Instruction Manual

FERTILIZA

Fertilizer Spreader with Precision Agriculture

BALDAN

▪ Presentation

We thank you for preference and congratulate you on the the excellent choice you have just made, as you have purchased a product made with **BALDAN IMPLEMENTOS AGRÍCOLAS S/A** technology.

This manual will guide you through the procedures necessary; from purchase to operating, safety and maintenance procedures.

BALDAN warrants that it has delivered this implement to the retailer complete and in perfect condition.

The retailer was responsible for the custody and conservation during the period in its possession, as well as for the assembly, retightening, lubrication, and overhaul.

At the technical delivery, the retailer should advise the user customer about maintenance, safety, their obligations in any technical assistance, the strict observance of the warranty term and the reading of the instruction manual.

Any warranty service claim should be made to the retailer where the implement was purchased.

We reiterate the need for careful reading of the warranty certificate and compliance with all items in this manual, as doing so will increase the life of your implement.

Instruction
Manual

FERTILIZA

Fertilizer Spreader with Precision Agriculture

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 AN IMPORTANT SAFETY WARNING. IN THIS MANUAL, WHENEVER YOU FIND IT, PLEASE READ THE FOLLOWING MESSAGE CAREFULLY AND WATCH OUT FOR POTENTIAL PERSONAL ACCIDENTS.

⚠ ATTENTION

Read the instruction manual carefully in order to get to know the recommended safety practices.

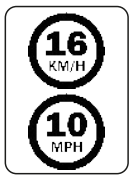
⚠ ATTENTION

Only start operating the tractor when properly seated and with a fastened seat belt.

⚠ ATTENTION

Do not make adjustments with the FERTILIZA in operation. When doing any service on the FERTILIZA, first turn off the tractor.
Use appropriate tools.

⚠ ATTENTION

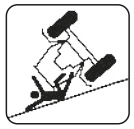


For greater safety when transporting FERTILIZA, do not exceed a speed of 16 Km/h or 10 MPH, avoiding the risk of damage and accidents.

⚠ ATTENTION

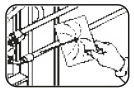
Do not carry people on or inside the tractor or on the equipment.

⚠ ATTENTION



There is a risk of serious injury due to tipping when working on sloping terrains. Do not use excessive speed.

⚠ ATTENTION



When checking hoses for leaks, use a piece of cardboard or wood, never use your hands. Avoid incision of fluid in the skin.

⚠ ATTENTION

Avoid heating parts near fluid lines.
The heating can cause the material to be brittle, ruptures, and discharges of the pressurized fluid, which can cause burns and injuries.

⚠ ATTENTION

Do not work with the tractor if its front is not sufficiently weighted for the rear equipment. If it tends to lift, add weights or ballasts to the front of the machine or front wheels.

⚠ ATTENTION

Before performing any maintenance on your equipment, make sure that it is properly stopped. Avoid getting run over.

⚠ ATTENTION

Always keep access and work places clean, such as from oil or grease, as they may cause accidents.

⚠ ATTENTION

Before working with or transporting the FERTILIZA, check for people or obstructions near the FERTILIZA.

▪ Safety Rules

⚠ ATTENTION | FOLLOW ALL RECOMMENDATIONS, WARNINGS, AND RECOMMENDED SAFETY PRACTICES IN THIS MANUAL, UNDERSTAND THE IMPORTANCE OF YOUR SAFETY. ACCIDENTS MAY CAUSE DISABILITIES OR EVEN DEATH. REMEMBER, ACCIDENTS CAN BE AVOIDED!

⚠ ATTENTION

Avoid skin contact with hot surfaces on FERTILIZA.

⚠ ATTENTION

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

⚠ ATTENTION

Be careful when handling the FERTILIZA support foot, as there is a risk of accidents.

⚠ ATTENTION

Never use chemical products without proper protection, thus avoiding contact with the skin.

⚠ ATTENTION

Keep the articulation area free while the FERTILIZA is in operation.
In sharp turns, keep the tractor wheels from touching the head.

⚠ ATTENTION

When providing maintenance on the suspended conveyor, support it safely.
Do not support the conveyor on hollow bricks, piles or cement blocks that may collapse under load.

⚠ ATTENTION

Pressurized hydraulic oil under may cause serious injury if leaks occur.
Periodically check the condition of the hoses. If there is evidence of leaks, replace them immediately. Before connecting or disconnecting hydraulic hoses, relieve system pressure by activating the control with the tractor off.

⚠ ATTENTION

Improper waste disposal affects the environment and ecology as it will pollute rivers, canals, or the soil.
Find out how to properly recycle or dispose of waste.

PROTECT THE ENVIRONMENT!

⚠ ATTENTION

The degradation of the environment reflects on everyone. May our daily actions come to recover it. Make sure chemical handling does not contribute to this degradation.

⚠ ATTENTION

Always stay away from the active elements of the FERTILIZA (discs), they are sharp and can cause accidents.
When carrying out any work on discs, wear safety gloves on your hands.

▪ Safety Rules

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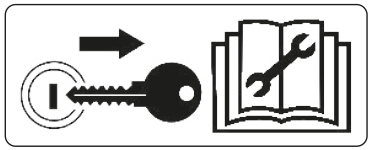
⚠ ATTENTION



Remove the ignition key before performing any maintenance on the FERTILIZA. Protect yourself from possible injury or death, caused by an unexpected start of the FERTILIZA.
If the FERTILIZA is not properly engaged, do not start the tractor.

⚠ ATTENTION

There is risk of possible injuries to the operator and expectators during operations with FERTILIZA due to the following reasons:
Contact with distributors discs.
Engagement of the body in the drive shaft and rotary shaft.

⚠ ATTENTION

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

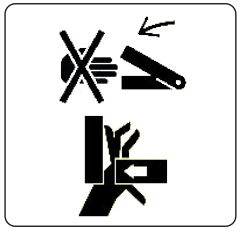
⚠ ATTENTION

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

⚠ ATTENTION

Never weld the wheel with a mounted tire, as heat can increase air pressure and cause the tire to explode.
When inflating a tire, position yourself next to the tire, never in front of it.
When inflating the tire, always use a containment device (inflation cage).

⚠ ATTENTION



To maneuver FERTILIZA, use the pin to lock the wheel system. When placing the pin, be careful to not press your hands.
Check the procedure for locking the wheel system on page 46.

▪ Safety Rules

⚠ ATTENTION | FOLLOW ALL RECOMMENDATIONS, WARNINGS, AND RECOMMENDED SAFETY PRACTICES IN THIS MANUAL, UNDERSTAND THE IMPORTANCE OF YOUR SAFETY. ACCIDENTS MAY CAUSE DISABILITIES OR EVEN DEATH. REMEMBER, ACCIDENTS CAN BE AVOIDED!

⚠ ATTENTION

To prevent intoxications, injuries or death when the FERTILIZA 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 rotating discs.

- Never allow people on or under the FERTILIZA.

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

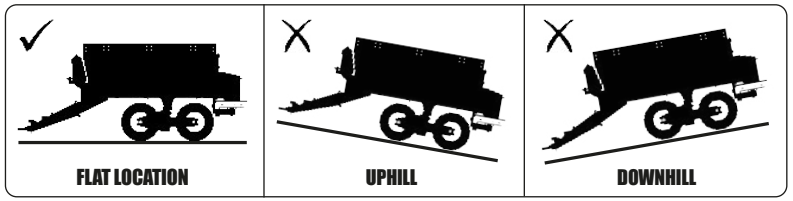
⚠ ATTENTION

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.

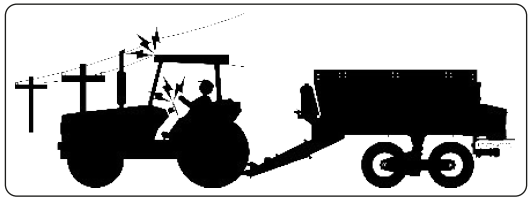
INTOXICATION SYMPTOMS:
Weakness, headache, chest pressure, chest tightness, blurred vision, unresponsive pupils, abundant salivation, sweating, nausea, vomiting and abdominal cramps.

⚠ ATTENTION



Only stop FERTILIZA on level ground. Do not park the FERTILIZA on an incline or slope.

⚠ ATTENTION



Be careful when driving or working with FERTILIZA under power lines, low tree branches and other overhead obstructions, avoiding serious injury or even death.
Before traveling or working with FERTILIZA, carry out a thorough assessment of the location.

⚠ ATTENTION

Always observe the recommendations on the chemical's packaging before buying and using it. Failure to read these recommendations may result in incorrect use of the product, thus affecting people, animals and yourself, causing serious illness or even death.
When emptying the chemical packaging, do not throw it into rivers or lakes, proceed as instructed on the packaging, without information, contact the competent agency in your region. Observe the triple wash recommendation on chemical packaging.

▪ Safety Rules

• PPE Equipment

⚠ ATTENTION | **DO NOT WORK WITH THE FERTILIZA WITHOUT FIRST WEARING PPE (SAFETY EQUIPMENT). IGNORING THIS WARNING MAY CAUSE HEALTH DAMAGES, SERIOUS ACCIDENT, OR DEATH.**

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

NOTE | **All PPEs (Safety Equipment) must have an authenticity certificate.**

IMPORTANT

The safety practice must be carried out in all stages of work with the FERTILIZA, thus avoiding accidents such as impact of objects, falling, noise, cuts and ergonomics, that is, the person responsible for operating the seeder is subject to internal and external bodily damage.

▪ Warnings

⚠ When operating the FERTILIZA, do not allow people to stand too close to or on top of it.

⚠ When performing any maintenance service, use PPEs equipment.

⚠ Do not wear loose clothing, as it may get caught in the FERTILIZA.

⚠ 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 FERTILIZA. 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 FERTILIZA, 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 FERTILIZA 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 FERTILIZA.

⚠ 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.

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

⚠ Any supply or inspection must be carried out with the FERTILIZA stopped and the tractor turned off, using safe access means.

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

⚠ If you need to travel on highways with the FERTILIZA, consult the transit authorities.

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

⚠ Do not transport or work with the FERTILIZA near obstacles, rivers or streams.

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

▪ Warnings

⚠ When operating the FERTILIZA, make sure that there are no people positioned in the throwing line of the distributor discs.

⚠ When carrying out any checks inside the distributor, do not lean on the distributor disks.

⚠ Do not enter the FERTILIZA, especially when the power outlet is on.

⚠ Do not remove the protection from the distributor discs.

⚠ Do not approach the dispensing discs while they are moving.

⚠ Improper use of the FERTILIZA, especially on uneven terrain, slopes or slopes, can cause it to tip over. Pay close attention in case of rain, snow, ice or any other case of slippery terrain. If necessary, get off the tractor and check the consistency of the soil.

⚠ When covering the FERTILIZA with canvas, do not walk on the edges of the bucket, use the ladder to avoid the risk of falling and having an accident.

⚠ Do not try to get off the FERTILIZA while it is moving, even in the event of an overturn, as you could be crushed.

⚠ If there is a need to access the FERTILIZA bucket, make sure that the transmission elements are disconnected from the tractor.

⚠ Accessing the FERTILIZA bucket during use is prohibited.

⚠ Avoid loads exceeding the capacity specified for each FERTILIZA model. Ignoring this warning can cause damage to the FERTILIZA and pose a risk to your safety.

⚠ Always chock the FERTILIZA tires before disengaging it from the tractor.

⚠ Use the same gear required for going uphill (engine brake) when using the FERTILIZA going downhill (downhill).

⚠ Keep stair treads and handrails always clean of residues (oil, grease, etc.) that can cause serious accidents or death.

⚠ The maintenance of the FERTILIZA must only be carried out by specialized personnel. Before starting maintenance, disconnect all drive systems.

⚠ FERTILIZA speed may differ from tractor speed depending on wheel slip, pitch and wheel sensor accuracy.

⚠ We recommend distributing products at speeds between 4 to 15 km/h. Speeds outside this range can generate values beyond the hydraulic capacity of the system.

⚠ Alterations to the FERTILIZA original characteristics are not allowed, as they may alter safety, operation and affect the service life.

⚠ Carefully read all safety information contained in this manual and on the FERTILIZA.

⚠ Only operate the distributor if all guards are correctly installed.

▪ Warnings

⚠ Do not, under any circumstances, remove the distributor's protective components.

⚠ Always check that the FERTILIZA is in perfect conditions of use. In case of any irregularity that may interfere with the operation of the distributor, provide the proper maintenance before any work or transport.

⚠ Maintenance and especially inspection in the FERTILIZA risk zones must only be carried out by a trained or qualified worker, observing all safety guidelines. Before starting maintenance, disconnect all drive systems from the FERTILIZA.

⚠ Periodically check all distributor components before use.

⚠ Depending on the equipment used and the working conditions in the field or in maintenance areas, precautions are necessary. Baldan has no direct control over precautions, so it is the owner's responsibility to practice safety procedures while working with the FERTILIZA.

⚠ Check the minimum tractor power recommended for each distributor model. Only use a tractor with power and ballast compatible with the load and topography of the terrain.

⚠ When transporting the FERTILIZA, drive at speeds compatible with the terrain and never exceeding 16 km/h, this reduces maintenance and consequently increases the useful life of the FERTILIZA.

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

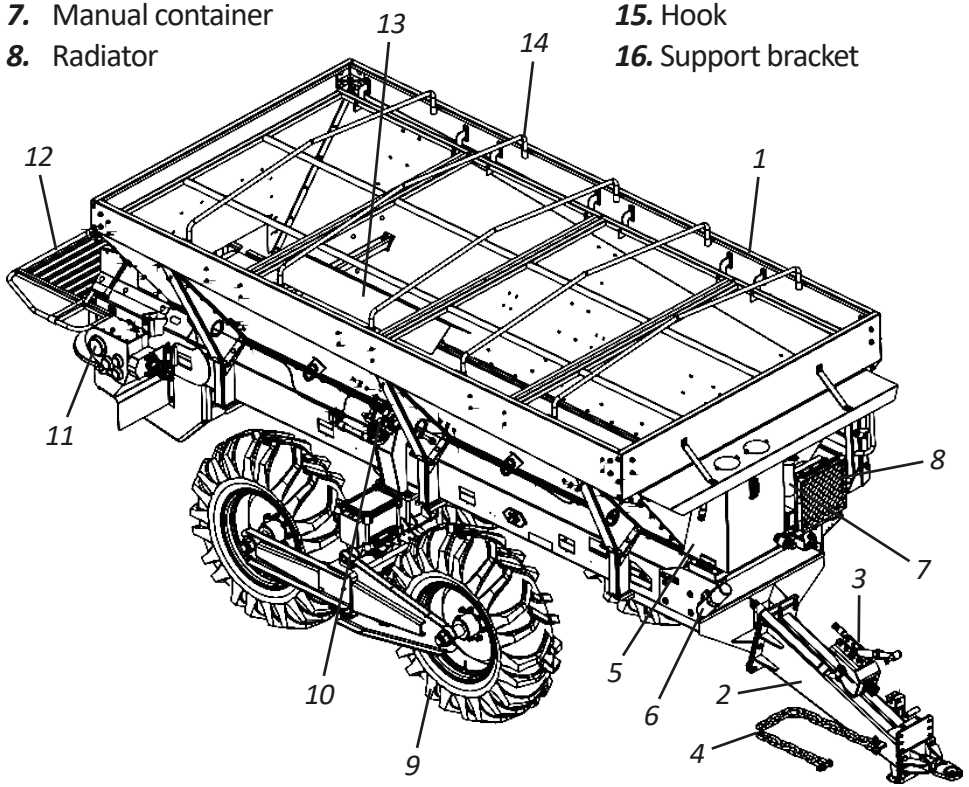
⚠ Read or explain all the procedures of this manual to the operator who cannot read.

