

⚠ ATTENTION

Never weld the wheel while the tire is mounted as the heat may increase air pressure and cause the tire to explode.

When filling the tire, position yourself besides the tire, never in front of it. To inflate a tire, always use a containment device (inflation cage).

Assemble the tires with proper equipment. The service should only be performed by people qualified for the work.

IMPORTANT

When calibrating tires, do not exceed the recommended calibration.

NOTE

The pressure of the tractor tires should be performed according to the manufacturer's recommendation.

▪ Maintenance

• Lubrification

Lubrification is essential for good performance and durability of the **DCF-CO's** moving parts, saving maintenance costs.

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

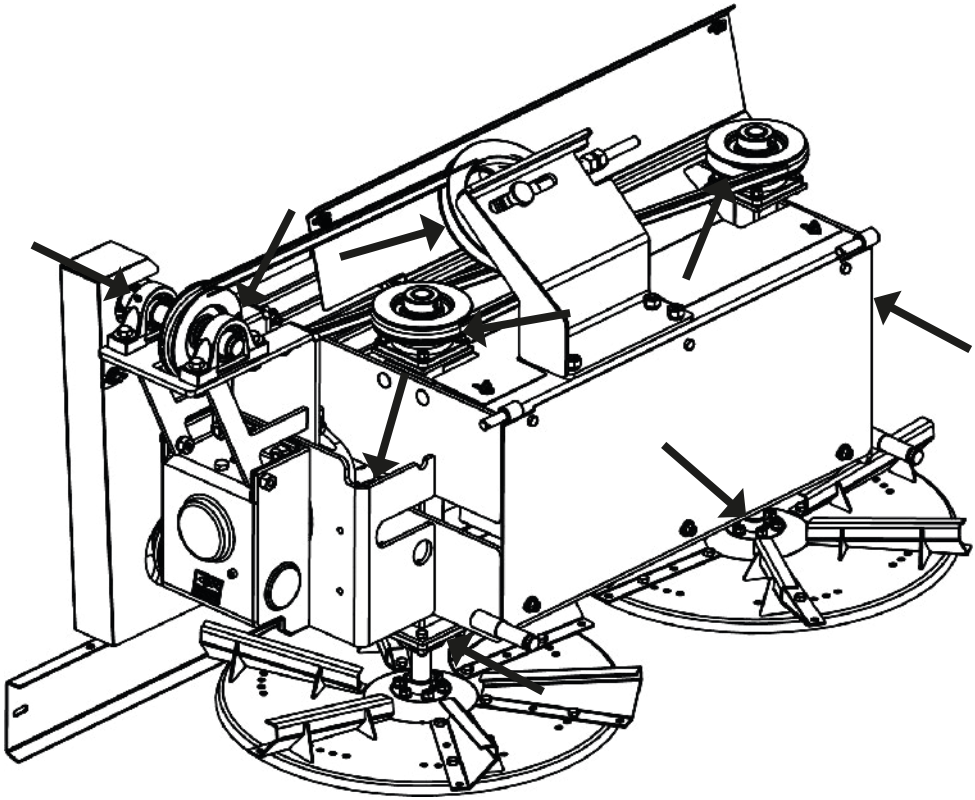
• Table of greases and equivalents

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

▪ Maintenance

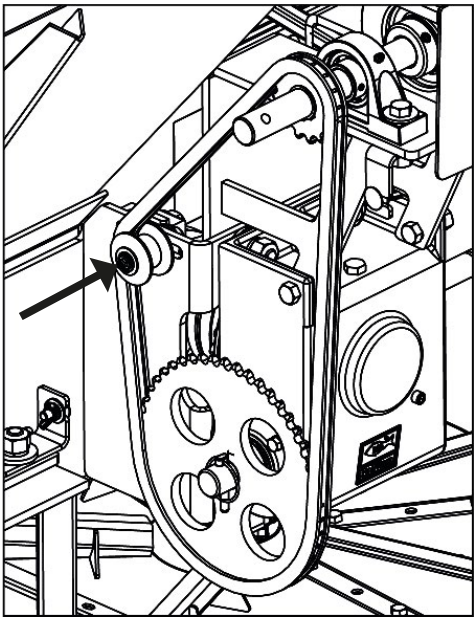
• Lubrification every 5 hours of work

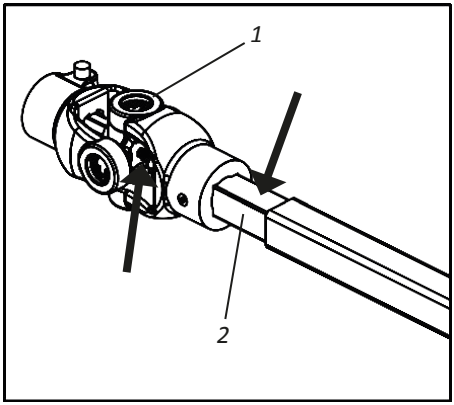


ATTENTION When lubricating the DCF-CO, do not exceed the amount of new grease. Put an adequate amount.

▪ Maintenance

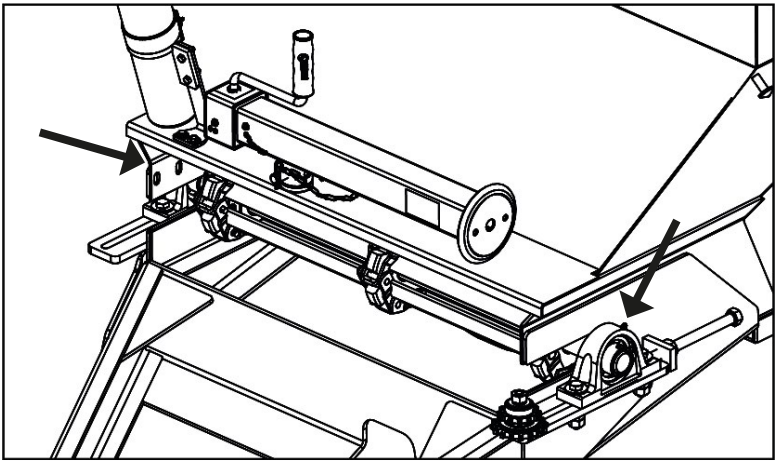
- **Lubrification every 8 hours of work**





Lubrificate the crossheads (1) with grease at 8-hour intervals.

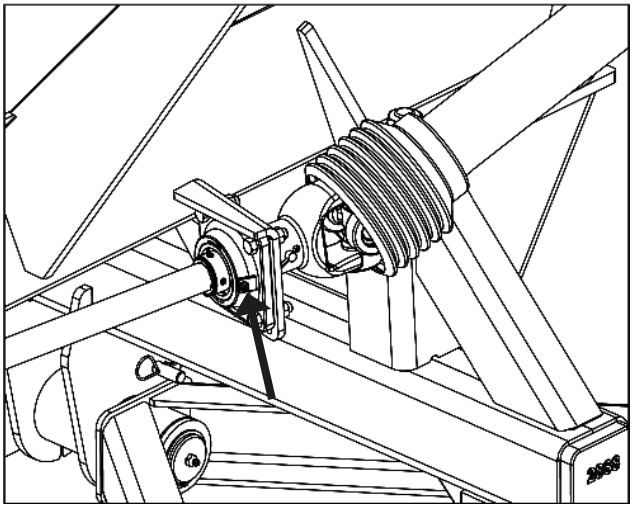
The telescopic axle (2) must be lubricated weekly.

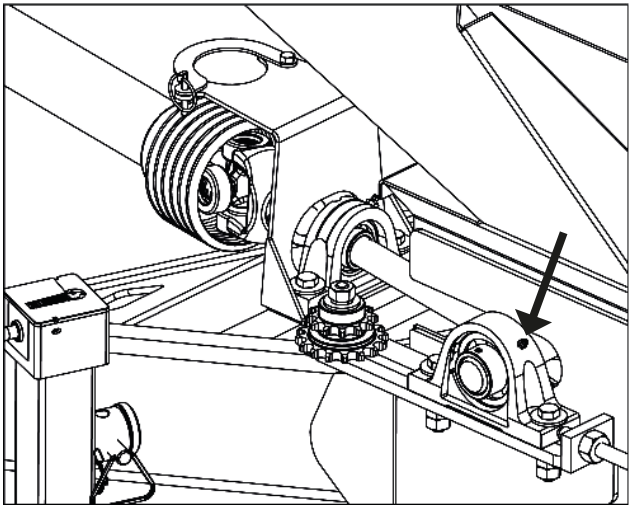


⚠ ATTENTION | **When lubricating the DCF-CO, do not exceed the amount of new grease. Put an adequate amount.**

▪ Maintenance

• Lubrification every 8 hours of work

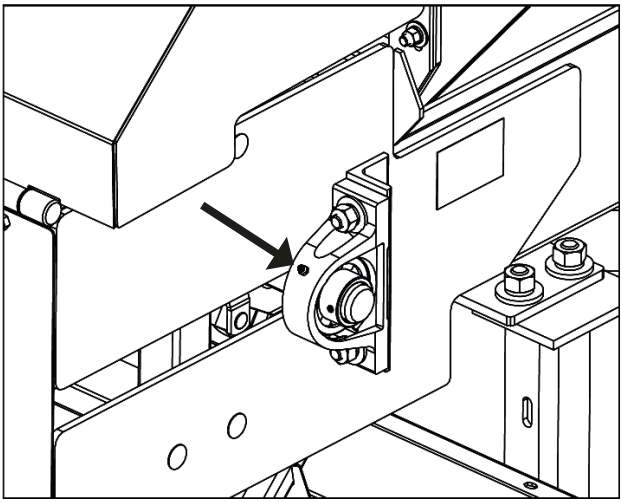


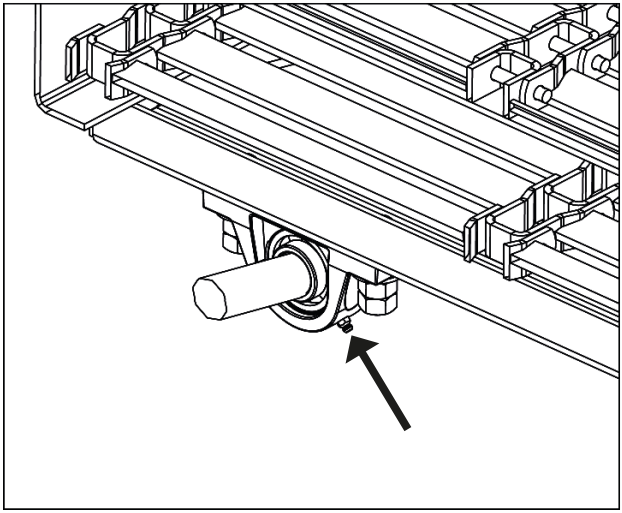


ATTENTION When lubricating the DCF-CO, do not exceed the amount of new grease. Put an adequate amount.