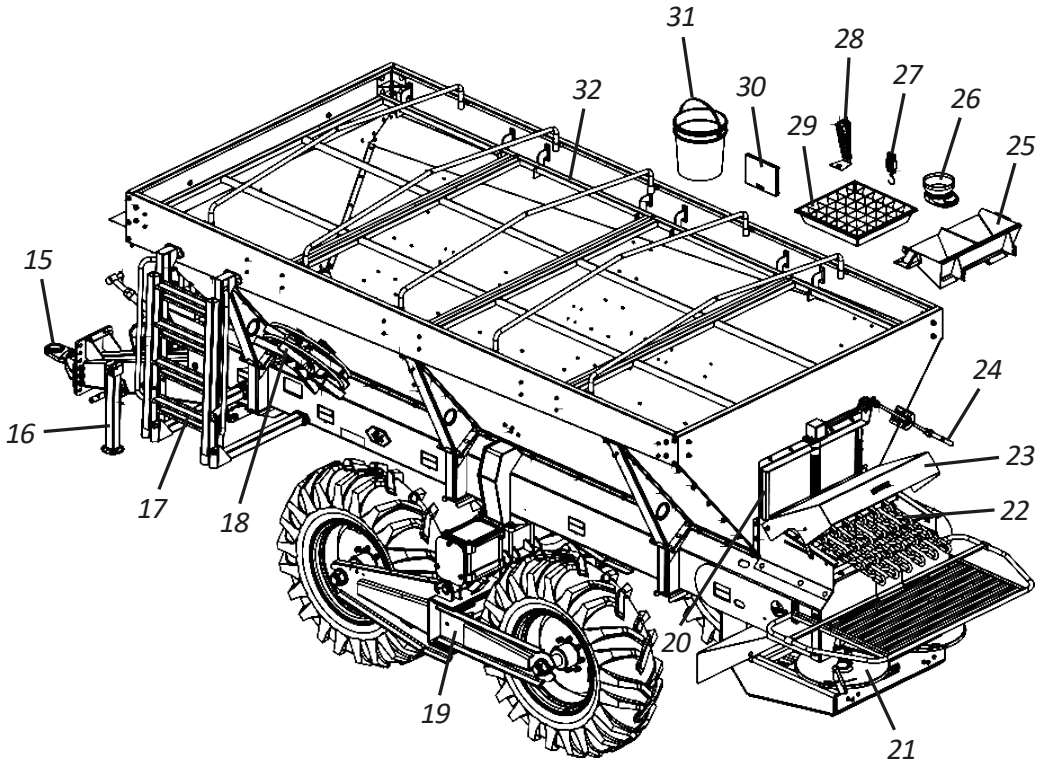
If in doubt, contact After Sales.
Telephone: 0800-152577 / E-mail: posvenda@baldan.com.br

Components

• FERTILIZA - Fertilizer Spreader with Precision Agriculture

1. Dumpster
2. Header hook
3. Hydraulic pump
4. Safety chain
5. Oil tank
6. Oil filter
7. Manual container
8. Radiator
9. Tire
10. Control block
11. Transmission system
12. Protection grid
13. Deflector
14. Pipe for tarpaulin
15. Hook
16. Support bracket

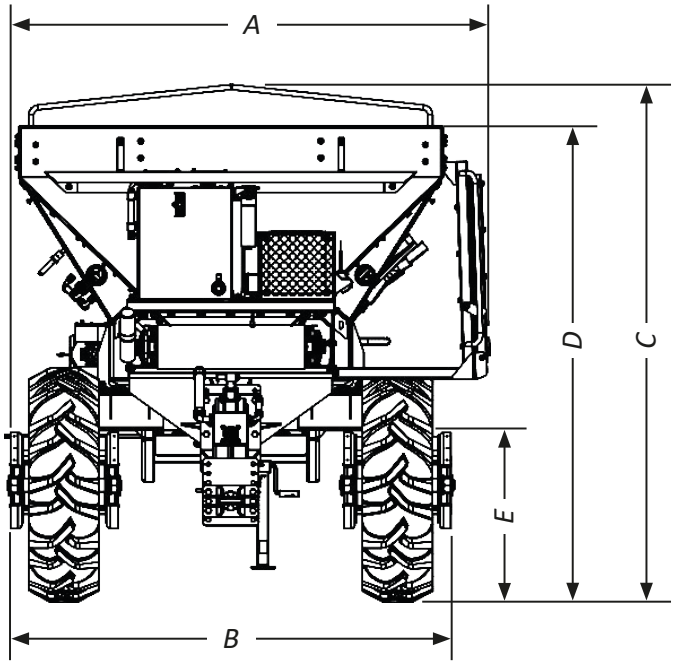


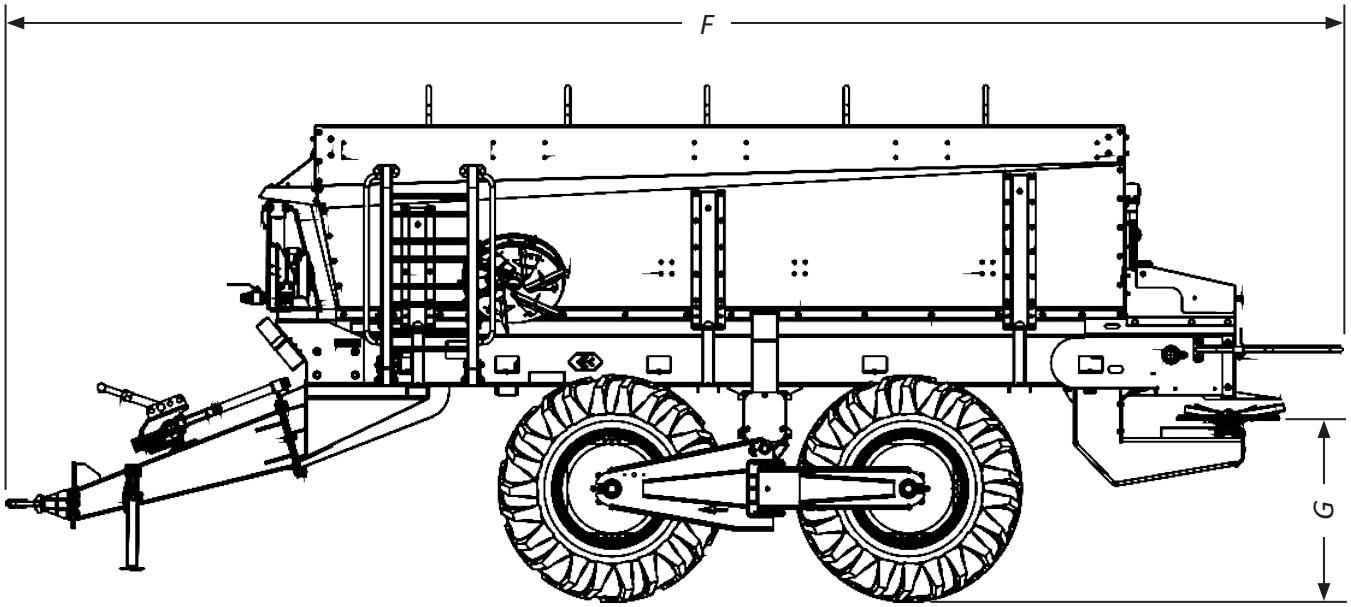


17. Ladder
18. Powder distributor disc
19. Wheelset system
20. Gate
21. Grain and seed distribution disc
22. Chains
23. Protection cover
24. Handle
25. Collection hopper
26. Digital scale
27. Portable digital scale
28. Pluviometer
29. Tray
30. Signal receiver
31. Plastic bucket
32. Protection screen

▪ Dimensions

• FERTILIZA





Model	Measurement A (mm)	Measurement B (mm)	Measurement C (mm)	Measurement D (mm)	Measurement E (mm)	Measurement F (mm)	Measurement G (mm)
FERTILIZA 6m³	2600	2350	2696	2570	844	6373	933
FERTILIZA 8m³	2600	2350	2775	2650	921	7432	1010

▪ Specifications

• FERTILIZA - Fertilizer Spreader with Precision Agriculture

Model	Length Total (mm)	Width Total (mm)	Height Total (mm)	Load Capacity (m^3)	Flow (kg/ha)	Wheelset	Adjustable Gauge (m)	Approximate Weight (Kg)	Approximate do Trator (Cv)
FERTILIZA 6m³	6373	2600	2696	6m³	15kg/ha - 8000 kg/ha	Tire 12.5/80-18"TL 10 Rim W 9,00" x 18"	1,80 à 3,20	4272	90
FERTILIZA 8m³	7432	2600	2775	8m³	15kg/ha - 8000 kg/ha	Tire 14.9.24 12 Rim W 12" x 24"	1,80 à 3,20	4869	110

Distribution disks ..... Grains / Powder Products
Work speed ..... 4 - 15 Km/h
Distribution width (grains) ..... 36 m
Distribution width (powder) ..... 14 m
Oil reservoir ..... 80 lts
Pump: Flow ..... 60 L/min
Maximum pressure ..... 172,4 Bar
Minimum rotation ..... 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 USE OF FERTILIZA

FERTILIZA was solely developed for the distribution of correctives and fertilizers.
FERTILIZA must only be driven and operated by a properly instructed operator.

PROHIBITED USE OF FERTILIZA

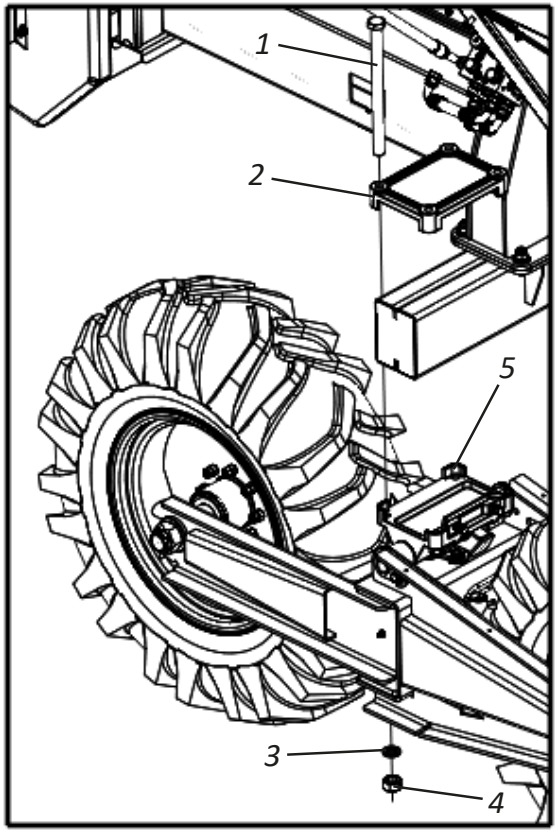
To avoid damage, serious accident or death, DO NOT transport people on any part of **FERTILIZA.**
Do NOT use **FERTILIZA** dumpster for products other than the intended use.
It is NOT permitted to use **FERTILIZA** to attach, tow, or push other implements or accessories.
FERTILIZA should NOT be used by an inexperienced operator who does not know all the driving, command and operation techniques.

▪ Assembly

• Changing the transport support - Part I

To facilitate logistics, loading and unloading, **FERTILIZA** leaves the factory assembled with transport supports (1). When unloading **FERTILIZA** in the field, the transport supports must be replaced by the rocker fixing support that comes with it. To do this, proceed as follows:

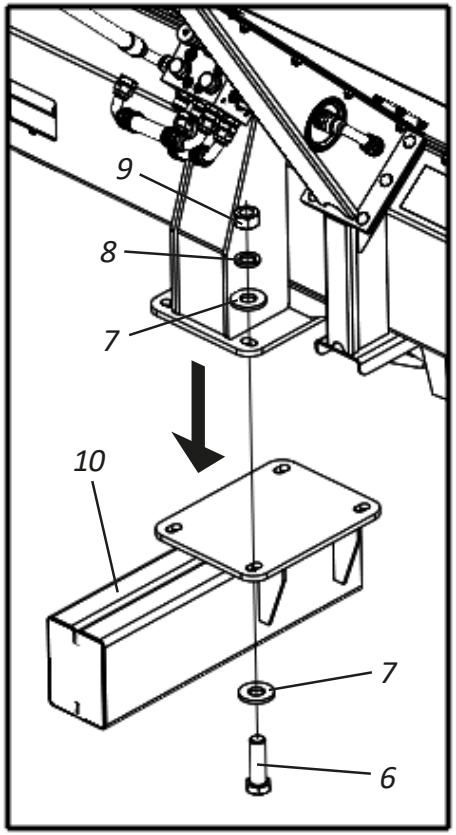
01 - First, loosen the screws (1), the fixing base (2), spring washers (3) and nuts (4) and remove the wheel support (5).



⚠ ATTENTION

To change the transport supports, support the FERTILIZA chassis on trestles.
Before starting to change the transport supports, look for an ideal location where it is easy to change them.

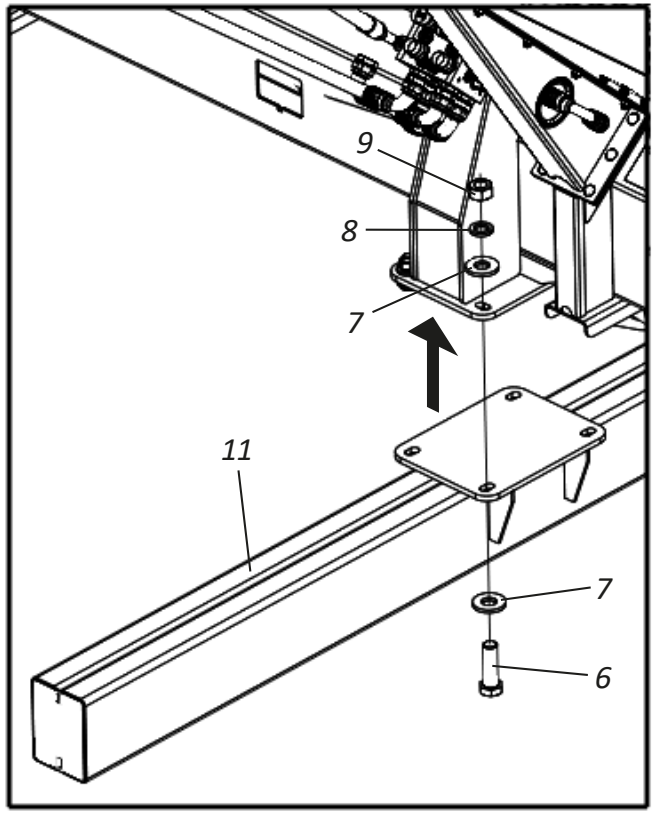
02 - Then, loosen the screws (6), flat washers (7), spring washers (8) and nuts (9) and remove the transport support (10).



▪ Assembly

• Changing the transport support - Part II

03 - Then, attach the rocker arm fixing bracket (11) using screws (6), plain washers (7), spring washers (8) and nuts (9).



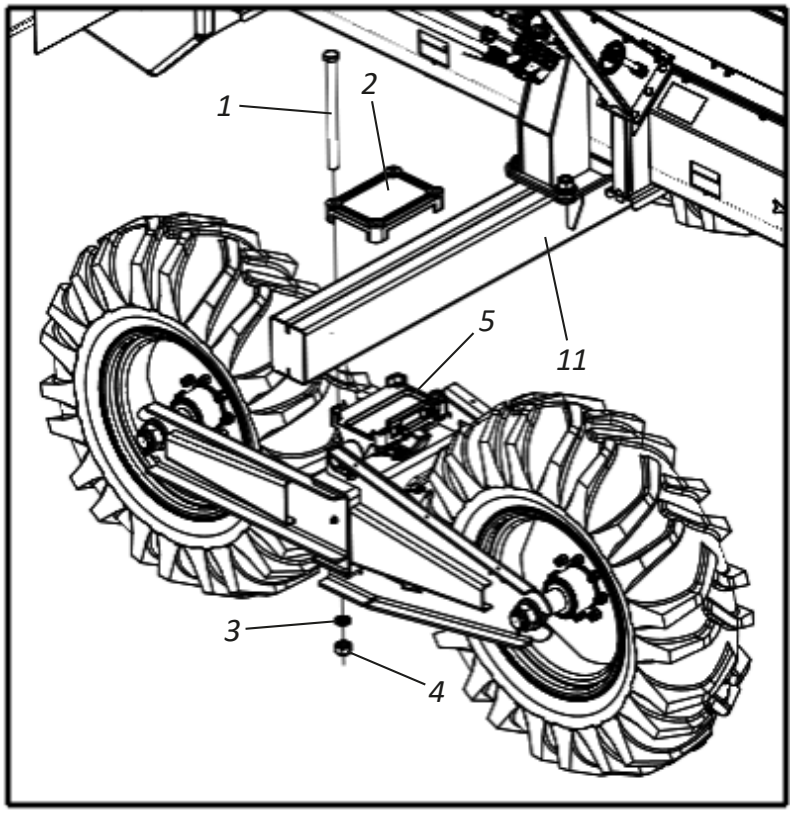
IMPORTANT

When assembling the wheel support (5), check the positioning of the front and rear tire clamps, which must work towards the rear of the Fertiliza, allowing the tire to float on the ground, making it easier to follow the unevenness of the ground and avoiding compaction.

NOTE

When assembling the wheel support (5), adjust the tread as per the instructions on page 33.

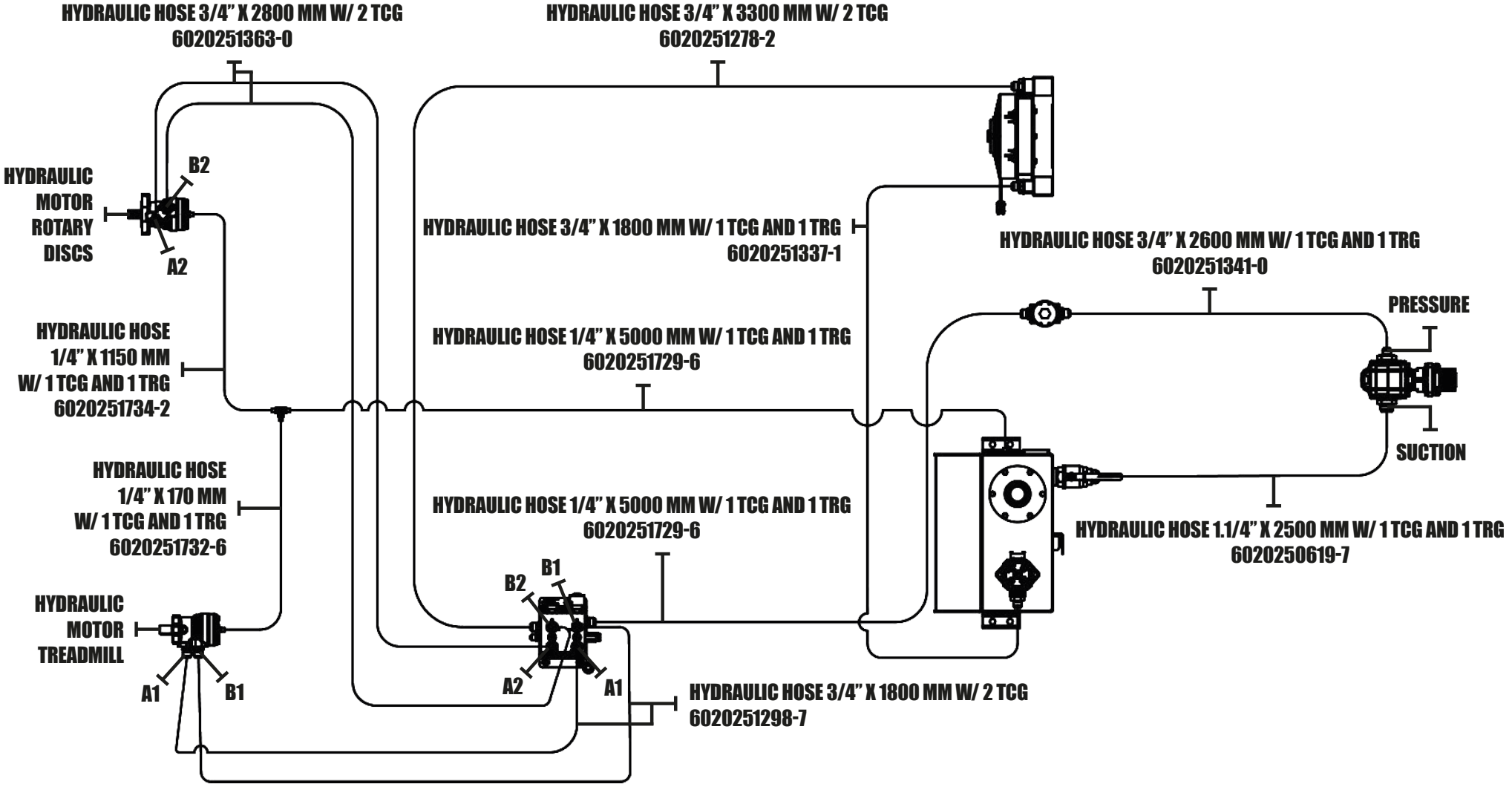
04 - Finally, attach the wheel support (5) to the rocker arm fixing support (11), securing it using the screws (1), the fixing base (2), spring washers (3) and nuts (4).



ATTENTION **Do not allow people, animals or children to remain near or under the FERTILIZA during the procedure of changing the transport supports. Ignoring this warning can cause serious accidents or even death.**

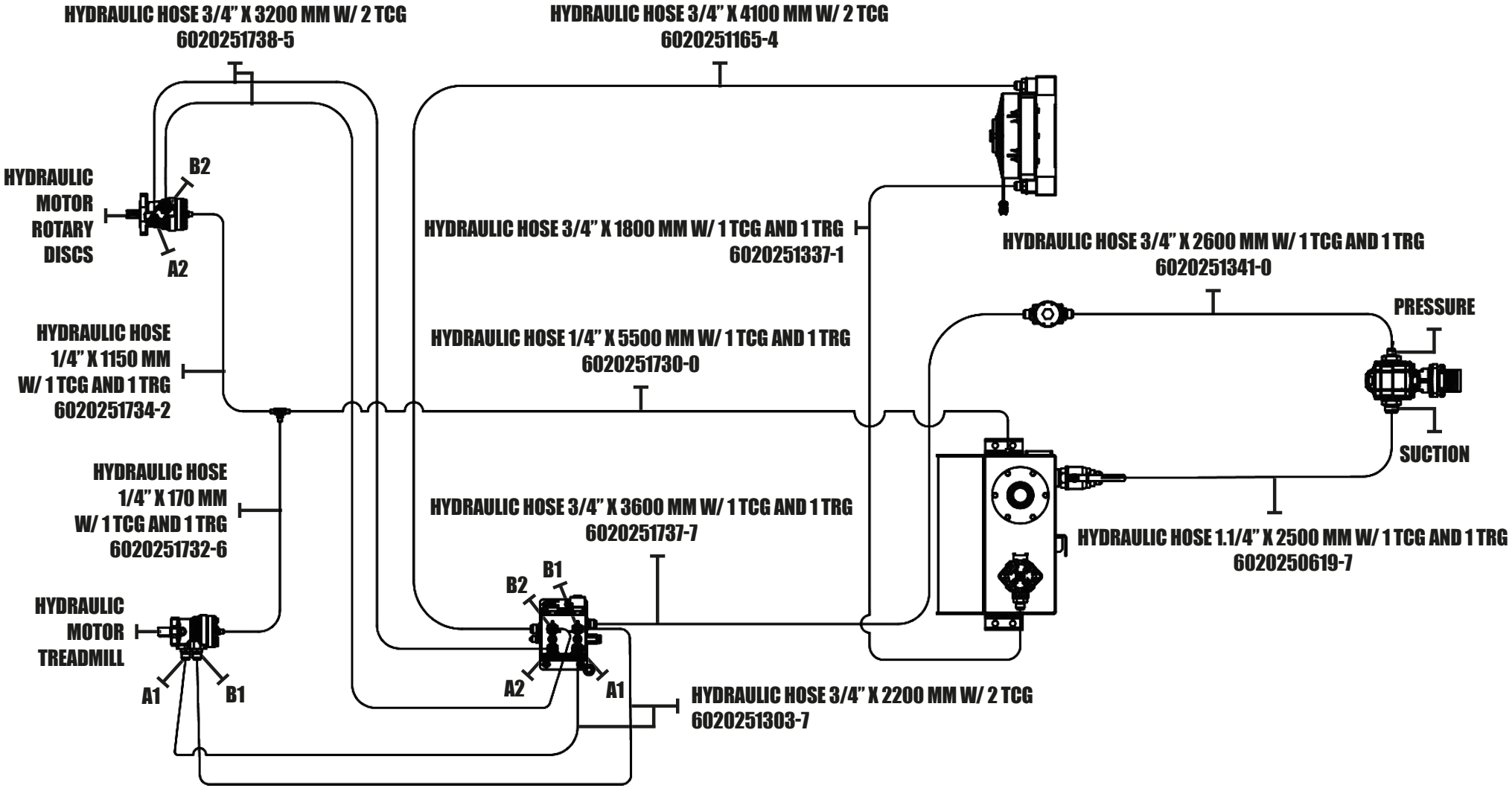
▪ Assembly

• Hydraulic system assembly "Variable Rate" - FERTILIZA 6m³



▪ Assembly

• Hydraulic system assembly "Variable Rate" - FERTILIZA 8m³



▪ Hitch

• Tractor hitch - Part I

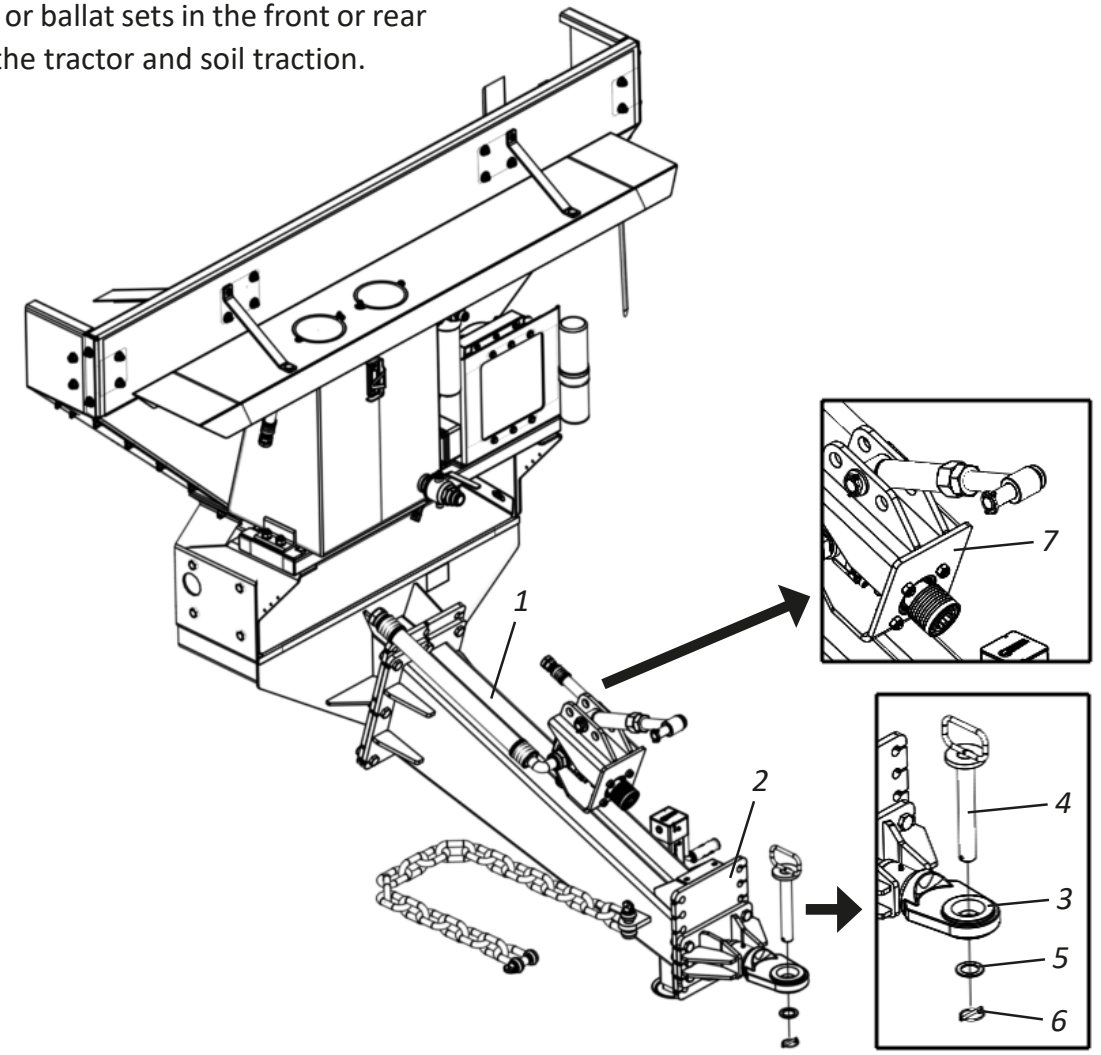
Before engaging **FERTILIZA** in the tractor, check if the tractor has weight or ballat sets in the front or rear wheels to avoid lifting the tractor. Rear wheels will give greater stability to the tractor and soil traction.

To engage **FERTILIZA**, proceed as follows:

01 - Level the Header Hook (1) of **FERTILIZA** in relation with the tractor hitch through the adjustments (2) of the Hook (3). Next, slowly approach the tractor to the seeder in reverse, being aware when to use the brakes.

02 - Engage **FERTILIZA** hitch to the tractor by attaching it through the hitch pin (4), plain washer (5) and lock (6).

03 - Engage the pump (7) in the tractor's TDP.



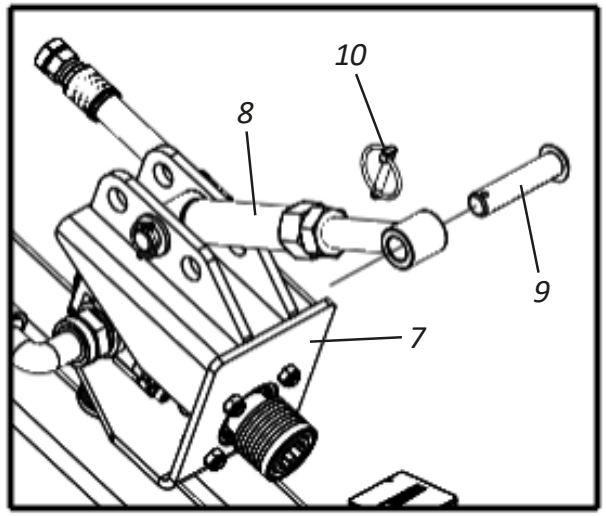
❗ IMPORTANT

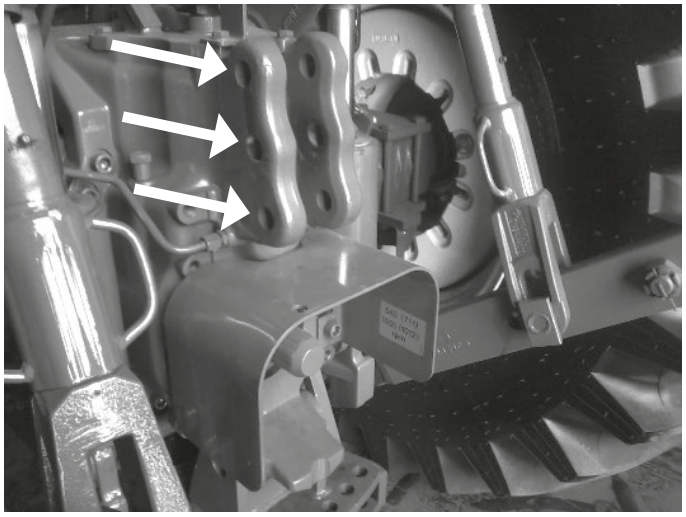
When hitching FERTILIZA up, look for a safe place and easy access, always use low gear with low acceleration.