▪ Maintenance

- Lubrification every 8 hours of work

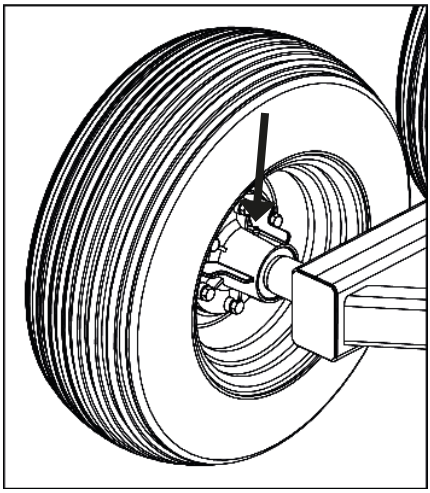


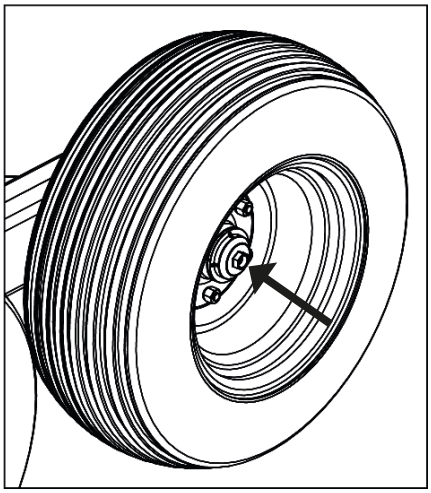


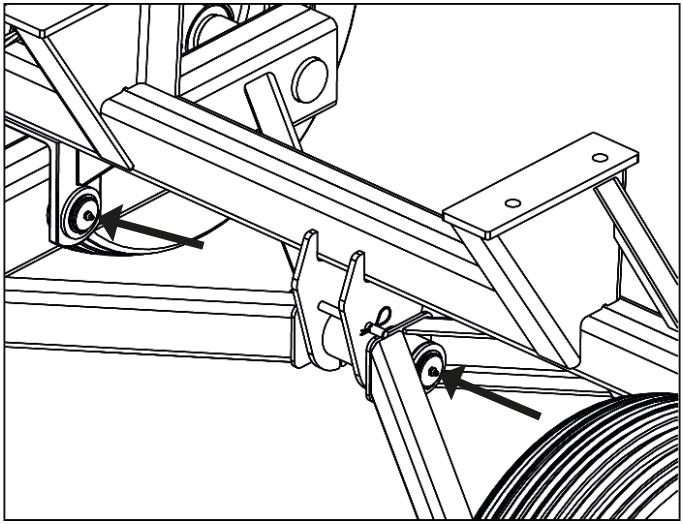
ATTENTION When lubricating the DCF-CO, do not exceed the amount of new grease. Put an adequate amount.

▪ Maintenance

• Lubrification every 24 hours of work



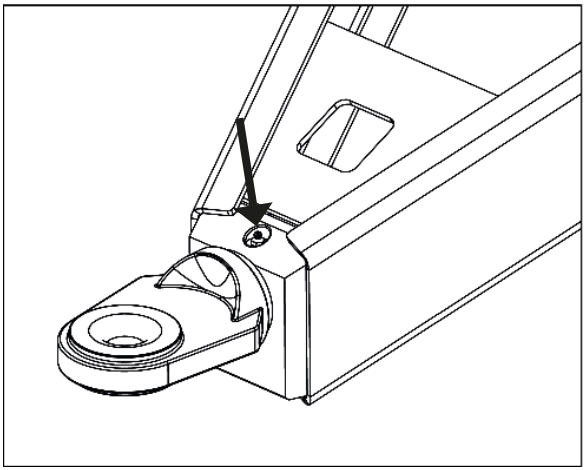




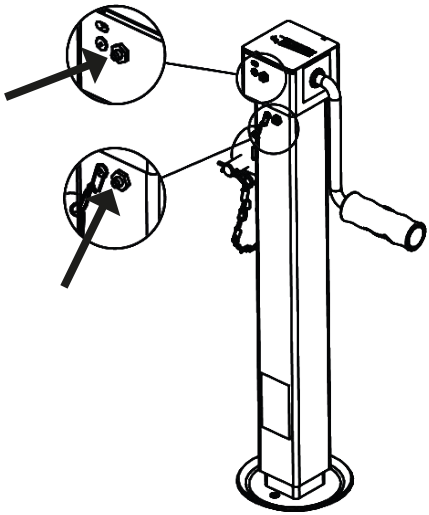
ATTENTION When lubricating the DCF-CO, do not exceed the amount of new grease. Put an adequate amount.

▪ Maintenance

• Lubrification every 30 hours of work



• Lubrification every 60 hours of work



⚠ ATTENTION | When lubricating the DCF-CO, do not exceed the amount of new grease. Put an adequate amount.

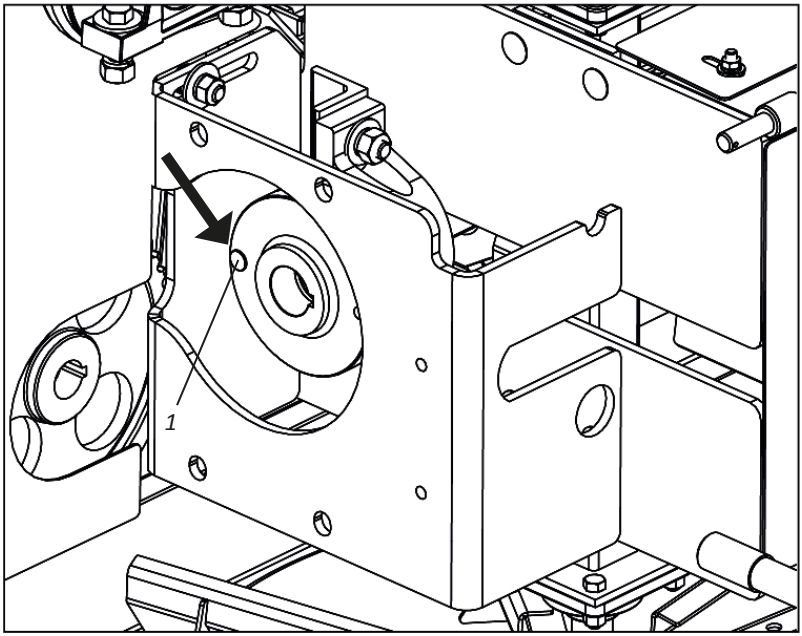
▪ Maintenance

⚠ ATTENTION **Constantly check nuts and screws and, if necessary, retighten them. The maintenance of general re-installation of the equipament must be performed every 8 hours of work.**

• Safety fuse

The reducer safety fuse (1) is intended to prevent damage to the transmission system caused by stresses greater than dimensioned. If the safety fuse (1) begins to break frequently, check:

01 - Check if there are no foreign objects locking the conveyor.
02 - If the product is not too compacted on the conveyor, wich may occur with dry powder products.
03 - When adjusting the belt tensioner, one side may be tighter than the other.



⚠ ATTENTION **Only use factory original fuses, since they are the only ones which have controlled hardness. Do not use two or more fuses, as this will increase resistance and damage the system.**

▪ Maintenance

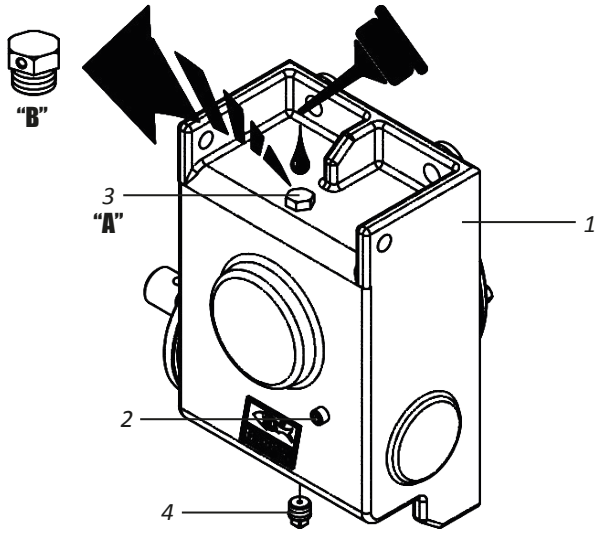
• Oil change - Gearbox

Peridically check oil level of gearbox (1) through the screw indicating the level (2) and refill it whenever required. To change the oil of the gearbox (1), proceed as follows:

01 - Remove drainage plug (4), breather cap (3) and level indicator screw (2) draining all oil from the gearbox (1).

02 - Then, reinstall the drainage plug (4) and fill with the breather cap (3) until oil leaks through the level vent (2).

03 - Finish by placing level indicator screw (2) and breather plug (3) back again.



ATTENTION | **Do not fill with oil above the level. Only use the specifield oil: 85W140 API GL-5 MIL-L-2105D SAEJ306; May/81.**

IMPORTANT | **Before operating the DCF-CO, remove the ("A") plug from the gearbox and place the ("B") breather plug in its place.**

NOTE | **Replace oil in first 200 hours of operation.**
Then, change at every 1000 hours of operation.
When using a specific oil brand, avoid completing the oil level with a different brand and specification.