▪ Hitch

• Tractor hitch - Part II

04 - After engaging **FERTILIZA**, secure the adjuster (8) to the various tractor hitching points through the pin (9) and ring lock (10).

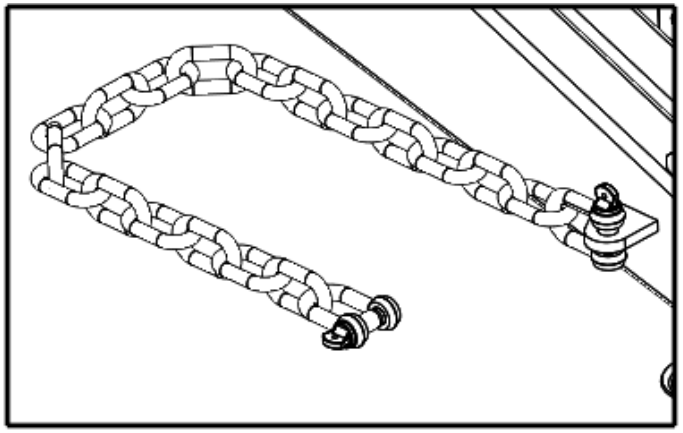




⚠ ATTENTION

The adjuster (8) is used to secure the support and the hydraulic pump (7), not letting them loose or rotating, that´s why we recommend to not work with FERTILIZA without rst securing the adjuster (8) in the tractor.

05 - Finalize the hitching of **FERTILIZA** to the tractor securing the safety chain (11) in the tractor.



⚠ ATTENTION

The safety chain (11) provides greater safety during work, preventing the FERTILIZA from disengaging from the tractor in case the hitch pin breaks. Therefore, we recommend not working with FERTILIZA without first fixing the safety chain (11).

❗ IMPORTANT

When coupling the hydraulic pump (7) to the tractor's PTO, open the suction valve of the hydraulic oil reservoir. Ignoring this warning could result in damage to the hydraulic pump (7).

NOTE

At the end of the FERTILIZA coupling, level it according to the instructions on the next page.

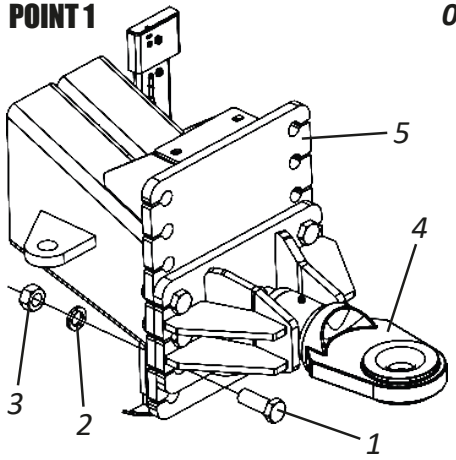
▪ Levelling

• Distributor levelling

FERTILIZA offers 2 levelling points: **Point 1:** Hook and **Point 2:** Base of the Header Hook. To level **FERTILIZA**, proceed as follows:

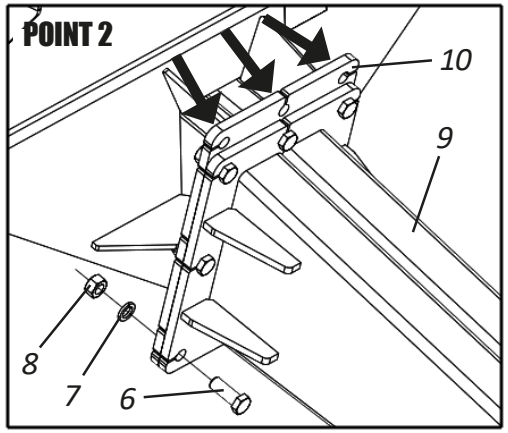
01 - First, place the tractor and **FERTILIZA** in a plain location.

POINT 1



02 - After, adjust in point 1, loosening the screws (1), pressure washers (2) and nuts (B), adjust the shackle (4) in the header´s holes (5).

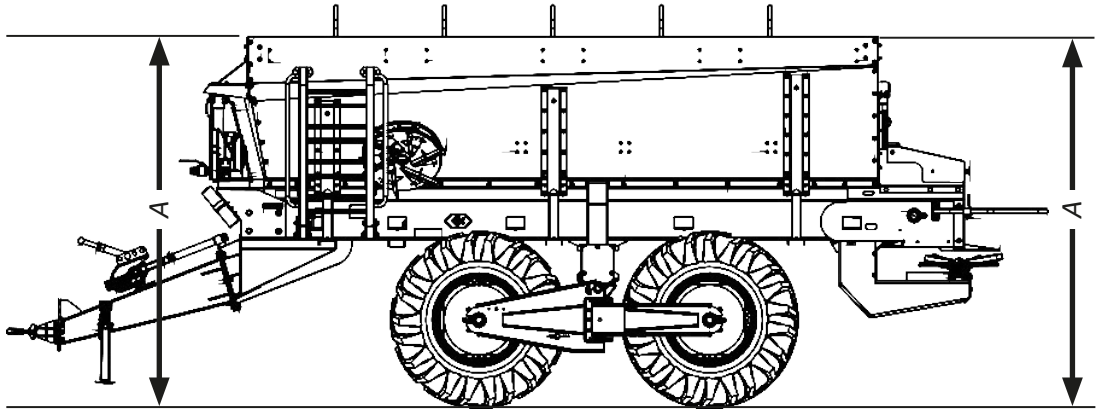
POINT 2



03 - Then, if necessary, adjust in point 2, loosening the screws (6), pressure washers (7) and nuts (8), adjust the header (9) in the upper point of the base (10).

04 - After levelling, observe **FERTILIZA** from the side, verifying the longitudinal levelling (length) in relation to the ground.

LONGITUDINAL LEVELLING



⚠ ATTENTION

If FERTILIZA is not properly leveled, it will not have a good performance and may suer structural damages.

❗ IMPORTANT

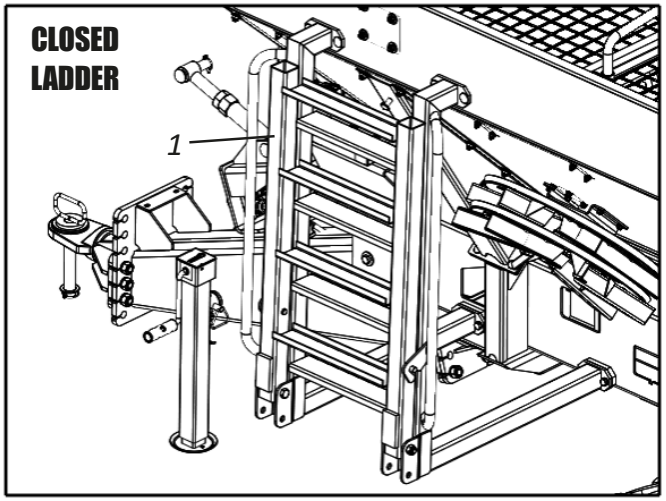
Read the instructions manual of the tractor and make sure of the positions in which you can work with the drawbar.

▪ Ladder

• Use of ladder - FERTILIZA 6m³ and FERTILIZA 8m³

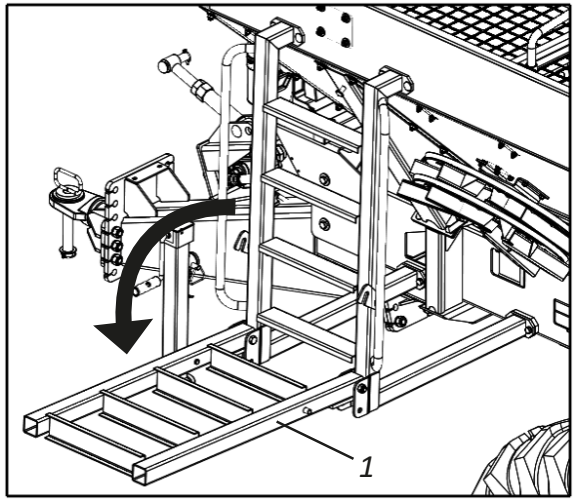
FERTILIZA has ladder (1), which should be used only when loading it or when performing maintenance in the fertilizer storage. To use it, proceed as follows:

01 - Lift the latch (2), unlocking the ladder (1).

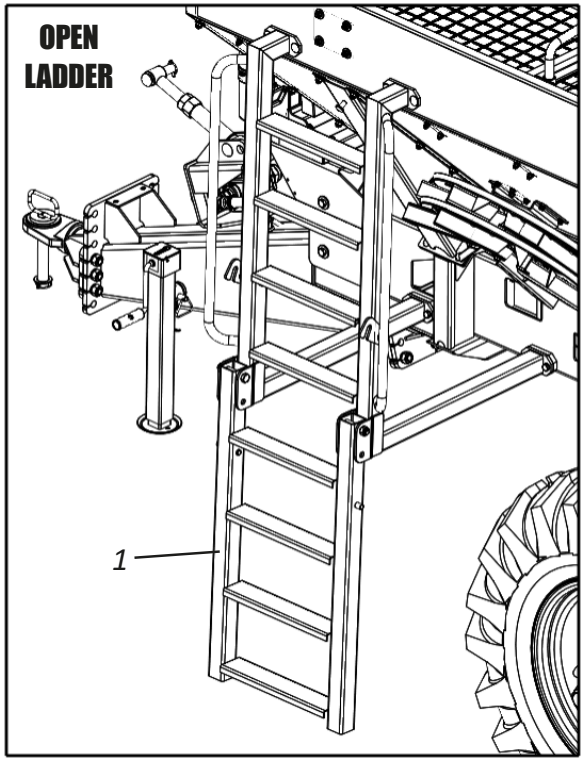


WORK OR TRANSPORT POSITION

02 - Then hinge the ladder (1) by lowering it.



03 - When you finish using the ladder (1), do the opposite, closing and locking it.



POSITION FOR LOADING OR PERFORM MAINTENANCE IN TANK

⚠ ATTENTION

Do not remain on the ladder when FERTILIZA is working or being transported.
Do not work or transport FERTILIZA with the ladder open.
Only use the ladder to climb the FERTILIZA, as it has non-slip steps.
Ignoring these warnings could result in serious injury or death.

❗ IMPORTANT

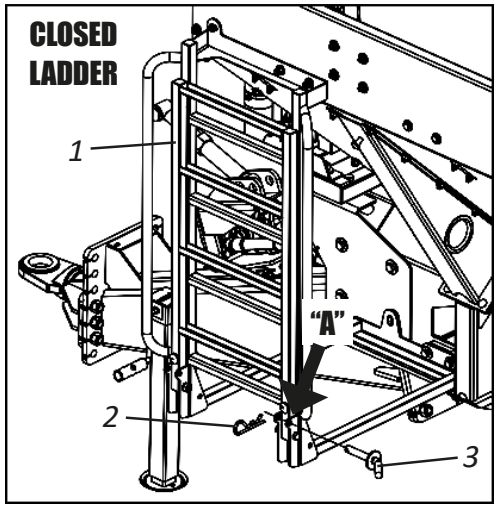
For bucket access or maintenance, always use the ladder (1).
Before using the ladder (1), make sure that the FERTILIZA is stopped and the tractor is switched off.

▪ Ladder

• Use of ladder - FERTILIZA 6m³ with tires 12.4.24 / Aro W 10" x 24"

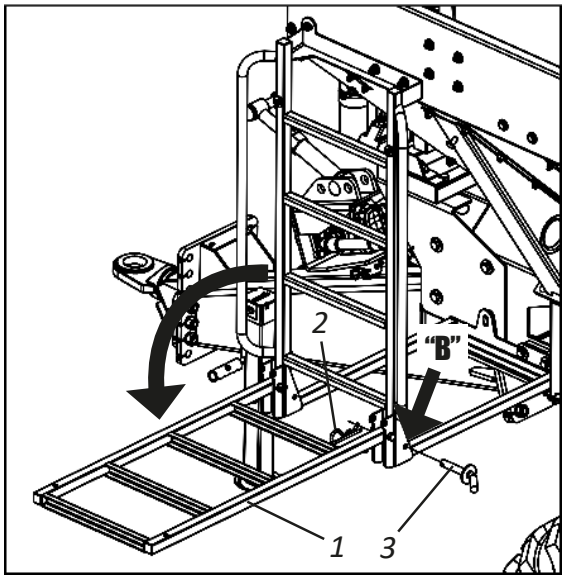
FERTILIZA has ladder (1), which should be used only when loading it or when performing maintenance in the fertilizer storage. To use it, proceed as follows:

01 - Release the lock (1) and remove the pin (2) from point **"A"** unlocking the ladder (3).

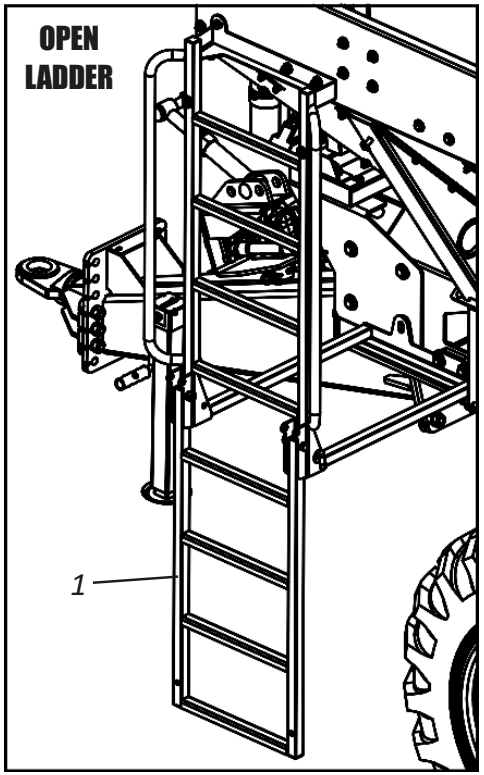


WORK OR TRANSPORT POSITION

02 - Then, articulate the ladder (3) by lowering it and place the pin (2) and lock (1) in point **"B"**.



03 - When you are finished using the ladder (1), do the reverse, closing and locking it.



POSITION FOR LOADING OR PERFORM MAINTENANCE IN TANK

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Do not work or transport FERTILIZA with the ladder open.
Only use the ladder to climb the FERTILIZA, as it has non-slip steps.
Ignoring these warnings could result in serious injury or death.