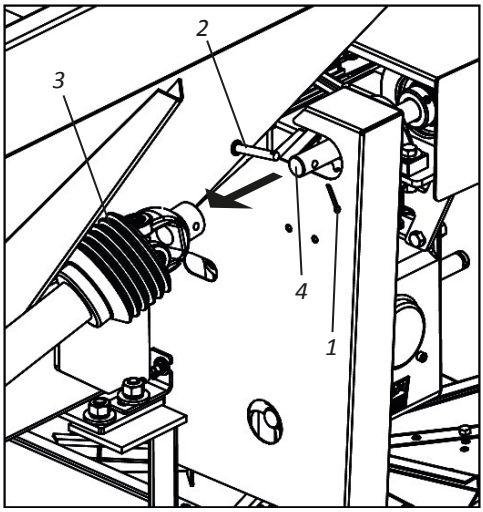
▪ Maintenance

• DCF-CO (Cardan) reduction gearbox replacement - Part I

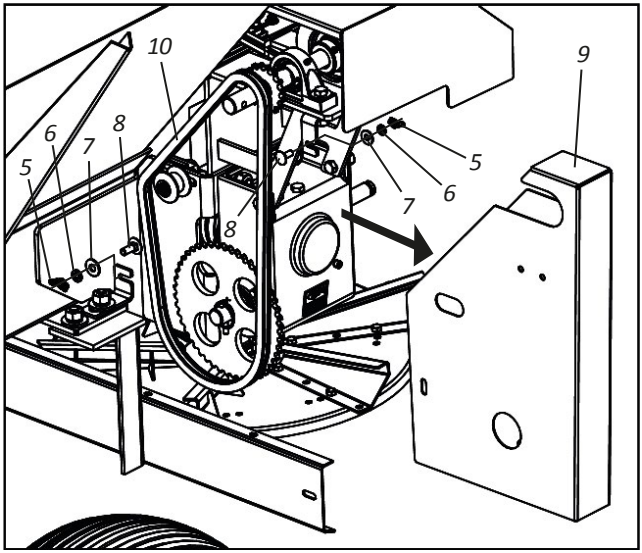
⚠ ATTENTION **Before starting the reduction gearbox change, make sure that the tractor is turned off. DO NOT replace reduction gearbox if tractor is on. Ignoring this warning may cause serious injury or death.**

To change the reduction gearbox, proceed as follows:

01 - Loosen the cotter pin (1), remove the pin (2) and uncouple the cardan (3) from the shaft (4).



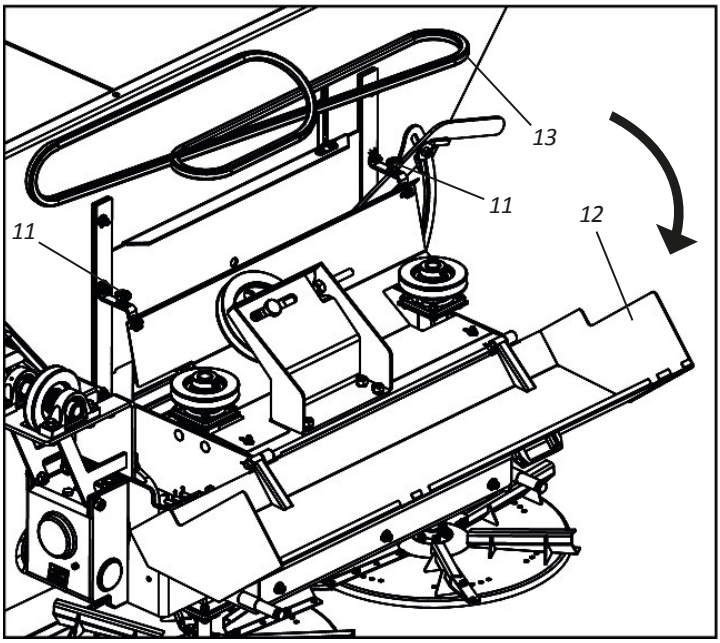
02 - Then, release the wing nuts (5), lock washers (6), flat washers (7), screws (8) and remove the protective cover (9) and the chain (10).



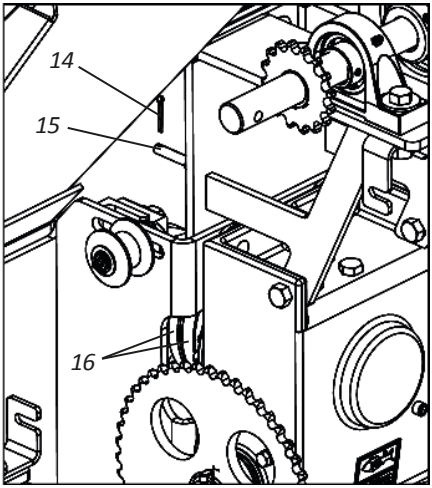
▪ Maintenance

• DCF-CO (Cardan) reduction gearbox replacement - Part II

03 - Then, loosen the handles (11), open the cover (12) and loosen the belt (13).



04 - Then, loosen the cotter pin (14) and remove the fuse pin (15) to loosen the flanges (16).



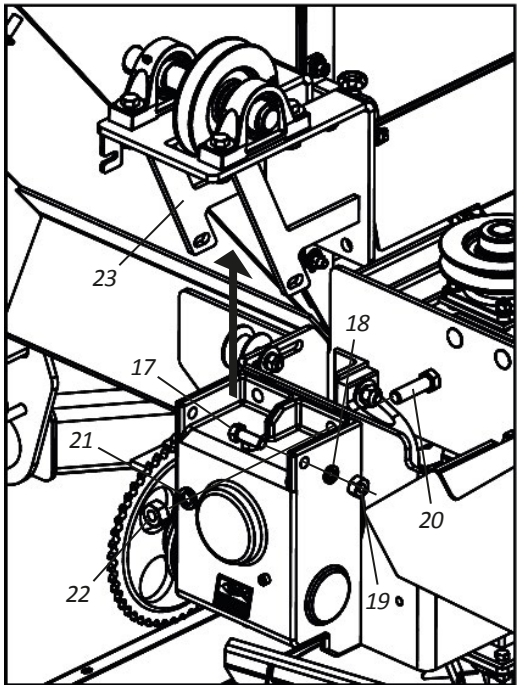
▪ Maintenance

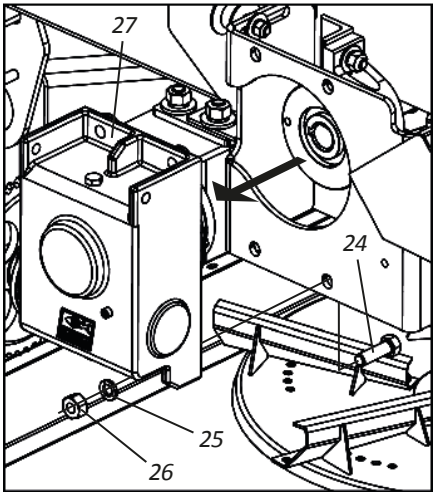
• DCF-CO (Cardan) reduction gearbox replacement - Part III

05 - Then, loosen the screws (17), lock washers (18) and nuts (19).

06 - Then, loosen the screws (20), lock washers (21), nuts (22) and remove the bracket (23).

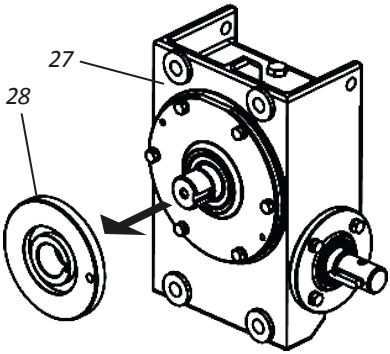
07 - Then, loosen the screws (24), lock washers (25), nuts (26) and remove the reduction gearbox (27).

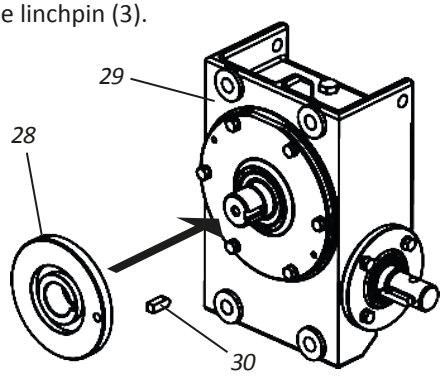




08 - Then, uncouple the flange (28) from the reduction gearbox (27).

09 - Then, couple the flange (28) to the new reduction gearbox (29), securing it through the linchpin (3).

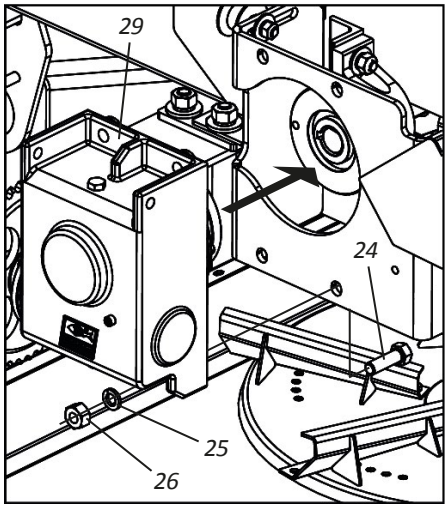




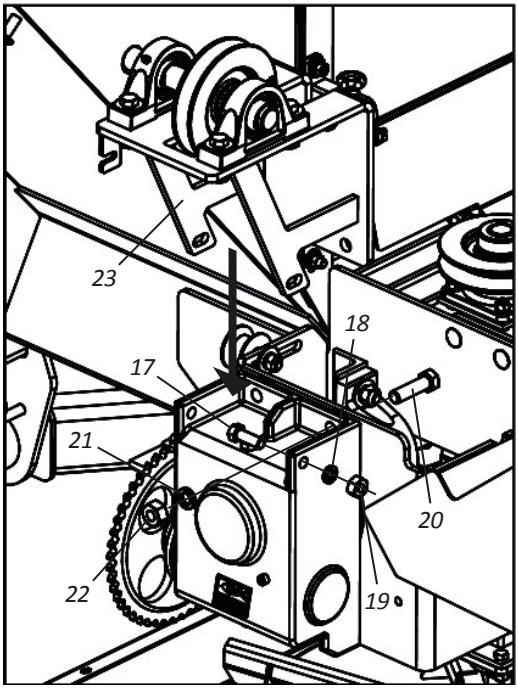
▪ Maintenance

• DCF-CO (Cardan) reduction gearbox replacement - Part IV

10 - The, couple the new reduction gearbox (29) securing it through the screws (24), lock washers (25) and nuts (26).



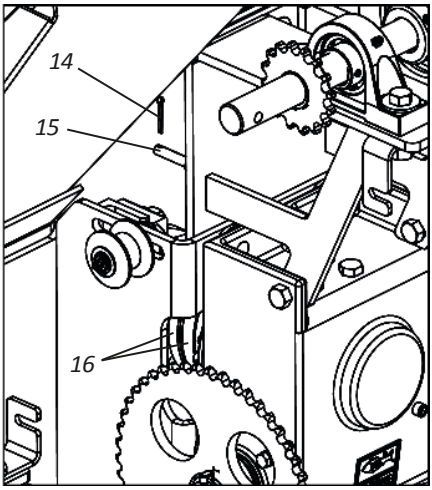
11 - Then, couple the bracket (23) securing it through the screws (20), lock washers (21), nuts (22) and screws (17), lock washers (18) and nuts (19).



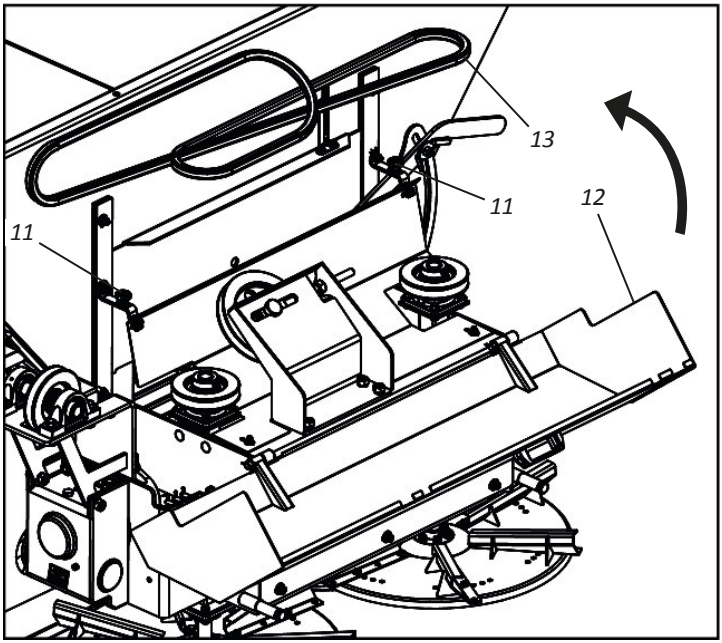
▪ Maintenance

• DCF-CO (Cardan) reduction gearbox replacement - Part V

12 - Then, lock the flanges (16) trhough the fuse pin (15) and the cotter pin (14).



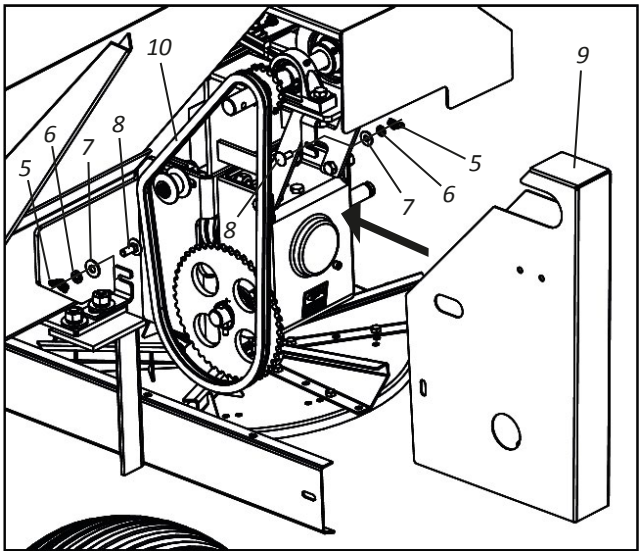
13 - Then, couple the belt (13), close the lid (12) and tighten the handles (11).



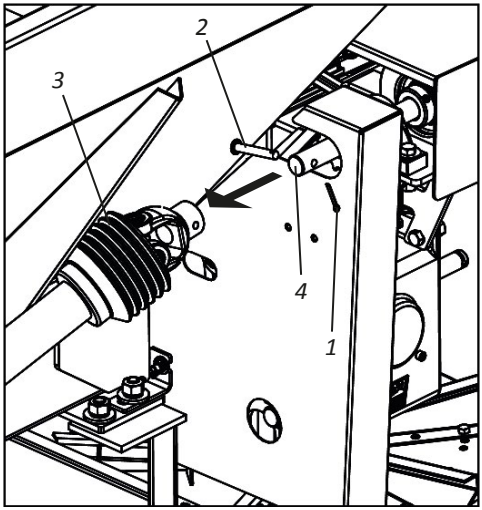
▪ Maintenance

• DCF-CO (Cardan) reduction gearbox replacement - Part VI

14 - Then, couple the chain (10) and couple the protective cover (9), securing it through the screws (8), flat washers (7), lock washers (6) and wing nuts (5).



15 - Finish by coupling the cardan (3) to the shaft (4), securing it through the pin (2) and the pin (1).



⚠ ATTENTION

Upon completing the assembly, before commencing work, perform a general overhaul and ensure that all components are correctly assembled.

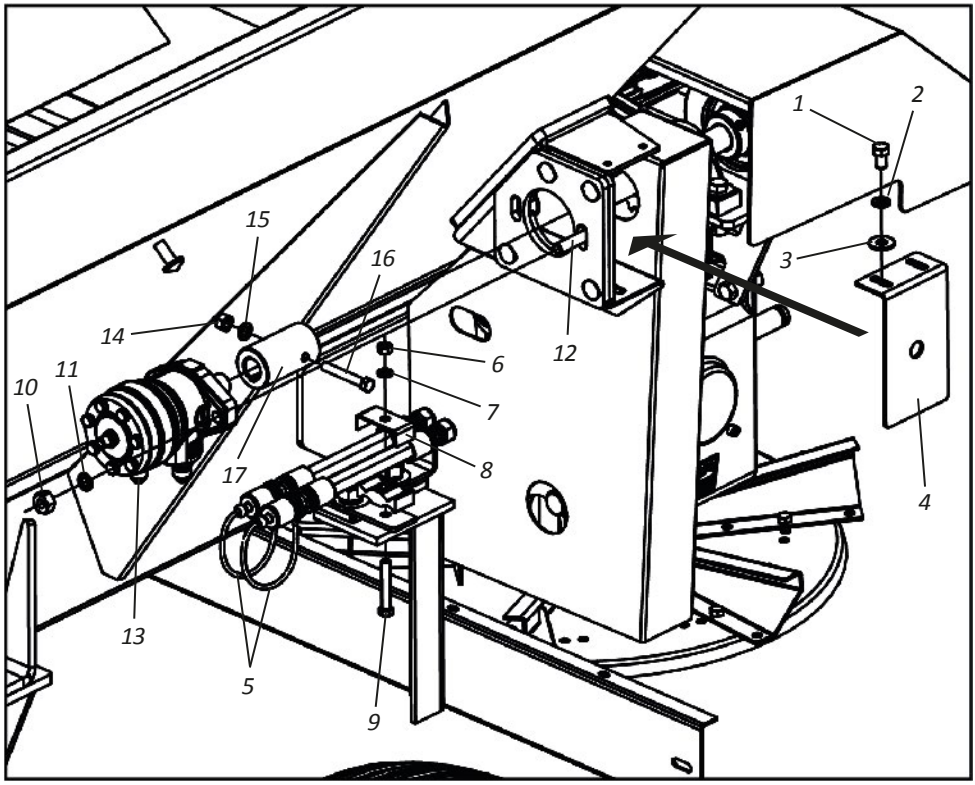
▪ Maintenance

• DCF-CO (Hydraulic Motor) reduction gearbox replacement - Part I

⚠ ATTENTION **Before starting the reduction gearbox change, make sure that the tractor is turned off. DO NOT replace reduction gearbox if tractor is on. Ignoring this warning may cause serious injury or death.**

To change the reduction gearbox (1), proceed as follows:

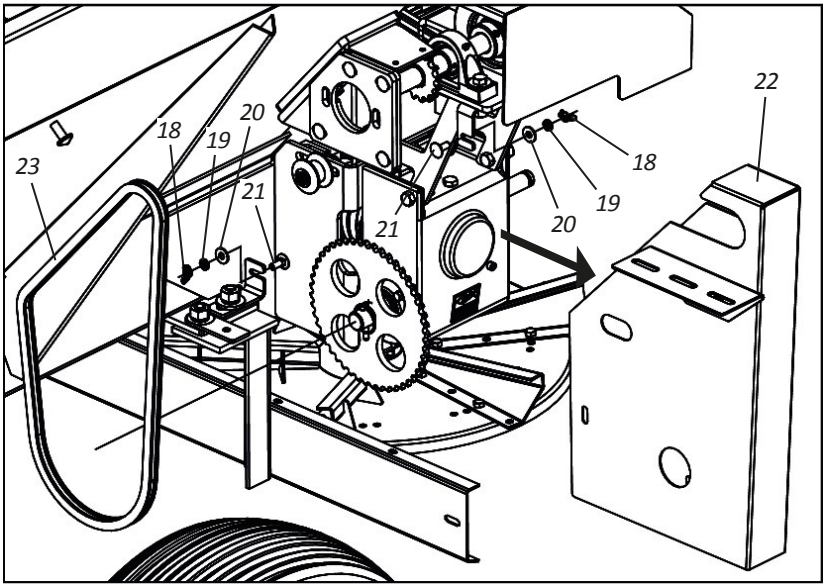
01 - Loosen the screws (1), lock washers (2), flat washers (3), and remove the plate (4).
02 - Then, release the hydraulic hoses (5) through the nut (6), lock washer (7), plate (8) and screw (9).
03 - Then, release the nuts (10), lock washers (11), screws (12) and remove the hydraulic motor (13).
04 - Then, release the nut (14), lock washer (15), screw (16) and remove the bushing (17).



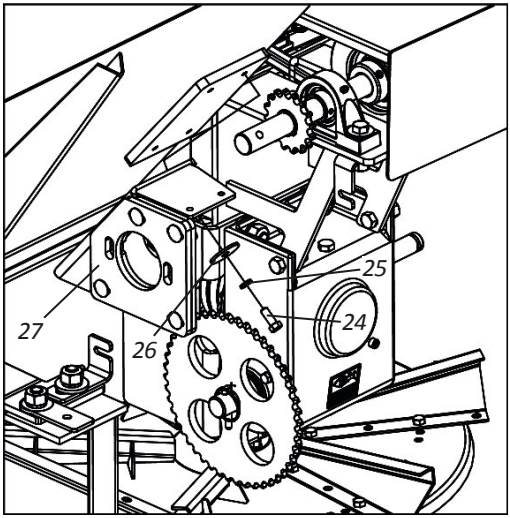
▪ Maintenance

• DCF-CO (Hydraulic Motor) reduction gearbox replacement - Part II

05 - Then, release the wing nuts (18), lock washers (19), flat washers (20), screws (21), remove the protective cover (22), and the chain (23).