❗ IMPORTANT

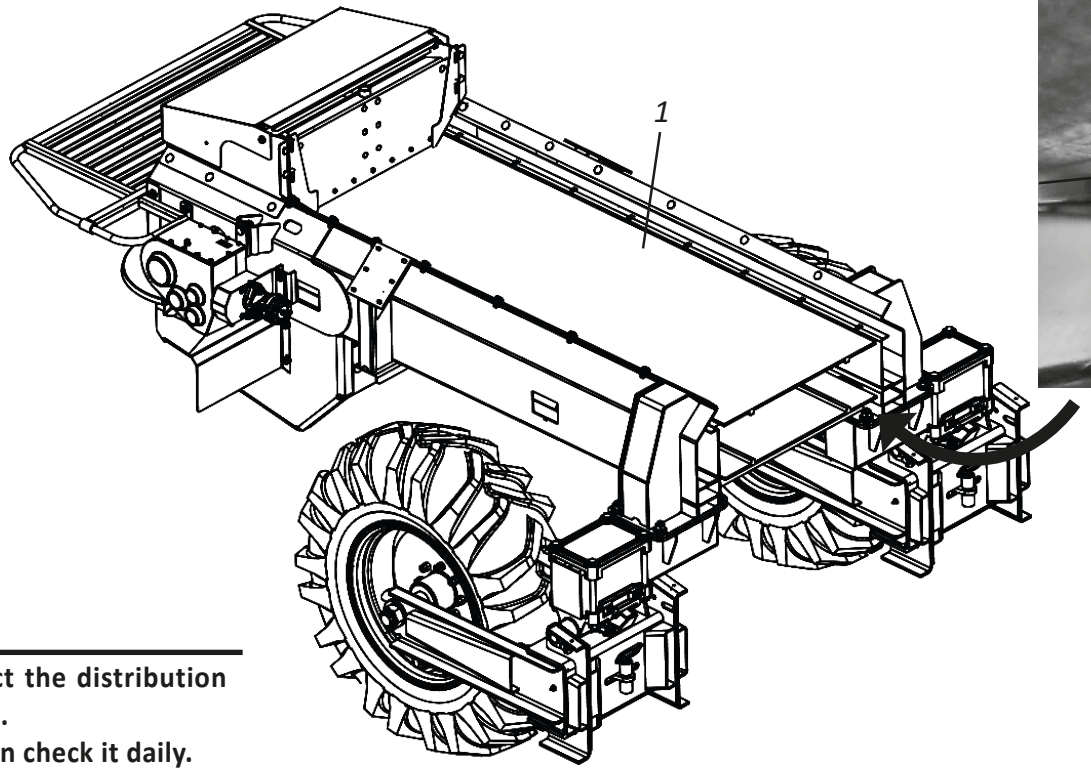
For bucket access or maintenance, always use the ladder (1).
Before using the ladder (1), make sure that the FERTILIZA is stopped and the tractor is switched off.

▪ Adjustments

• Belt tension adjustment - Part I

Before placing any type of product in the **FERTILIZA** tank, we recommend that you check the belt tension (1). The main consequence of the lack of a correct tensioning is the slippage of the belt (1). To adjust the belt tension (1), proceed as follows:

01 - First, turn off the **FERTILIZA** and the tractor engine.
02 - Then make sure the **FERTILIZA** is empty, if not, empty it.
03 - Then, in the center of the belt (1), make sure that there is a distance of **20 mm** between the base of the **FERTILIZA** chassis and the belt (1) as shown in **detail "A"**; if there is another distance, adjust the belt tension (1), to do so, proceed according to the instructions on the next page.



DETAIL "A"

⚠ ATTENTION

The belt must not be too tensioned as it will affect the distribution performance, respect the clearance of up to 20 mm.
Check the belt tension in the first hours of work, then check it daily.

▪ Adjustments

• Belt tension adjustment - Part II

04 - Adjust the tension of the track (1) through the tensioners (2), loosening or tightening the nut and locknut (3) adjusting the position of the bearing (4) on the scale (5).

❗ IMPORTANT

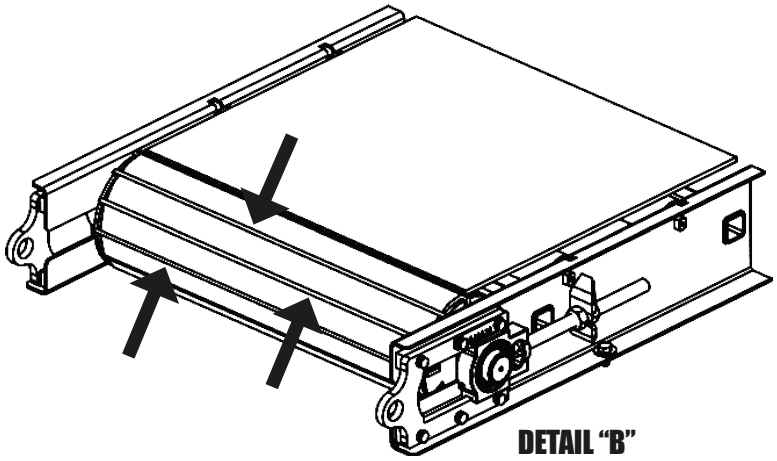
When adjusting the belt tension, adjust both sides evenly, avoiding belt misalignment.
When it is no longer possible to stretch the belt due to the tensioners reaching the end of the threads, replace the belt.

🔍 NOTE

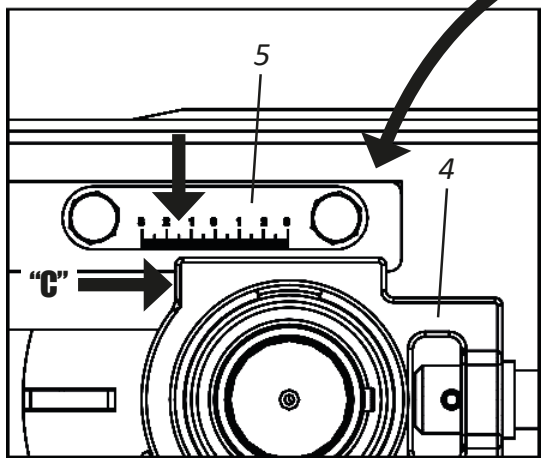
Before supplying FERTILIZA with any product, check its purity, preventing objects such as stones or other materials from damaging the rubber mat during distribution.

⚠ ATTENTION

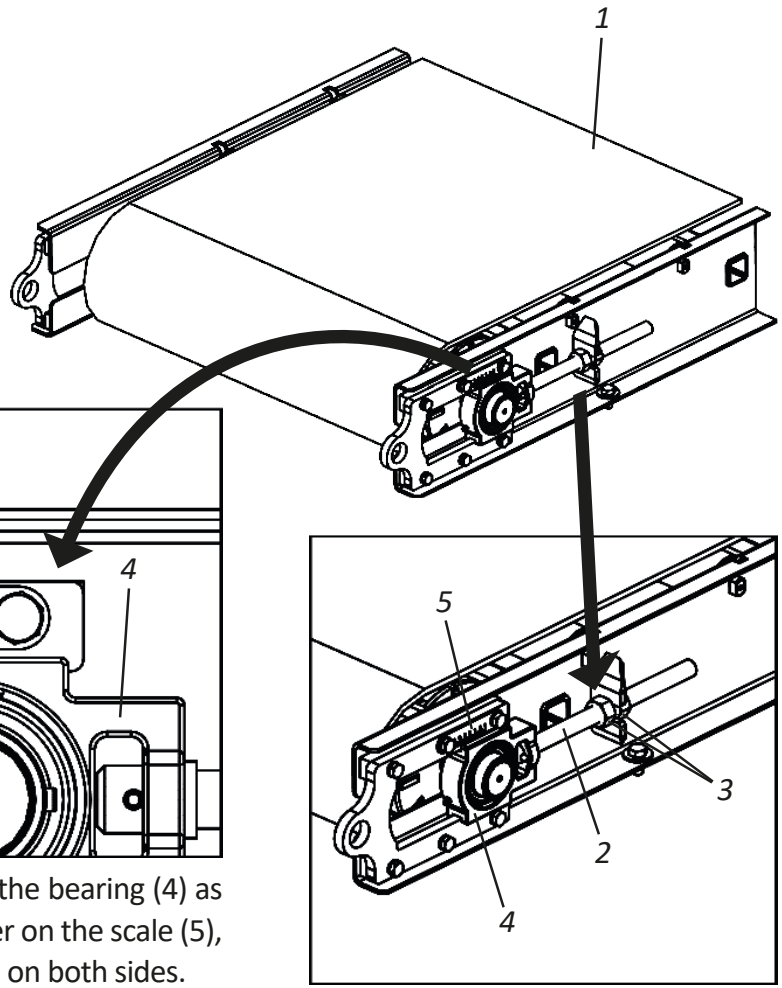
Check on the front of the belt if it is marking on the front roller, this is a sign of too much tension, as shown in detail "B"; if this happens, remove some tension until the belt does not mark the front roller.



DETAIL "B"



Use the **"C"** face of the bearing (4) as an adjustment parameter on the scale (5), which must be the same on both sides.

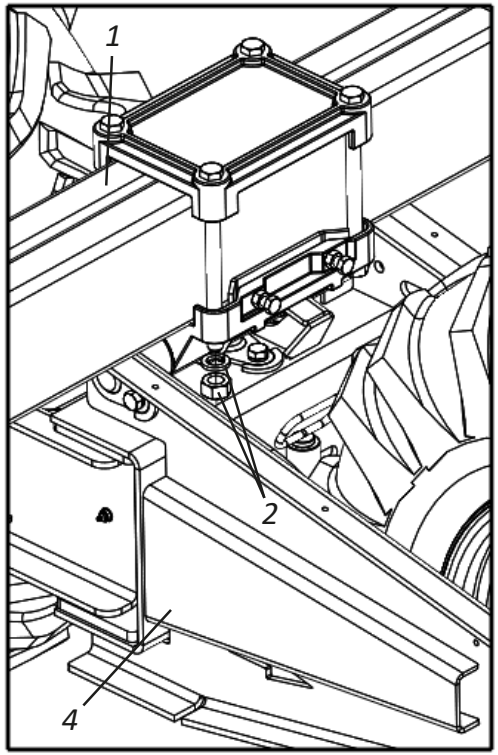


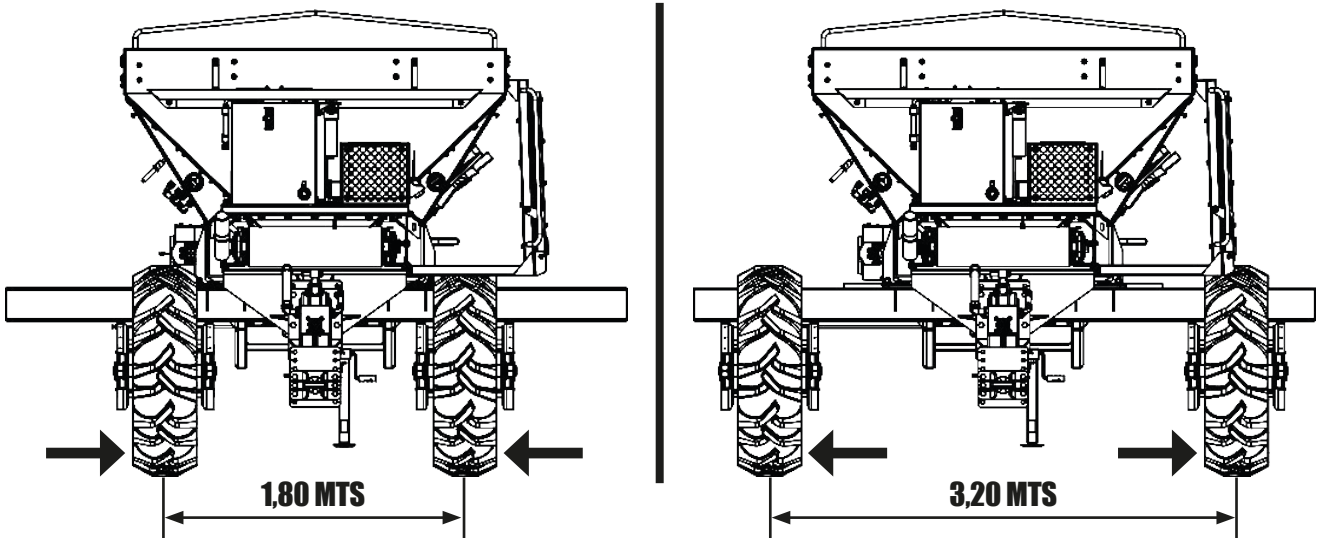
▪ Adjustments

• Gauge adjustment

FERTILIZA has a gauge adjustment system 1.80 to 3.20 meters to match the spacing of the planting lines from various cultures. To adjust the gauge, proceed as follows:

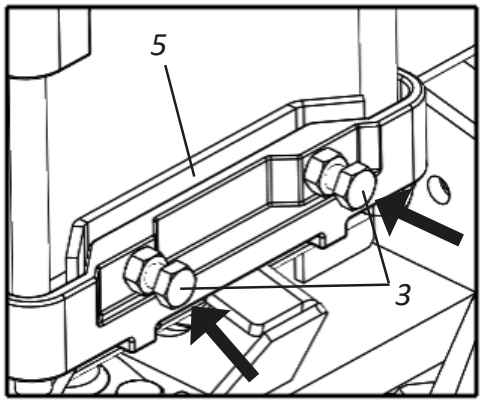
01 **-** First, make sure that **FERTILIZA** tank is empty, if not, empty it.





02 **-** Next, in a steady surface, lift one side at a time of **FERTILIZA** with a jack supporting the rocker arm bracket (1).

03 **-** Then, loosen the nuts and washers (2) and screws (3) and displace the wheels set (4) to the gauge desired position.



04 **-** Soon after positioning the wheels set (4), retighten nuts and washers (2).

05 **-** After, tighten the screws (3) adjusting the support bar (5) to the rocker arm bracket (1), eliminating the gap.

06 **-** Complete it lowering the ground besides **FERTILIZA** that was suspended.

07 **-** Proceed in the same way on the other side of **FERTILIZA**.

IMPORTANT | **When adjusting the gauge, it should be measured on both sides.**

▪ Adjustments

• Distribution adjustment

Distribution of fertilizers, seeds, or correctives is bound to several factors, such as gate opening, conveyor speed, **FERTILIZA** travelling speed, and adjustment of the disc's vanes dening the width of the distribution. **FERTILIZA** can be provided in three distribution adjustment options:

01 **-** Distribution system with xed rate and interface for controlling the oil ow of the hydraulic system according to variation of tractor´s speed, maintaining application rate constant and uniform.

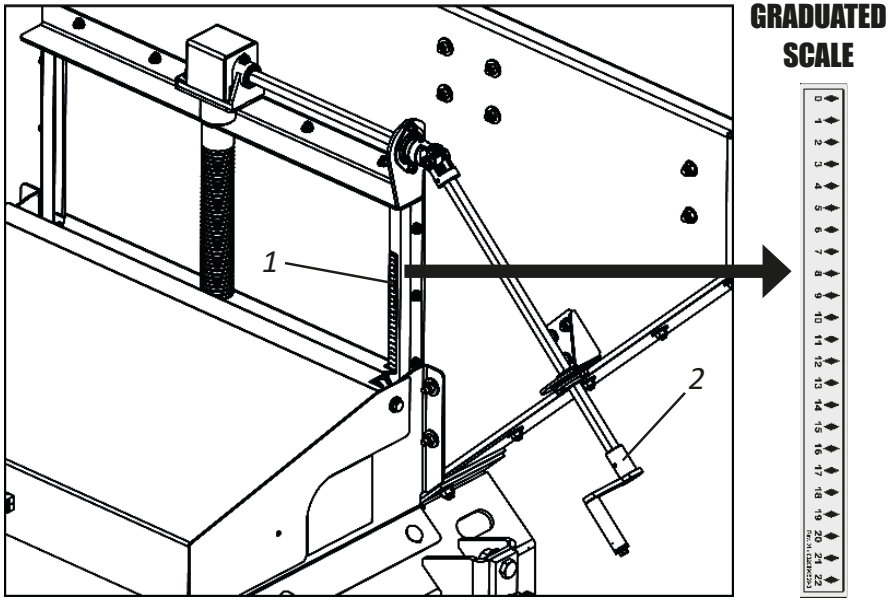
02 **-** Distribution system with oating rate with GPS, monitor with mapping system allowing the application of the product according to productivity maps or harvest yield, in the precision agriculture concept.

03 **-** Distribution system with oating rate with GPS, monitor with mapping system, interface system with the hydraulic system, providing the application of specic rates in each point of the eld, based on yeld maps prepared during harvest, in the precision agriculture concept.

• Flow gate adjustment

FERTILIZA has ow gate that, through a graduated scale (1), adjusts the amount of product to be distributed. To adjust the product ow, proceed as follows:

01 **-** Turn the handle (2), adjusting the opening or closing of the gate according to the graduated scale (1).



▪ Adjustments

• Types of calculations

For greater precision in distribution, measure the quantity to be distributed on site, because there is a condition on each land, in addition to the characteristics of the products to be distributed that may change, such as specic weight, granulometry, moisture conditions and others. Use the formulas below, according to the required information.