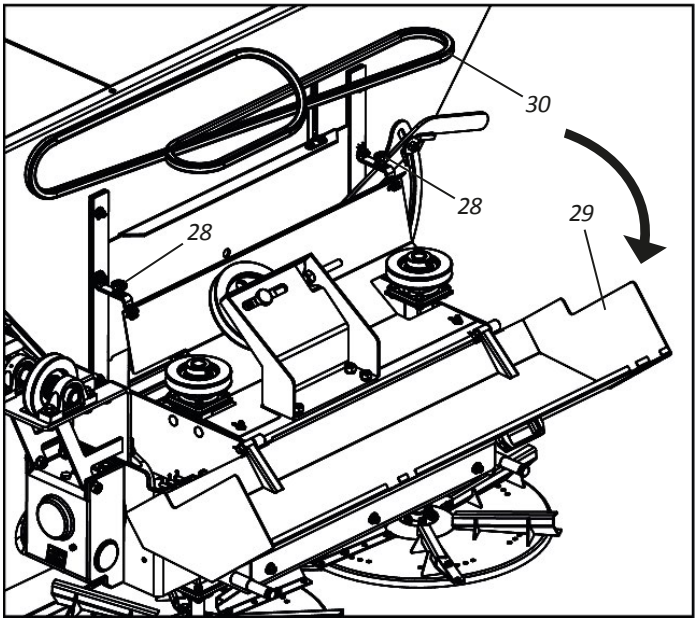
06 - Then, release the screws (24), lock washers (25), flat washers (26) and remove the retaining bracket (27).



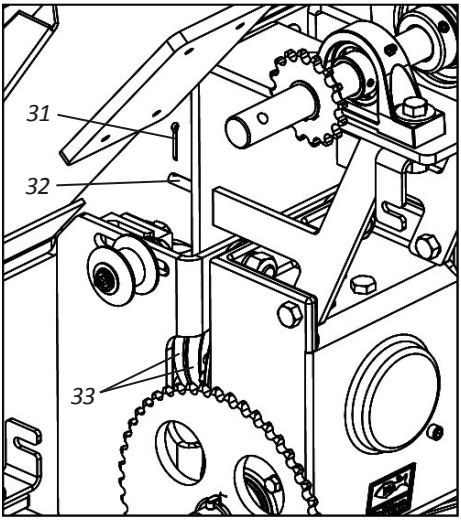
▪ Maintenance

• DCF-CO (Hydraulic Motor) reduction gearbox replacement - Part III

07 - Then, loosen the handles (28), open the cover (29) and loosen the belt (30).



08 - Then, loosen the cotter pin (31) and remove the fuse pin (32) to loosen the flanges (33).



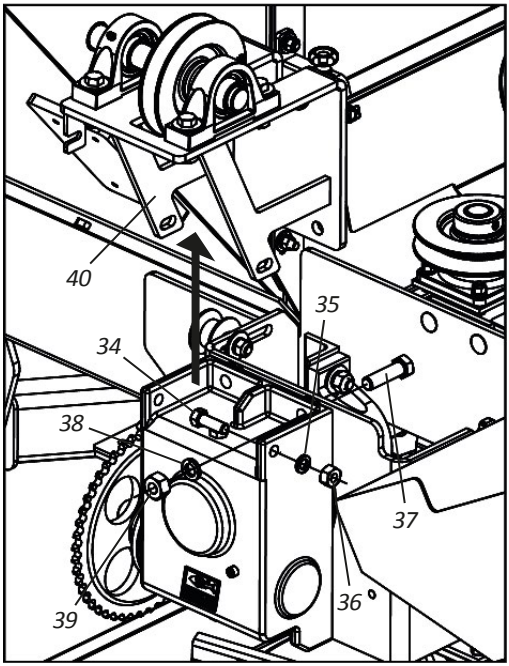
▪ Maintenance

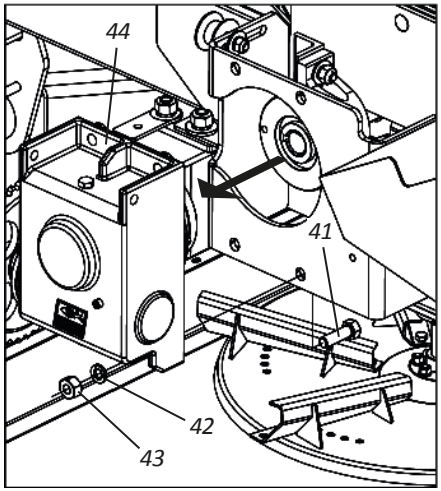
• DCF-CO (Hydraulic Motor) reduction gearbox replacement - Part IV

09 - Then, loosen the screws (34), lock washers (35) and nuts (36).

10 - Then, loosen the screws (37), lock washers (38), nuts (39) and remove the bracket (40).

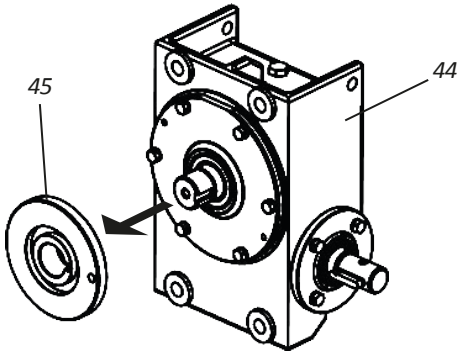
11 - Then, loosen the screws (41), lock washers (42), nuts (43), and remove the reduction gearbox (44).

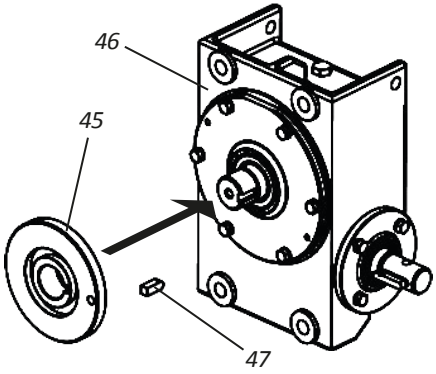




12 - Then, uncouple the flange (45) from the reduction gearbox (44).

13 - The, couple the flange (45) to the new reduction gearbox (46), securing it through the linchpin (47).

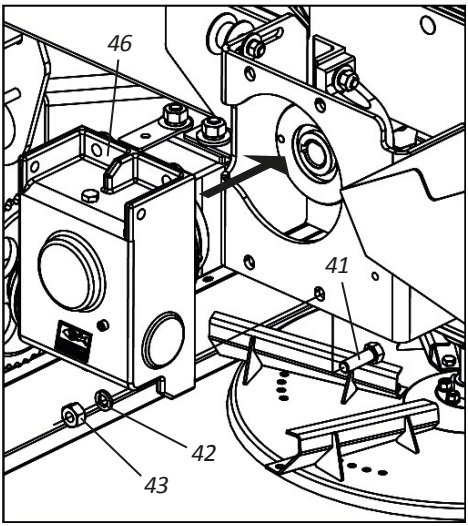


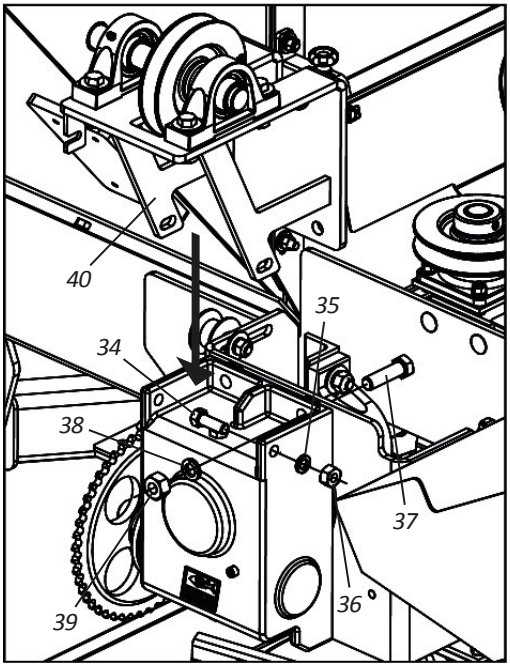


▪ Maintenance

• DCF-CO (Hydraulic Motor) reduction gearbox replacement - Part V

14 - Then, couple the new reduction gearbox (46) securing it through the screws (41), lock washers (42) and nuts (43).



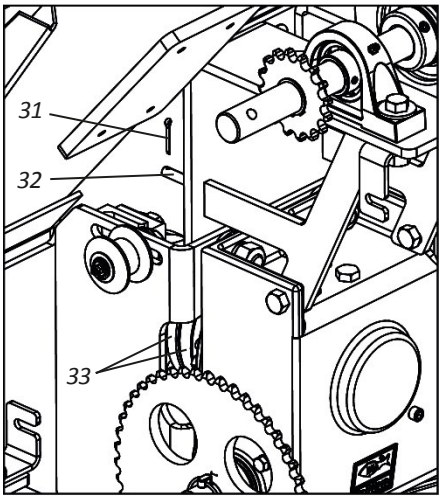


15 - Then, couple the braket (40) securing it through the screws (37), lock washers (38), lock washers (35) and nuts (36).

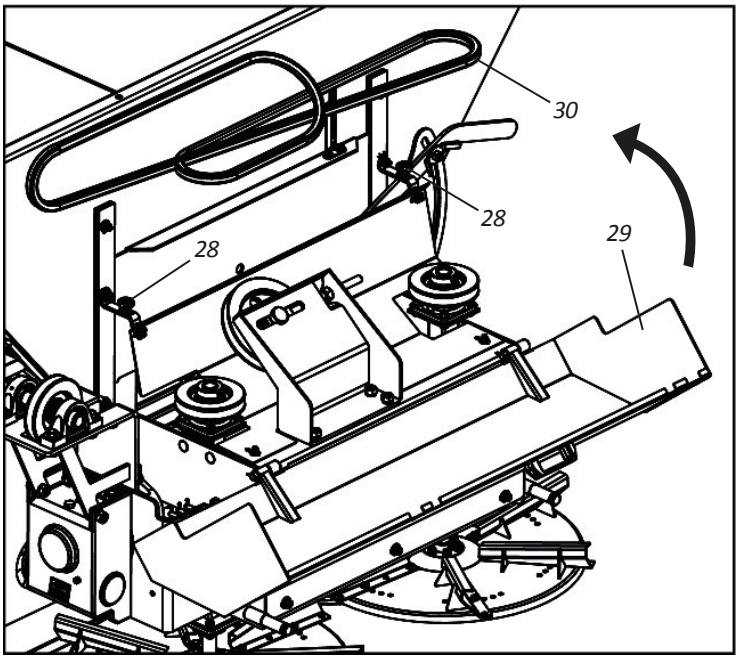
▪ Maintenance

• DCF-CO (Hydraulic Motor) reduction gearbox replacement - Part VI

16 **-** Then, lock the flanges (33) through the fuse pin (32) and the cotter pin (31).



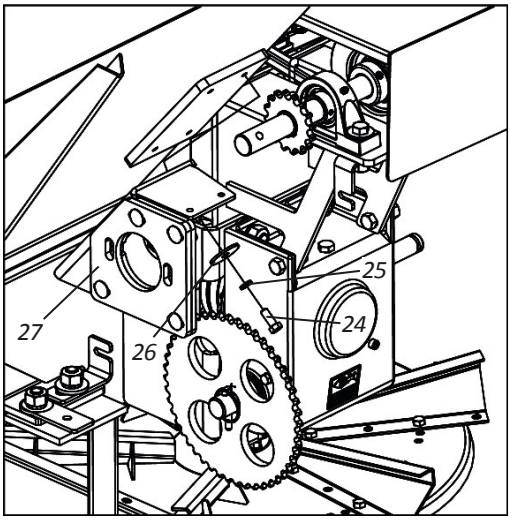
17 **-** Then, couple the belt (30), close the lid (29) and tighten the handles (28).



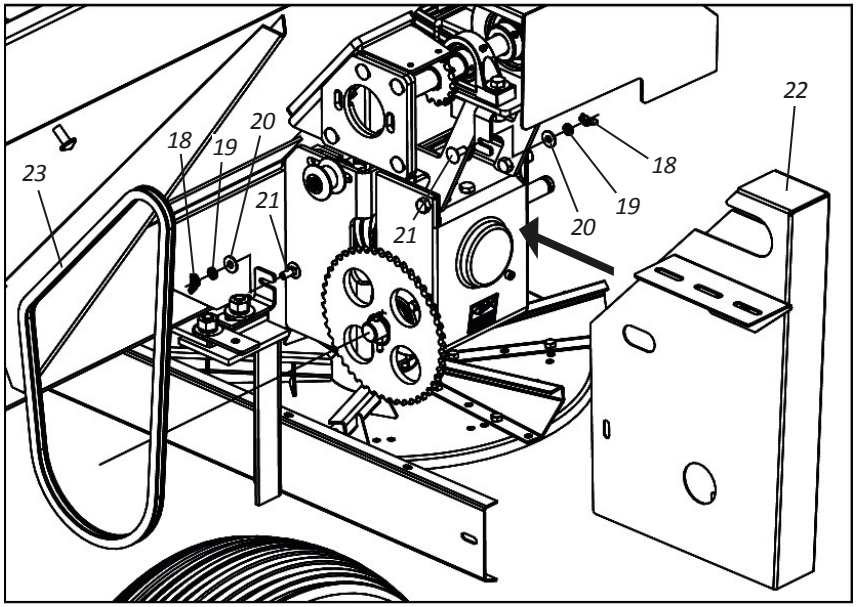
▪ Maintenance

• DCF-CO (Hydraulic Motor) reduction gearbox replacement - Part VII

18 - Then, couple the mounting bracket (27), securing through the screws (24), lock washers (25), and flat washers (26).



19 - The, couple the chain (23) and the protective cover (22), securing it through the screws (21), flat washers (20), lock washers (19), and wing nuts (18).



▪ Maintenance

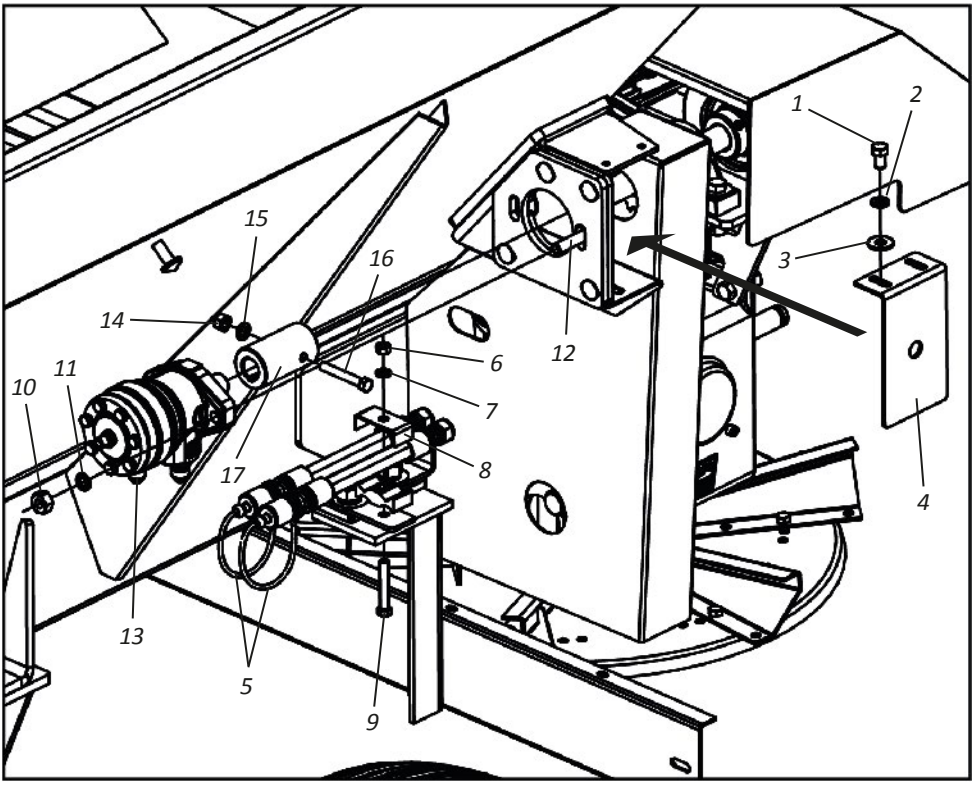
• DCF-CO (Hydraulic Motor) reduction gearbox replacement - Part VIII

20 - Then, couple the bushing (17) securing through the screw (16), lock washer (15) and nut (14).

21 - Then, engage the hydraulic motor (13) securing it through the screws (12), lock washers (11), and nuts (10).

22 - Then, couple the hydraulic hoses (5) securing through the plate (8), screw (9), lock washer (7), and nut (10).

23 - Finish by coupling the plate (4), securing it through the screws (1), lock washers (2), flat washers (3).



ATTENTION **Upon completing the assembly, before commencing work, perform a general overhaul and ensure that all components are correctly assembled.**

▪ Maintenance

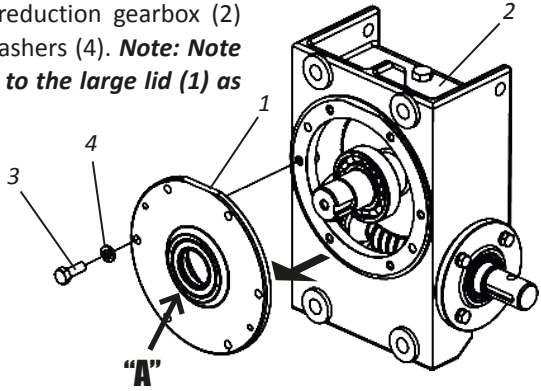
• Crown and pinion replacement (Reduction gearbox) - Part I

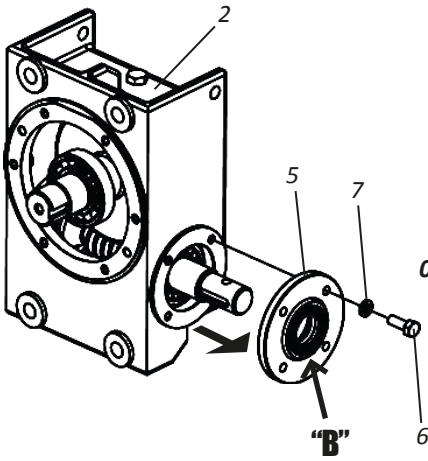
⚠ ATTENTION

Before starting to change the crown shaft and worm gear pinion, remove the reduction gearbox from the DCF-CO as instructed on pages 84 to 89 for DCF-CO (Cardan) and pages 90 to 97 for DCF-CO (Hydraulic Motor). Then, drain all reduction gearbox oil as instructed on page 83.

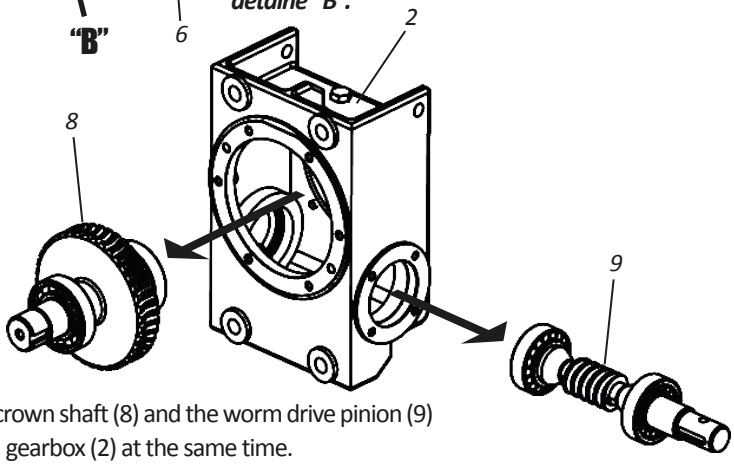
To change the crown shaft and worm drive pinion of the reduction gearbox, proceed as follows:

01 - Loosen the large cap (1) of the reduction gearbox (2) through the screws (3) and lock washers (4). ***Note: Note that the retainer will be attached to the large lid (1) as show in detail "A".***





02 - Em seguida, solte a tampa menor (5) da caixa redutora (2) através dos parafusos (6) e arruelas de pressão (7). ***Obs: Repare que o retentor estará fixado na tampa menor (5), conforme mostra o detalhe "B".***

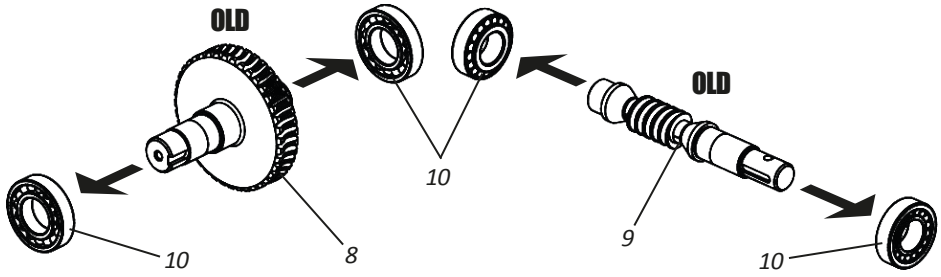


03 - Then, remove the crown shaft (8) and the worm drive pinion (9) from the reduction gearbox (2) at the same time.