• Rule of three

Use the rule of three beside to calculate the distribution:

Formula: 2000 m² → 50 kg
10000 m² → X

Where: $X = \frac{10.000 \times 50}{2000} = 250$ kg/ha

• Work speed

To convert the timed interval in km/h, use the following calculation:

Formula: $Km/h = \frac{\text{Distance travelled} \times 3,6}{\text{Speed time in seconds}} = \text{Speed km/h}$

Where: $Km/h = \frac{50 \text{ meter's} \times 3,6}{25 \text{ segunds}} = 7,2$ km/h

Note: The value 3,6 is the conversation factor from meters per second to km/h.

• Dosage of kilos per minute

Use the following formula to calculate dosage in pounds per minute to be distributed by Fertiliza regarding: **Work width / Work speed and Dosage per hectare to be distributed.**

Formula Data: **VT -** Work Speed.
LT - Working Width.
D - Dosage.

Formula: $\text{Output in kg/minute} = \frac{VT \times LT \times D\ (kg/ha)}{600} = \text{Value kg}$

Where: $Km/h = \frac{7 \text{ km/h} \times 40 \text{ m} \times 450 \text{ kg/ha}}{600} = 210$ kg

Collect the product distributed and the timed interval.

▪ Adjustments

• Exclusive components for each type of product

FERTILIZA has two work settings that, according to the necessity, may be set:
- Setting 1: Powder distribution.
- Setting 2: Grains and seed distribution.
Each setting has dierentiated components in the dispenser set that should be properly assembled for **FERTILIZA** operation.

• Setting 1: Powder distribution

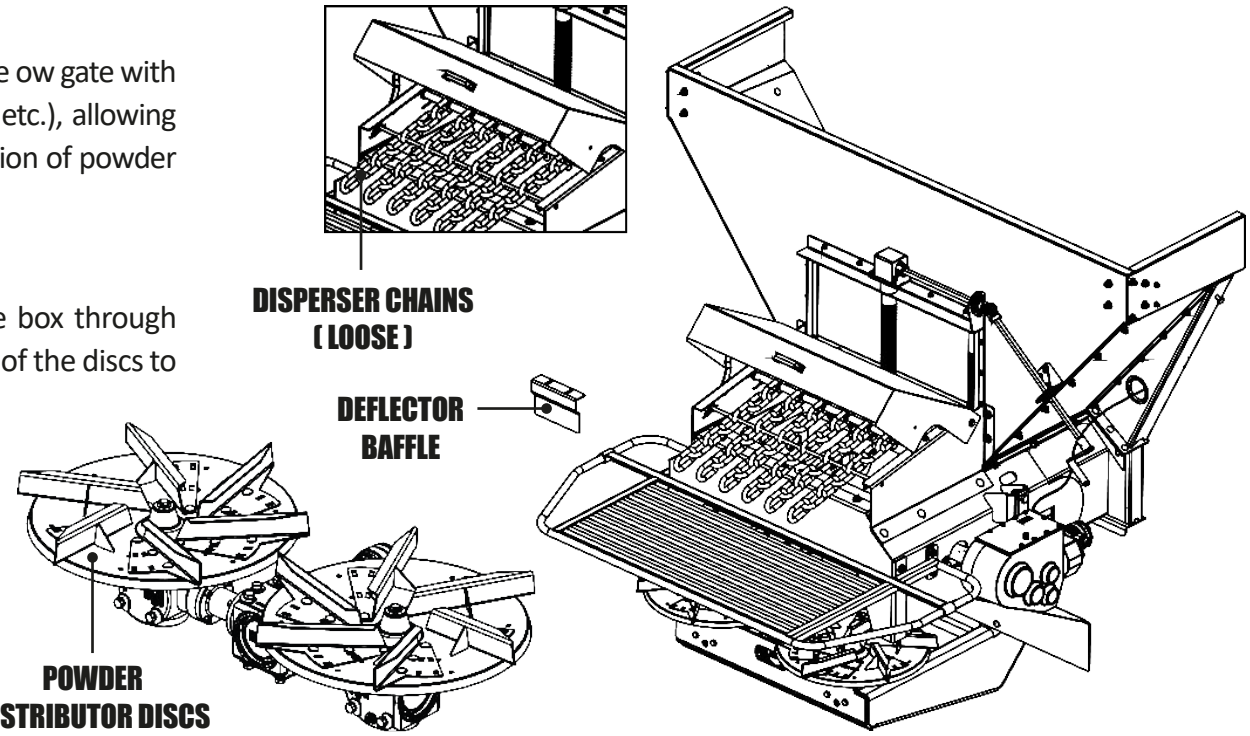
For the powder distribution, it is fundamental that the components below are assembled in **FERTILIZA** distributor set.

DISPERSER CHAINS

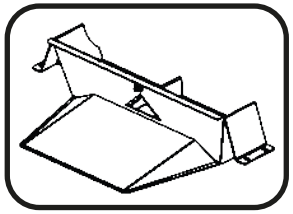
The dispenser set has a disperser chain set positioned next to the ow gate with the purpose of dissociate the powder products (limestone, plaster, etc.), allowing a homogeneous distribution. When using **FERTILIZA** for the application of powder products, the chains should remain loose.

POWDER DISTRIBUTOR DISCS (LIMESTONE AND PLASTER)

The powder distributors discs should be secured in the triple box through anges, pressure washers and screws, using caution to t the grooves of the discs to the splines.



⚠ ATTENTION



When assembling the conguration for powder distribution, remove the deector for grainy products and seeds that is factory installed in FERTILIZA. Its non-removal will aect the powder distribution.

▪ Adjustments

• Setting 2: Grain and seed distribution

For the grain and seed distribution, it is fundamental that the components below are assembled in **FERTILIZA** distributor set.

DISPERSER CHAINS

The dispenser set has a disperser chain set positioned next to the ow gate with the purpose of dissociate the powder products (limestone, plaster, etc.), allowing a homogeneous distribution. When using **FERTILIZA** for the application of grainy products or seeds, the chains should remain tighten.

GRAIN OR SEED DISTRIBUTION DISCS

The grain or seed distributors discs should be secured in the triple box through anges, pressure washers and screws, using caution to fit the grooves of the discs to the splines.

FLOW DIVIDER PLATE

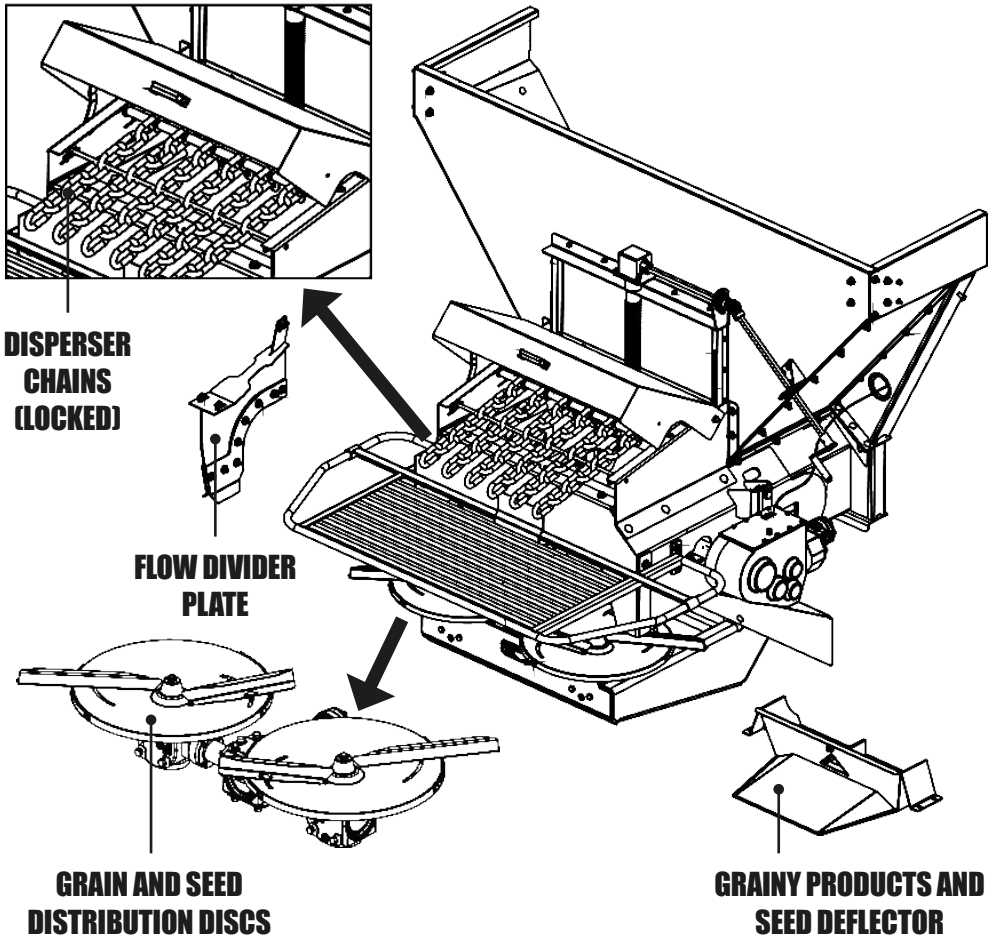
The ow divider plate is used to equalize the amount of grainy products at the deposition hopper to the distributor discs during the operation.

The ow divider plate should be jointly assembled with the deflector for grainy products or seed.

GRAINY PRODUCTS AND SEED DEFLECTOR

The grainy products and seed deector has the purpose of directing the product to the discs allowing the vanes discs to perform the distribution in the area determined evenly.

The grainy products and seed deector should be assembled jointly with the ow divider plate, which is positioned in the output center of the conveyor to equalizer the amount of grainy product and seed to the deflector set.



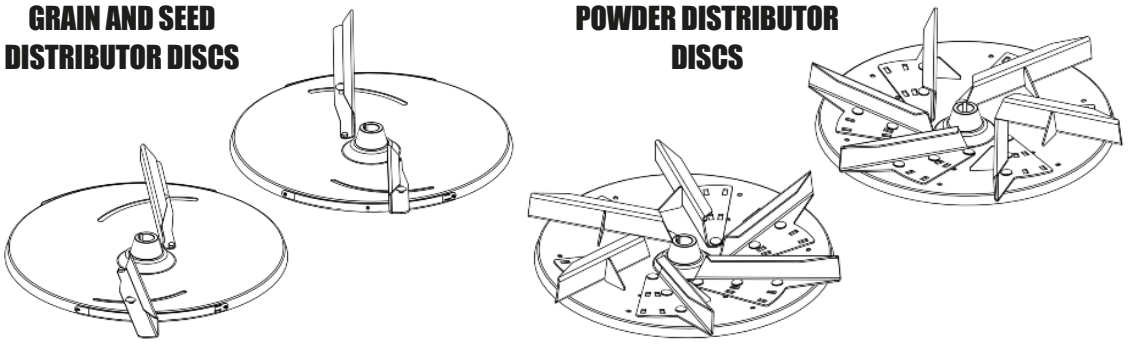
▪ Adjustments

• Distributor discs

FERTILIZA leaves the factory with 2 types of distributor discs:

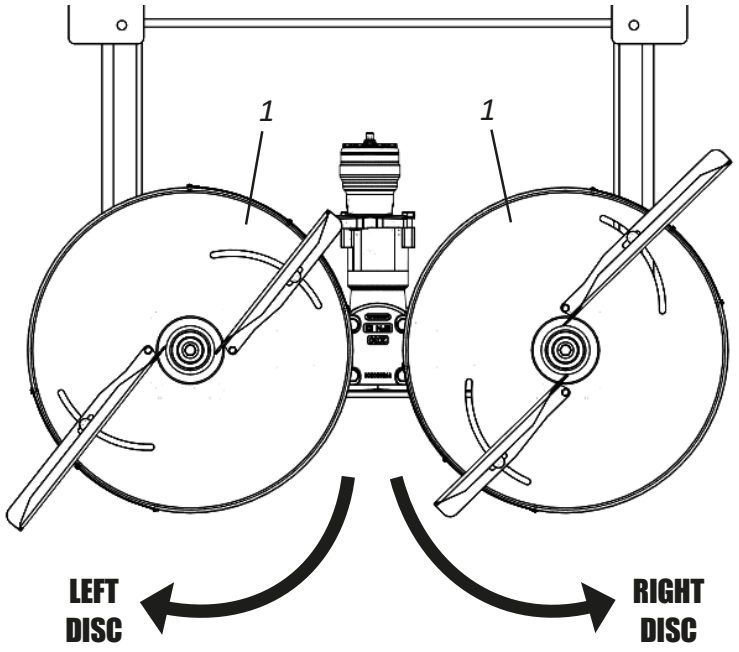
GRAIN AND SEED DISTRIBUTOR DISCS and **POWDER DISTRIBUTOR DISCS.**

GRAIN AND SEED DISTRIBUTOR DISCS are factory-mounted in **FERTILIZA** and the **POWDER DISTRIBUTOR DISCS** are secured to its side.



• Position of vanes in the grain and seed distribution discs

To ensure the uniformity in the distribution, the correct assembly of the distributors discs (1) is indispensable.



⚠ ATTENTION

The vanes should respect the rotation direction of the triple box, shown in the direction of the arrows in figure side, that is, the aps should be facing out. If the left disc vanes are assembled on the right disc and vice versa, the distribution will be totally wrong.

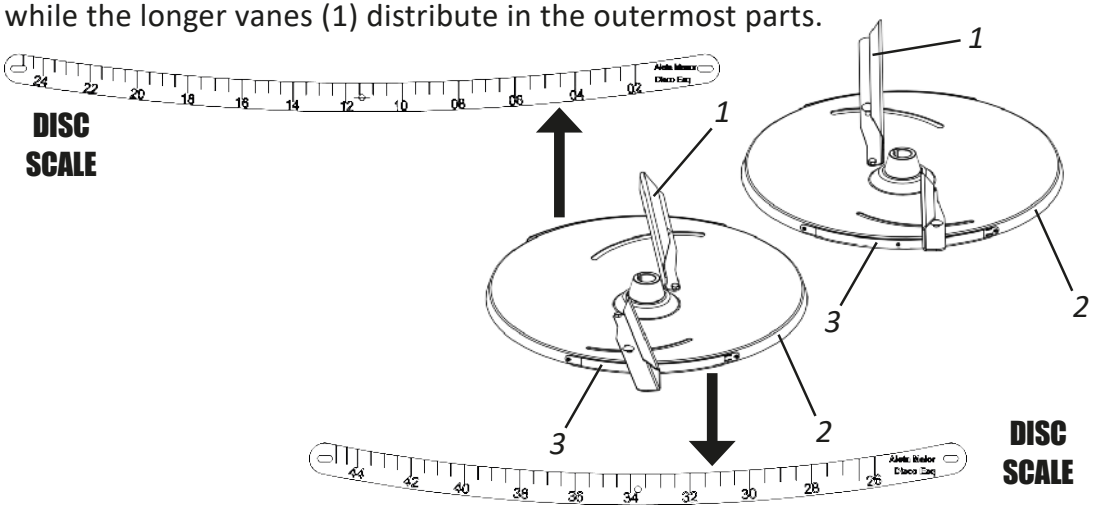
When replacing the disc's vanes, pay attention since there is a set for the left disc and another for the right one. They could be easily inverted because they fit on either side, however, they should follow according to figure side for a proper operation.

For grainy products, it is indispensable the use of the sieve to provide a more uniform distribution.

▪ Adjustments

• Adjustment of vanes in the grain and seed distribution discs

The adjustment of the vanes (1) of the distributors discs (2) are performed respecting the scale (3) attached to the side of the distributor discs (2), this way, the higher the number in the scale (3), larger the work width will be. The shorter vanes (1) distribute the product predominantly in the central strip of the prole, while the longer vanes (1) distribute in the outermost parts.