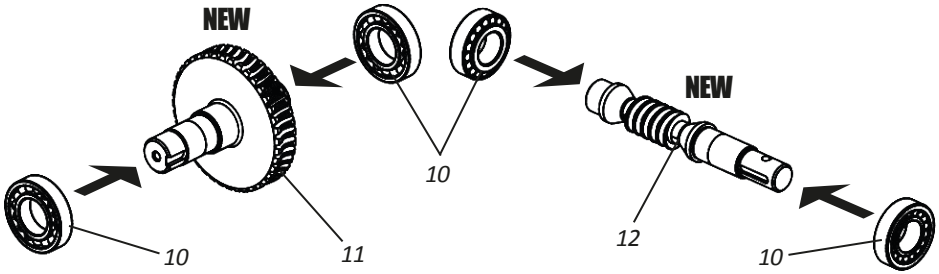
▪ Maintenance

• Crown and pinion replacement (Reduction gearbox) - Part II

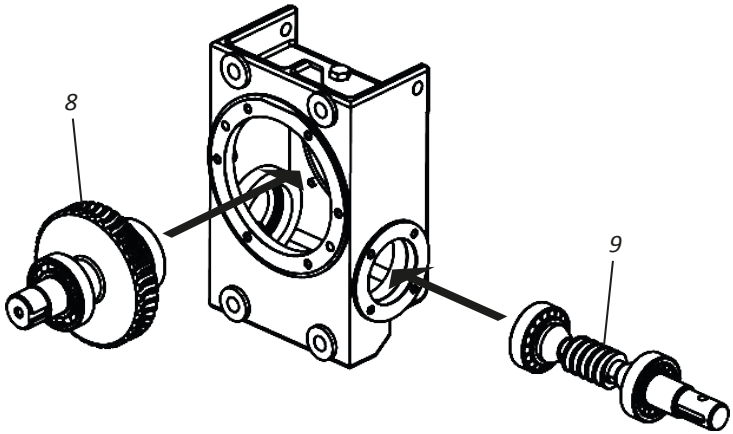
04 - Then, remove the old bearings (10) from the old crown shaft (8) and the worm gear pinion (9).



05 - Then, place the new bearings (10) on the new crown shaft (11) and worm gear pinion (12).

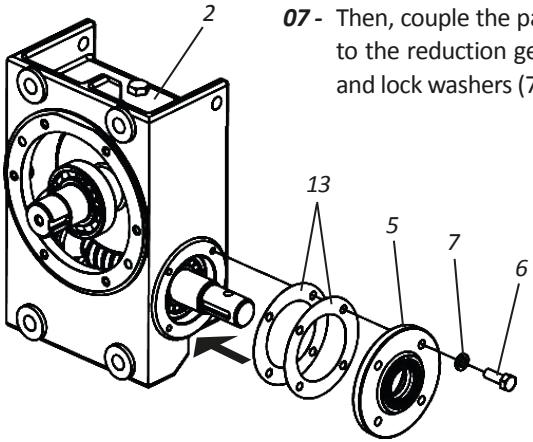


06 - Then, at the same time, replace the crown shaft (8) and the worm gear pinion (9) in the reduction gearbox (2), adjusting them.



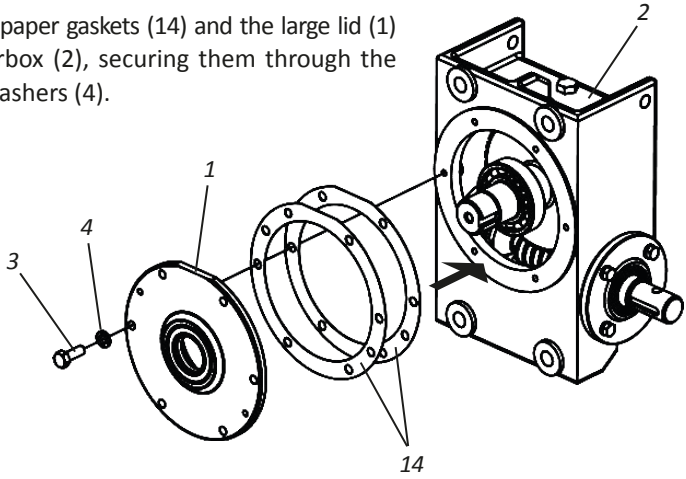
▪ Maintenance

• Crown and pinion replacement (Reduction gearbox) - Part III



07 - Then, couple the paper gaskets (13) and the smaller cover (5) to the reduction gearbox (2) securing through the screws (6) and lock washers (7).

08 - Finish by coupling the paper gaskets (14) and the large lid (1) of the reduction gearbox (2), securing them through the screws (3) and lock washers (4).



ATTENTION

After changing the crown shaft and the pinion worm gear, fill the reduction gearbox with oil as instructed on page 83. Then, couple the reduction gearbox to the DCF-CO as instructed on pages 55 and 56.

IMPORTANT

When the reduction gearbox assembly (2) is finished if the smaller cover (5) and large cap (1) have gaps, replace the paper gaskets (13 and 14).

▪ Maintenance

• Operational Maintenance

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
Product not flowing to the discs or insufficient amount.	The shut-off gate may be closed.	Check and take them out in it is the case.
	Foreign objects locking the conveyor.	Assemble the cardan correctly or replace crossheads with excessive wear.
	Conveyor, roller chain or broken fuse.	Retighten the bearings or replace them if damaged.
	Wrong assembly of the gears.	Tension the conveyor belt.
Distribution of the product in the soil is not uniform.	Distance between on stroke and the other is too long.	Reduce distance between strockes and operate according within the recommended distance.
	Fin in the wrong position on power distribution discs.	Check the position of the fins if they are not inverted according to the rotating direction of the distributor discs. If they are inverted, proceed with their correct assembly.
	Rotating the power outlet.	Correct rotation in the PTO which should be 540 RPM.
	Very strong wind.	Wait until the wind reduces or use the buffer (**optional**).
Distribution range too narrow.	Position of fins on power distribution discs.	Adjust the fins on the discs for a more open position.
Recommended dosage is not obtained.	Dosage system. Work speed above recommendation.	Increase gate flow. Reduce work speed.
Dosage higher than recommended.	Dosage system. Work speed under recomendation.	Reduce gate flow. Adjust work speed to the recommended one.
Rompimento do fusível com frequência.	Belt operating over recommended speed. Foreign objects locking the conveyor.	Reduce belt speed and increase gate flow. Check and clean the belt.

▪ Maintenance

• Operational Maintenance

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
Vibration or excessive noises during operation.	Foreign objects inside the DCF-CO.	Check and take them out in it is the case.
	Wrong cardan assembly or worn out crosshead.	Assemble the cardan or replace crossheads with excessive wear.
	Loosen or damaged bearings.	Retighten the bearings or replace them if damaged.
	Conveyor adjustment	Tension the conveyor belt.
	PTO Rotation.	Keep rotation in 540 Rpm.
Frequent breaking of the use.	Belt operating over recommended speed. Foreign objects locking the conveyor.	Reduce belt speed and increase gate flow. Check and clean the belt.

▪ Maintenance

• Cares

01 - Before each work, check the condition of all pins and screws. Where necessary, retighten or replace them.
02 - Movement speed should be carefully controlled according to the terrain's conditions.
03 - The **DCF-CO** is used in several applications, requiring knowledge and attention in its handling.
04 - Only local conditions can determine the best way to operate the **DCF-CO**.
05 - When assembling or disassembling parts of the **DCF-CO**, use appropriate methods and tools.
06 - Carefully observe the lubrification intervals in the various lubrification points of the **DCF-CO**. Respect the lubrification intervals.
07 - Always check if the parts have wears. If there is a need for replacement, always demand Baldan original parts.

IMPORTANT | **Proper and periodic maintenance are necessary to ensure the long life of the DCF-CO.**

• General cleaning

01 - When storing the **DCF-CO**, perform a general cleaning and wash it thoroughly with water only. Make sure the paint has not worn out, if this has happened, apply a general coat and protective oil and fully lubrificate the **DCF-CO**. Do not use burned oil or other abrasive.
02 - After the work, proceed as follows:

- Remove transmission chains and keep them immersed in oil until the next work.

03 - Completely lubrificate the **DCF-CO**. Check all moving parts of the **DCF-CO**, for wear and tear or gaps, make the required adjustments or parts replacements, leaving the machine ready for the next work.
04 - When the **DCF-CO** is not in use, clean any product residues remaining after use, such as limestone, fertilizers, dirt, etc.
05 - Spray the entire **DCF-CO** with castor oil or preservative oil, never use burnt oil.
06 - Replace any damaged or missing stickers, especially warnings. Make everyone aware of the importance and risks of accidents when instructions are not followed.
07 - Clean the cardan every 15 days or sooner if necessary.

▪ Maintenance

• General cleaning

08 - Remove the protective caps, separate “male” from “female”, wash and remove crusts, dry and lubricate sliding parts with grease and reassemble.

09 - After all maintenance precautions, store your **DCF-CO** in a plain surface, at a covered and dry location, away from animals and children.

10 - We recommend washing the **DCF-CO** with water only on the beginning of works.

⚠ ATTENTION | **Do not use abrasives or chemical products to wash the DCF-CO, as it may damage its painting and adhesives.**

• Distributor Preservation - Part I

To extend the useful life and appearance of the **DCF-CO,** follow the instructions bellow:

01 - Wash and clean all distributor components during and at the end of the work season.

02 - Use neutral products to clean the distributor following the safety and handling guidelines provided by the manufacturer.

03 - Always carry out maintenance during the periods indicated in this manual.

• Distributor Preservation - Part II

The practices and care below make a difference for the conservation of the **DCF-CO** if adopted by the owner or operator**.**

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

02 - Use only NEUTRAL detergent and water (pH equal to 7);

03 - Apply the product, strictly following the manufacturer’s instructions, on a wet surface and in the correct sequence, respecting the application and washing times;

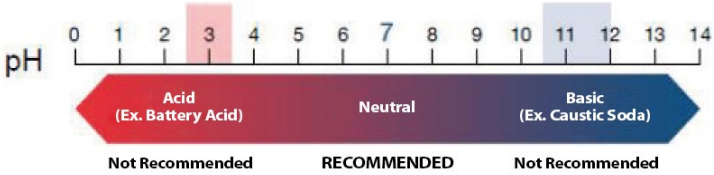
▪ Maintenance

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 distributor.

- Detergents with acid active ingredients (lower than 7 pH), act as zinc stripper/ remover (parts protection 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, lubrificate all chains and greases according to the recommendations in the operator's manual.

09 - Spray the whole machine, especially zinc parts, with protective oil, following the manufacturer's application instructions. 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.

⚠ ATENTION | **Do not use any other type oil to protect the distributor (used hydraulic oil, burnt oil, diesel, castor oil, kerosene, etc.).**

❗ IMPORTANT | **We recommend the following protective oils:**
- Bardahl: Agro protective 200 or 300
- ITWChemical: Zoxol DW - Series 4000

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

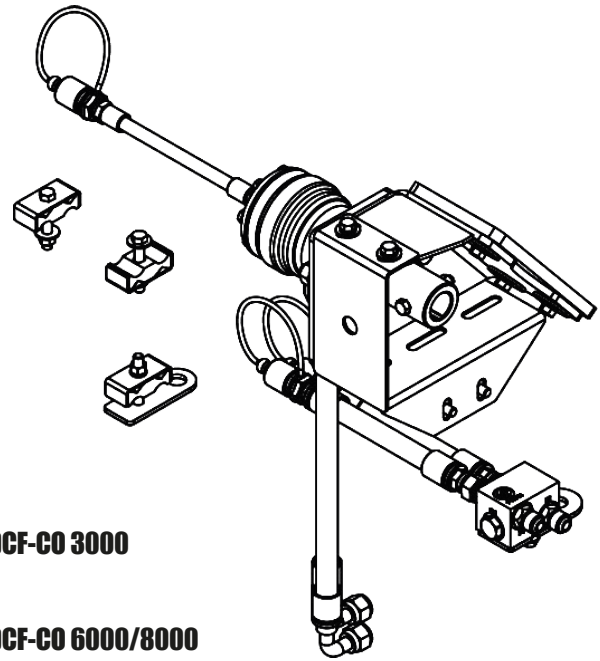
▪ Optional

• Optional Accessories - Part I

The **DCF-CO** has optional accessories that can be acquired according to the work needs.

HYDRAULIC ENGINE SYSTEM

The hydraulic engine system can be optionally purchased to transform your **DCF-CO** (Cardan) into a **DCF-CO** (Hydraulic Engine). Before purchasing the hydraulic engine system, observe the warning below and check that your tractor meets the requirements for hydraulic engine operation.



FULL HYDRAULIC ENGINE SYSTEM - DCF-CO 3000
CÓD: 5528011012-3

FULL HYDRAULIC ENGINE SYSTEM - DCF-CO 6000/8000
CÓD: 5528011010-7

⚠ ATTENTION

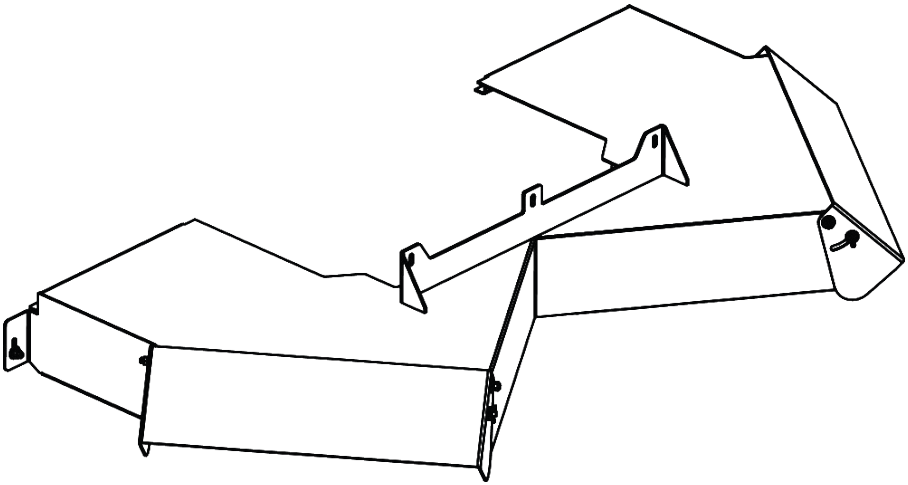
For the operation of the hydraulic engine system and the DCF-CO with hydraulic engine, the tractor must have a continuous flow hydraulic system and a 40 to 50 L/Min hydraulic pump. If the tractor does not include these items, both the hydraulic engine system and the DCF-CO with a hydraulic engine will not work.

▪ Optional

• **Optional accessories - Part II**

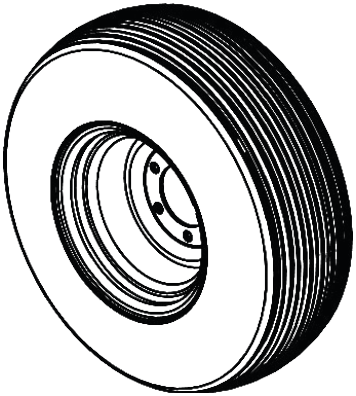
DRIVING GEARBOX

The driver box is used for jobs where the application of the fertilizer should be directed in line, for example under canopies.



TIRES

For work on clay soils, the **DCF-CO 3000** and **6000** can be optionally purchased with 11L-15 tires.

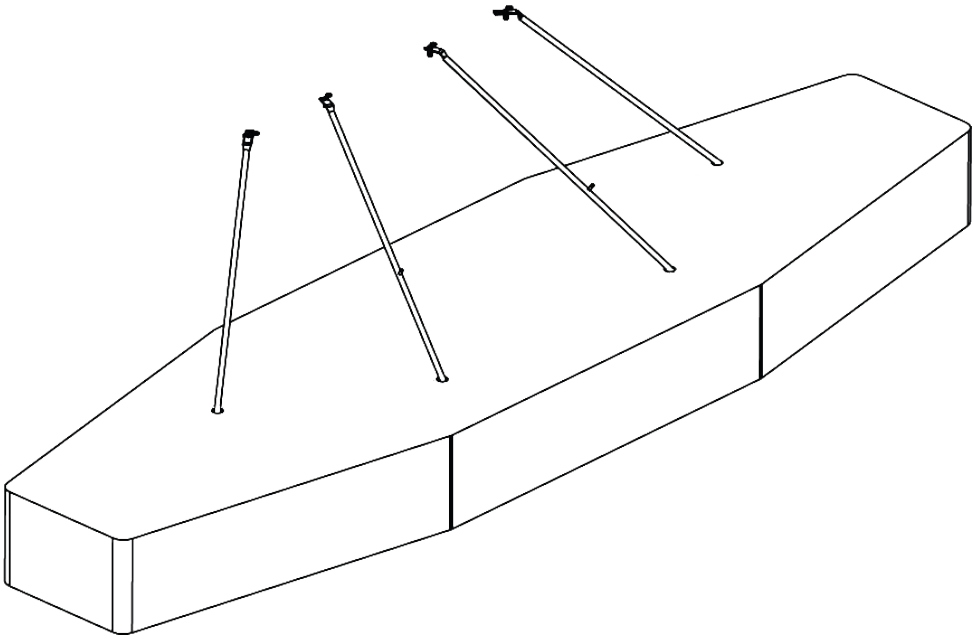


▪ Optional

• Optional accessories - Part III

BAFFLE WITH CANVAS

The baffle with canvas is used for the distribution of powdered products mainly when there are occurrences of winds. Using the baffle, ensures greater distribution uniformity, retaining the product.

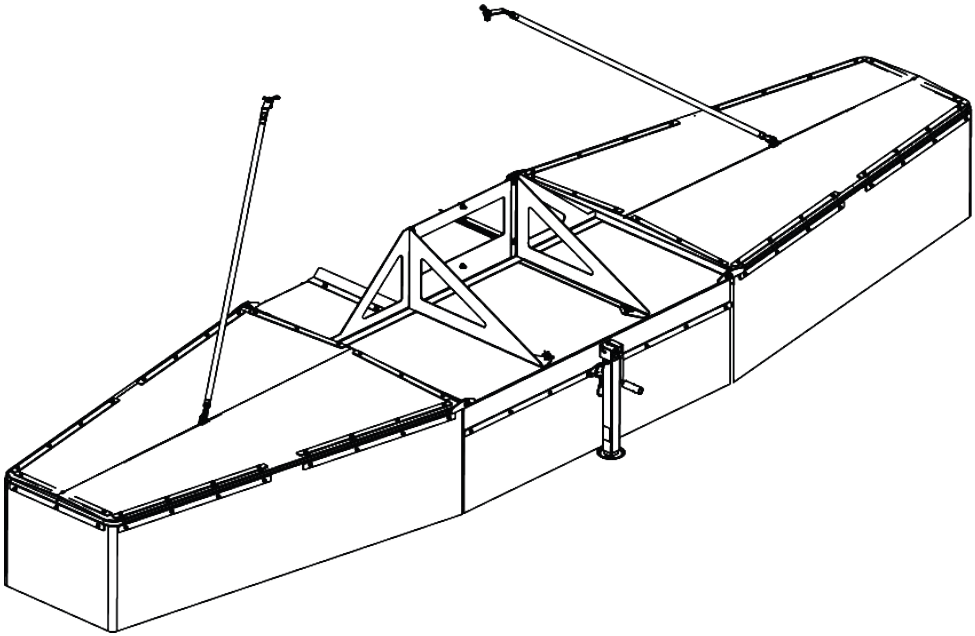


▪ Optional

• Optional accessories - Part IV

BAFFLE WITH RUBBER

The baffle with rubber is used for the distribution of powdered products mainly when there are occurrences of winds. Using the baffle ensures greater distribution uniformity retaining the product.



▪ Identification

• Identification plate

In order to consult the parts catalog or ask Baldan for service, always indicate the model (1), serial number (2) and manufacturing date (3), which is on the nameplate of your **DCF-CO**.

⚠ 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
e-mail: posvenda@baldan.com.br

PUBLICATIONS

Code: 60550105287 | CPT: DCFCO05618

PEÇAS ORIGINAIS BALDAN
ORIGINAL PARTS · PIEZAS ORIGINALES

▪ 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: _____

▪ Notes

▪ Notes

Certificate of 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 in the product within the dealer warranty deadline will only be authorized by **BALDAN** upon previous budget presentation describing parts and work 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.

Implement: _____ Serial Number: _____

Date: _____ Tax Number: _____

Dealer: _____

Telephone: _____ CEP: _____

City: _____ State: _____

Owner: _____

Telephone: _____

Address: _____ Number: _____

City: _____ State: _____

E-mail: _____

Sale date: _____

Signature / Dealer Stamp _____

1st copy - Owner

▪ 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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Dealer: _____

Telephone: _____ CEP: _____

City: _____ State: _____

Owner: _____

Telephone: _____

Address: _____ Number: _____

City: _____ State: _____

E-mail: _____

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.

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

Implement: _____ Serial Number: _____

Date: _____ Tax Number: _____

Dealer: _____

Telephone: _____ CEP: _____

City: _____ State: _____

Owner: _____

Telephone: _____

Address: _____ Number: _____

City: _____ State: _____

E-mail: _____

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

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

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