Example: To work with UREA 45% N with 24 m work width, the vanes with adjustment should be used:

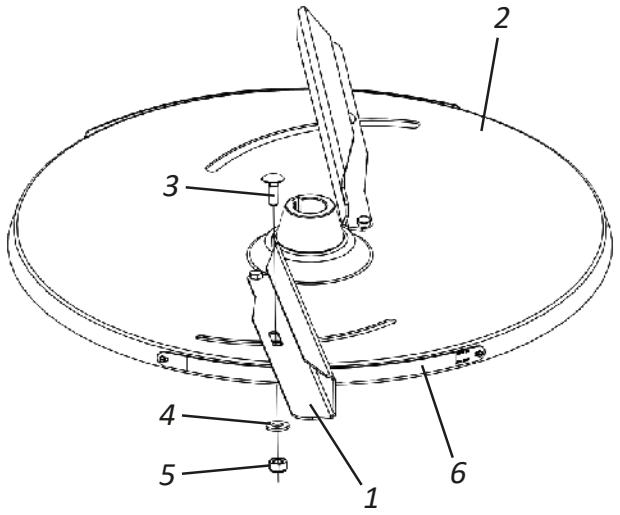
- Position of the smaller vane: **06**
- Position of the larger vane: **39**

Product	Diameter Grain (mm)	Specific grain weight (kg/l)	Working Width				
			24	27	30	32	36
UREA / UREA **45% N**	2,28	0,78	06/39	-	-	-	-

• Angle adjustment of vanes in the grain and seed distribution discs

To adjust the angle of the vanes (1) of the distributor discs (2), proceed as follows:

01 **-** Loosen the screws (3), pressure washers (4), and nuts (5).
02 **-** Next, adjust the vanes (1) respecting the scale (6).
03 **-** Then, loosen the screws (3), pressure washers (4), and nuts (5).



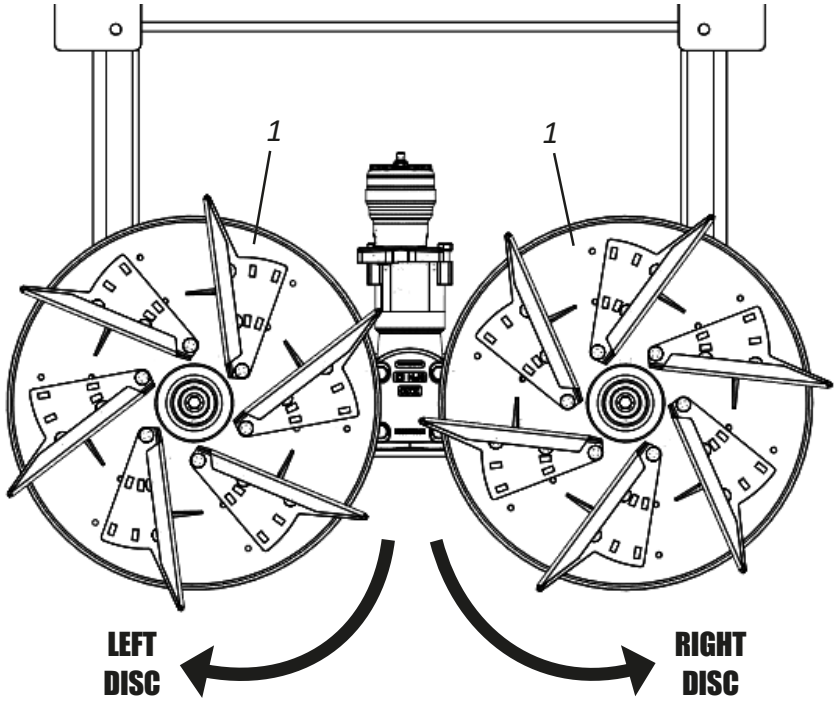
⚠ ATTENTION

Before performing the vanes adjustment (1), make sure that the tractor motor is o and that the ignition key has been taken out. Only perform adjustment of the vanes (1) when the distributor discs (2) are stopped.

▪ Adjustments

• Position of vanes in the powder distribution discs

To ensure the uniformity in the distribution, the correct assembly of the distributors discs (1) is indispensable, **according to figure below.**



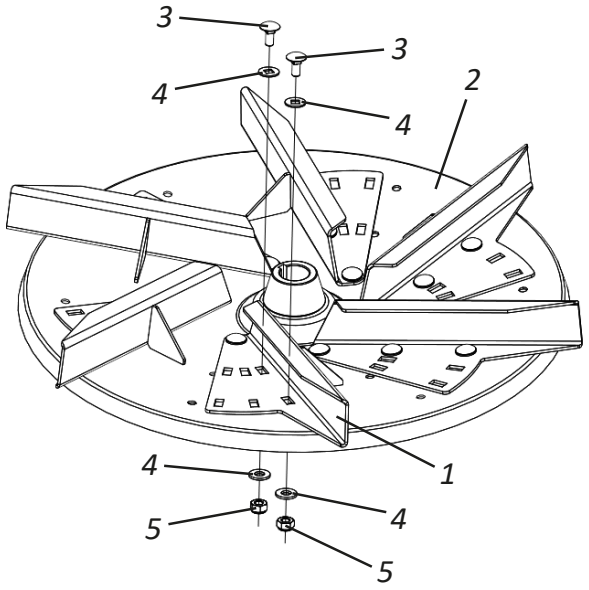
⚠ ATTENTION

For powder and seeds, it is indispensable the use of the sieve to provide a more uniform distribution.

• Adjustment of vanes in the powder distribution discs

To adjust the angle of the vanes (1) of the distributor discs (2), proceed as follows:

01 **-** Loosen the screws (3), pressure washers (4), and nuts (5).
02 **-** Next, adjust the vanes (1) according to the work necessity.
03 **-** Then, tighten the screws (3), plain washers (4), and nuts (5).



⚠ ATTENTION

Before performing the vanes adjustment (1), make sure that the tractor motor is o and that the ignition key has been taken out. Only perform adjustment of the vanes (1) when the distributor discs (2) are stopped.

▪ Adjustments

• Angle adjustments of vanes in the powder distribution discs

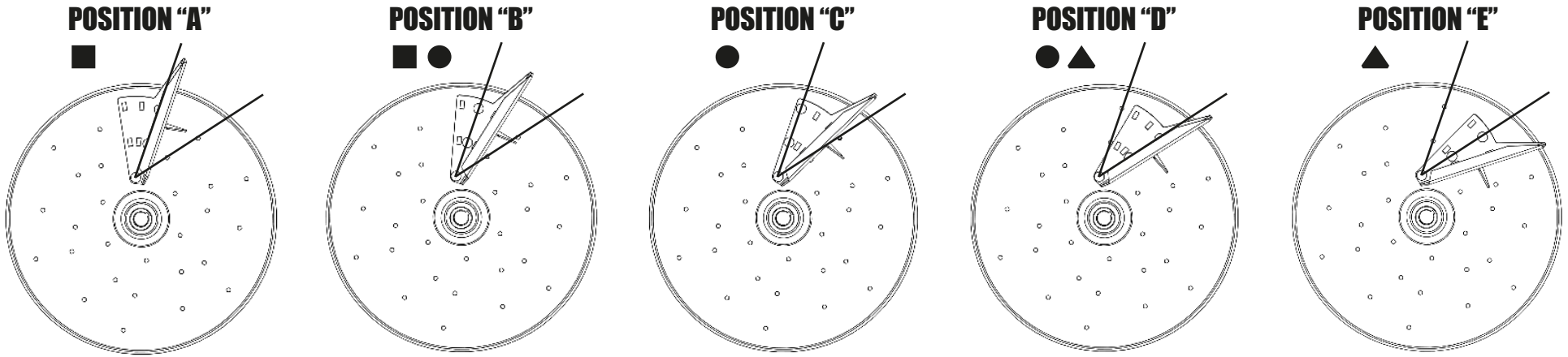
⚠ ATTENTION **Before performing the vanes adjustment (1), make sure that the tractor motor is o and that the ignition key has been taken out. Only perform adjustment of the vanes (1) when the distributor discs (2) are stopped.**

POSITION OF VANES

To obtain the desired distance in distribution, check the possible vanes settings below.

LIMESTONE DISTRIBUTION

- **SHORT** Distribution: 7m
- **AVERAGE** Distribution: 10m
- **LONG** Distribution: 14m



❗ IMPORTANT **The adjustment of the vanes is according to the desired distribution width. Check the correct way to assemble the discs, which ensure uniform distribution.**
GRAIN AND SEED DISTRIBUTOR DISCS (See page 37). / POWDER DISTRIBUTOR DISCS (See page 36).

▪ Adjustments

• Distribution adjustment

Fertilizers and seeds tables are indicative, that is, they are approximate to give notion of how to start the adjustment, because factors such as brand, type, density, fertilizer moisture and even the speed of movement during work are factors that can give variations in the distribution.

⚠ ATTENTION

Baldan is not responsible for any damages caused by improper adjustments of the devices related to the distribution of fertilizers, seeds or correctives with FERTILIZA.

• Adjustments table of the fertilizer distribution vanes

Product	Diamenter Grain (mm)	Specic grain weight (kg/l)	Working Width				
			24	27	30	32	36
UREA / UREA **45% N**	2,28	0,78	06/39	-	-	-	-
UREA / UREA **45% N**	2,16	0,78	07/42	-	-	-	-
UREA / UREA **46% N MANAH**	2,23	0,76	11/39	12/43	28m 12/44	-	-
NPK 5-20-20 ROULLIER	2,71	1,06	-	-	12/40	12/43	-
NPK 10-10-10	-	-	-	-	06/41	06/42	-
NPK 5-20-20 MANAH	3,09	1,09	-	-	06/36	06/38	06/44
NPK 7-11-19 MANAH	2,89	0,99	-	-	09/41	13/42	14/43
AMMONIUM SULFATE 20% N	2,29	1,14	-	08/45	28m 08/45	-	-
AMMONIUM SULFATE 20% N	2,08	1,09	-	09/43	-	-	-
AMMONIUM NITRATE 2,0% N	2,17	0,98	-	-	28m 06/40 30m 07/43	-	-
SULFAMMO Hydrogenated 26% ROULLIER	3,09	0,91	-	-	13/41	13/44	13/44
Kcl 60,5%K20 Potassium Chloride	3,03	1,11	-	-	06/37	06/41	08/45
NK 30-00-20 MANAH	2,35	0,80	11/39	12/43	12/44	-	-
PK 00-20-30 SERRANA	2,43	1,26	-	-	06/36	06/40	-
NK 30-00-01 MANAH	2,23	1,26	06/39	-	06/40	07/43	07/44
FOSTAG 567 M4 PK 0-12-28	-	-	-	-	06/40	07/43	07/44
NK 36-00-12 MANAH	2,36	0,83	10/39	11/42	28m 12/43	-	-
PHOSPHAT 00-18-00 SERRANA	2,87	1,24	-	-	09/40	09/43	13/45

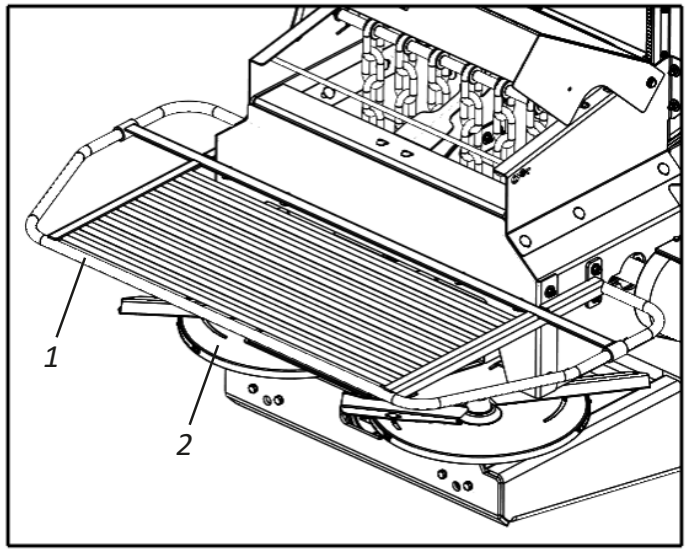
▪ Adjustments

• Adjustments table of the seeds distribution vanes

Product	Diameter Grain (mm)	Specic grain weight (kg/l)	Working width							
			9	10	12	15	16	18	20	21
SUNFLOWER	-	-	-	-	-	07/40	07/40	09/45	-	-
YELLOW MUSTARD	-	-	-	-	19/42	19/43	19/43	-	-	-
CANOLA	-	-	-	-	19/44	20/45	-	-	-	-
RADISH	-	-	-	-	-	-	-	10/51	12/45	28m 12/45
VETCH	-	-	-	-	-	-	-	13/36	17/40	28m 17/40
MILLET	2,05	0,86	-	-	-	-	-	-	10/49	-
MILLET	1,73	0,7	-	-	-	07/39	08/40	-	-	-
ALFAFA	-	-	12/35	13/37	13/45	-	-	-	-	-

• Distributors discs protection

The protection (1) is factory-original in the distributor discs (2) of **FERTILIZA**. The protection (1) is a safety item that not only avoids the contact of people with the distributors discs (2), especially when they are in operation, it also protects the distributor discs (2) from damages in case of maneuvers in small areas.



⚠ ATTENTION

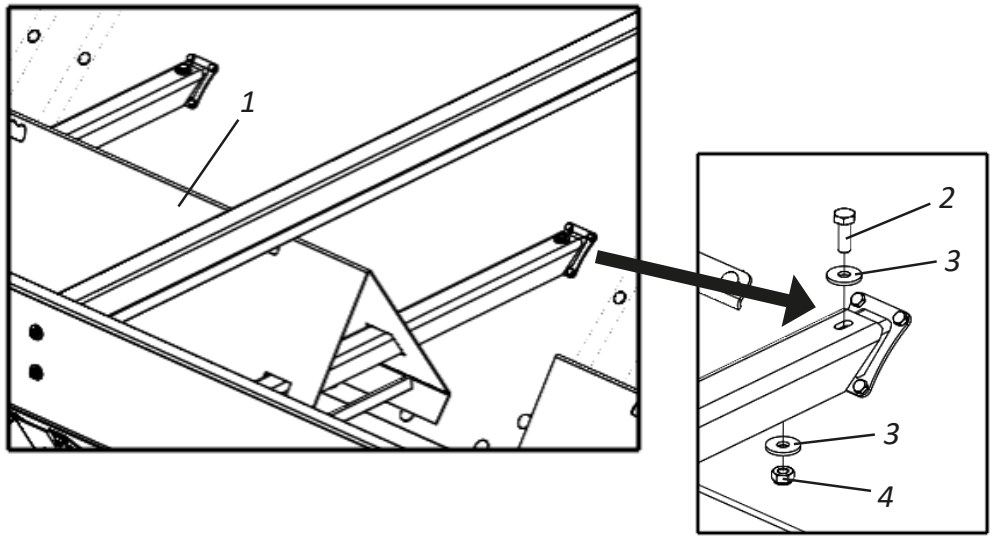
It is not allowed to use the protection (1) as platform or access ladder to FERTILIZA.
It is not allowed to remove the protection (1) under any circumstance.
Do not climb or remain on the protection (1).
Ignoring this warning may cause severe accidents and even death.

▪ Adjustments

• Use of deflector

FERTILIZA leaves the factory assembled with the deector the deector (1). This deector avoids the overload on the conveyor, allowing a milder operation.

Before starting the works with **FERTILIZA**, check if the deector (1) is properly secured, tightening the screws (2), washers (3) and nuts (4) preventing the deector (1) from coming o, damaging the conveyor and **FERTILIZA**.



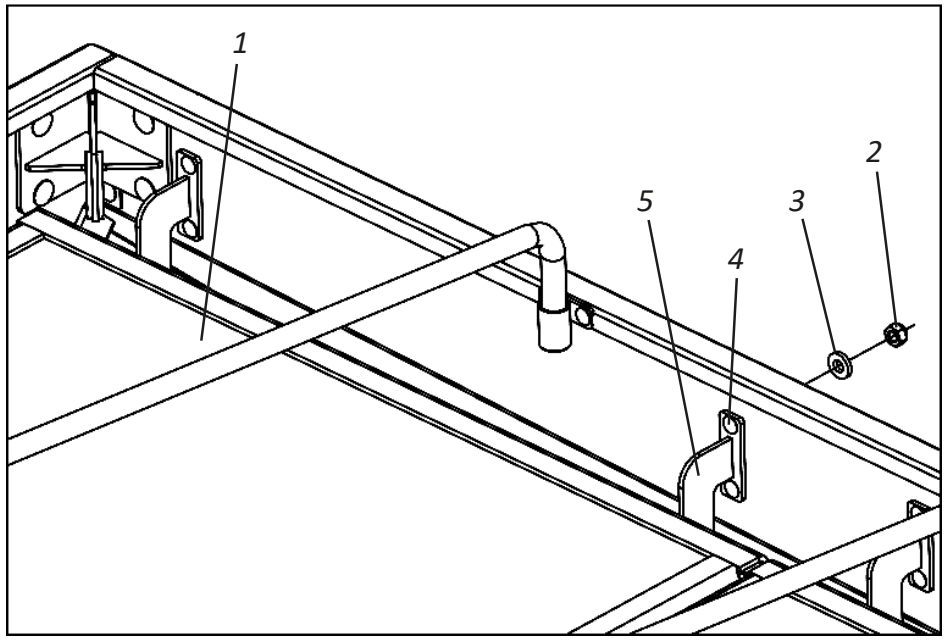
⚠ ATTENTION

For a longer service life and good operation of the conveyor, the deectors should be kept in the working position, relieving the load on the conveyor and, therefore, avoiding its skating. In the same way, the sieves should not be removed since they serve as protection, preventing stranger elements from falling together with the used products.

• Protection screens

FERTILIZA leaves the factory assembled with the protection screens (1). These screens prevent foreign objects or impurities from going inside the tank.

Before starting work with **FERTILIZA**, check that the protective screens (1) are properly fixed, tightening the nuts (2), pressure washers (3) and screws (4) preventing the supports (5) from loosening, damaging the **FERTILIZA**.



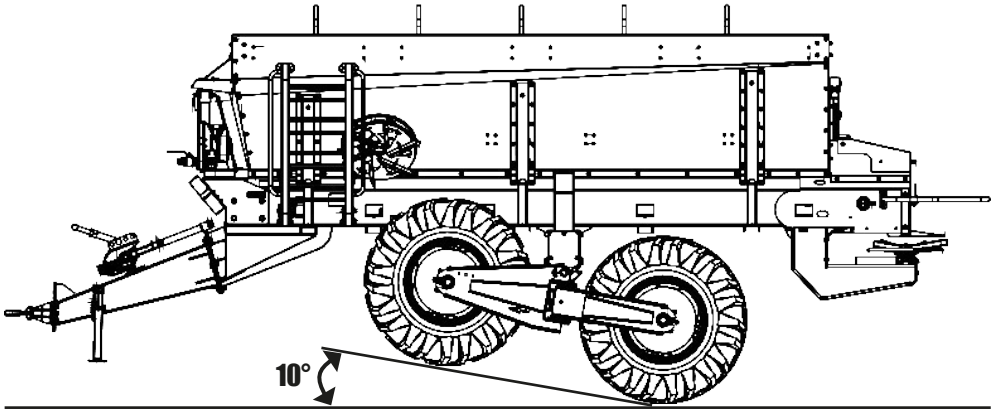
❗ IMPORTANT

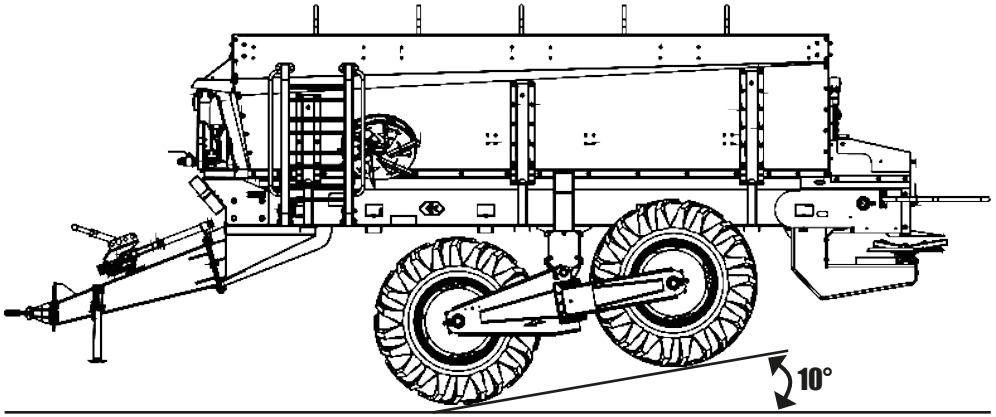
Do not climb or remain on the protection screens (1). Ignoring this warning may cause severe accidents and even death.

▪ Adjustments

• Tandem wheel system

FERTILIZA uses wheel system with the purpose of compensating irregularities of the land, evenly distributing the load on the wheels, providing greater work stability in uneven soils.

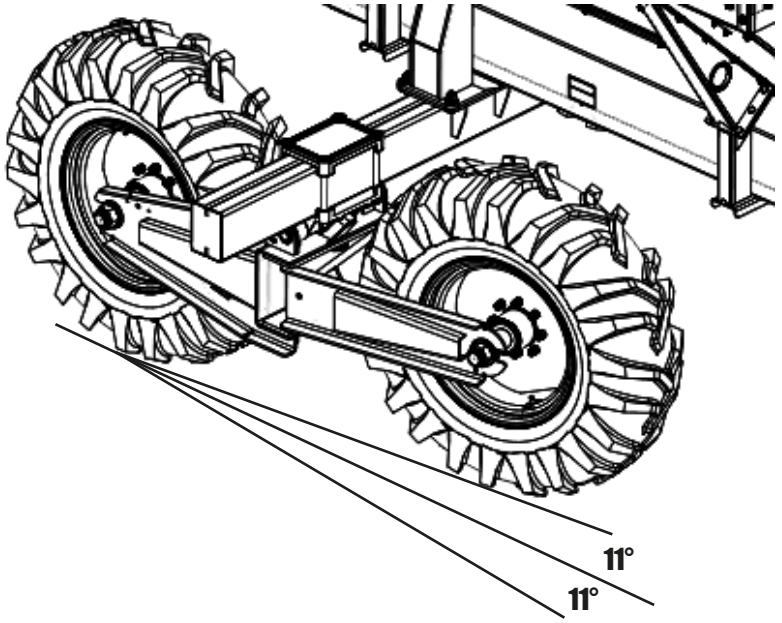




• Cross system

FERTILIZA uses the cross system that allows the wheel system to move lightly and safely in all types of land, avoiding soil compaction.

The cross system allows lateral movement at an angle of up to 11° to both sides, reducing impacts provoked by soil irregularities, thus not aecting **FERTILIZA** distribution and structure.



⚠ ATTENTION

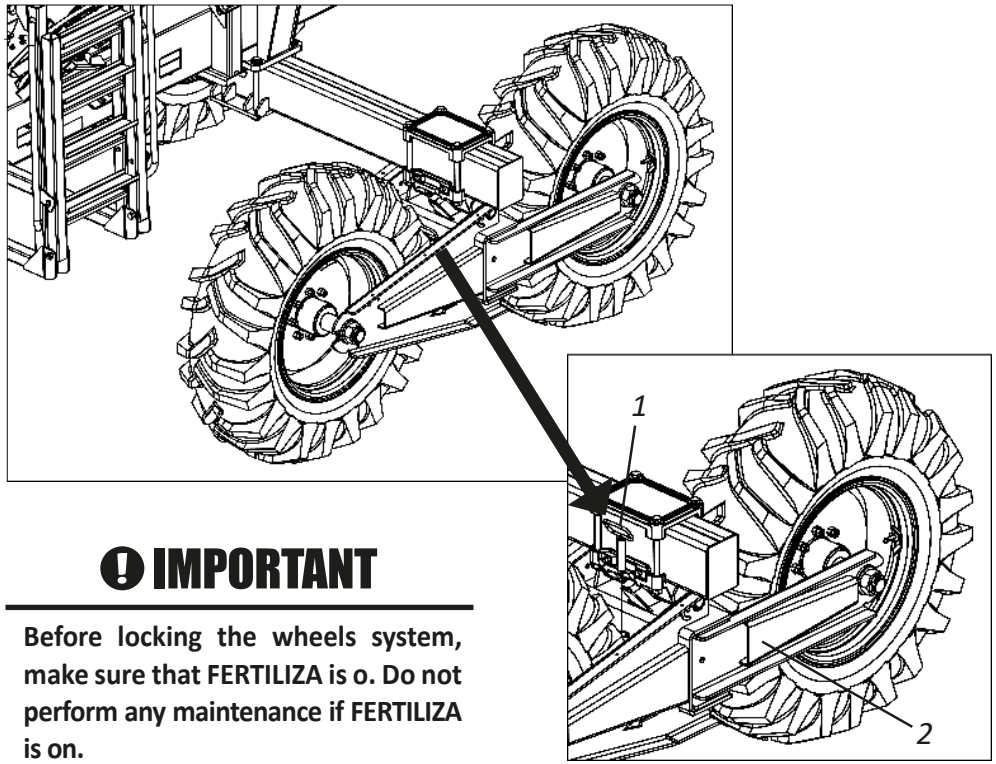
When maneuvering in reverse, lock the wheel system as instructed on the following page, preventing it from lateral movement by forcing the pivot system and damaging the wheel assembly.

▪ Adjustments

• Wheel system lock

When maneuvering in reverse, lock the wheel system preventing it from lateral movement forcing the pivot system and damaging the wheel set. T lock the wheel system, proceed as follows:

01 - Place the pin (1) on the wheel carriers (2). Perform this procedure on both sides of **FERTILIZA**.



⚠ ATTENTION

When removing the pin (1), the wheel carriers (2) may move. Double the attention in this moment to avoid accidents.

❗ IMPORTANT

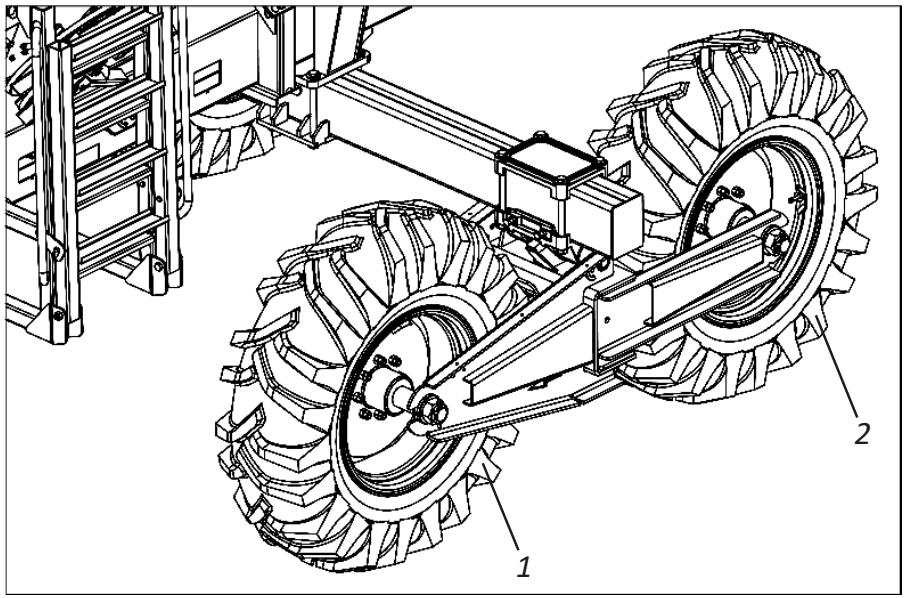
When completing the reverse maneuver, unlock the wheel's system by removing the pins (1) of the wheels system (2). Do not work on FERTILIZA with the wheel's system (2) locked.

❗ IMPORTANT

Before locking the wheels system, make sure that FERTILIZA is o. Do not perform any maintenance if FERTILIZA is on.

• Tires position

In order for the front and rear tires to exert uctuation on the ground, accompanying the irregularities of the tire avoiding compaction, the position of the front (1) and rear (2) tires grips should always be towards the rear of **FERTILIZA.**



▪ Adjustments

• Flow adjustment with use of trays - Part I

The uniformity of distribution of fertilizers, correctives or seeds is related to the characteristics of the applied products, such as the degree of **SECREGATION** (separation and accommodation of the particles by size and density), **HYDROSCOPICITY** (absorption of the humidity of the product that can cause diculty in handling and distribution, delivery, etc.), **FLUIDITY** (ow capacity), **GRANULOMETRY** (product grain size). SOURCE: Anda http://www.anda.org.br/multimidia/bo- letim_04.pdf.

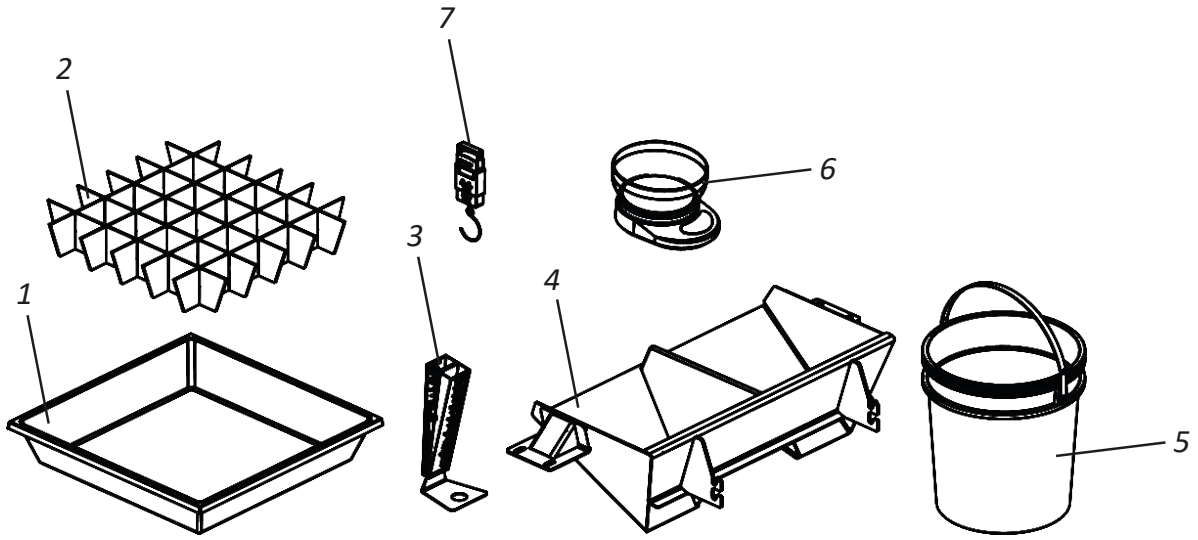
The variation of these components directly aects the uniformity of distribution and consequently the range achieved for each product. Therefore, even if the pre-sets tables for **FERTILIZA** adjustment are used, it is necessary to adjust in the application moment, adding all the characteristics at the moment. That is why is very important to adjust the ow using trays before beginning any product application, in order to be safe and certain that the adjustment is correct.

PURPOSE

The purpose is to adjust the required ow for the application of any product in the desired amount (kg/ha) adjusting the achieved range and overlapping required to obtain an even application.

REQUIRED MATERIAL FOR TRAYS COLLECTION

Item	Description	Amount
01	Tray	08
02	Collection Grid	08
03	Measurer Set (Pluviometer)	01
04	Sample Collector	01
05	Bucket	02
06	Digital Scale	01
07	Portable Digital Scale	01
-	Measuring tape **(No supplied with FERTILIZA)**	01



▪ Adjustments

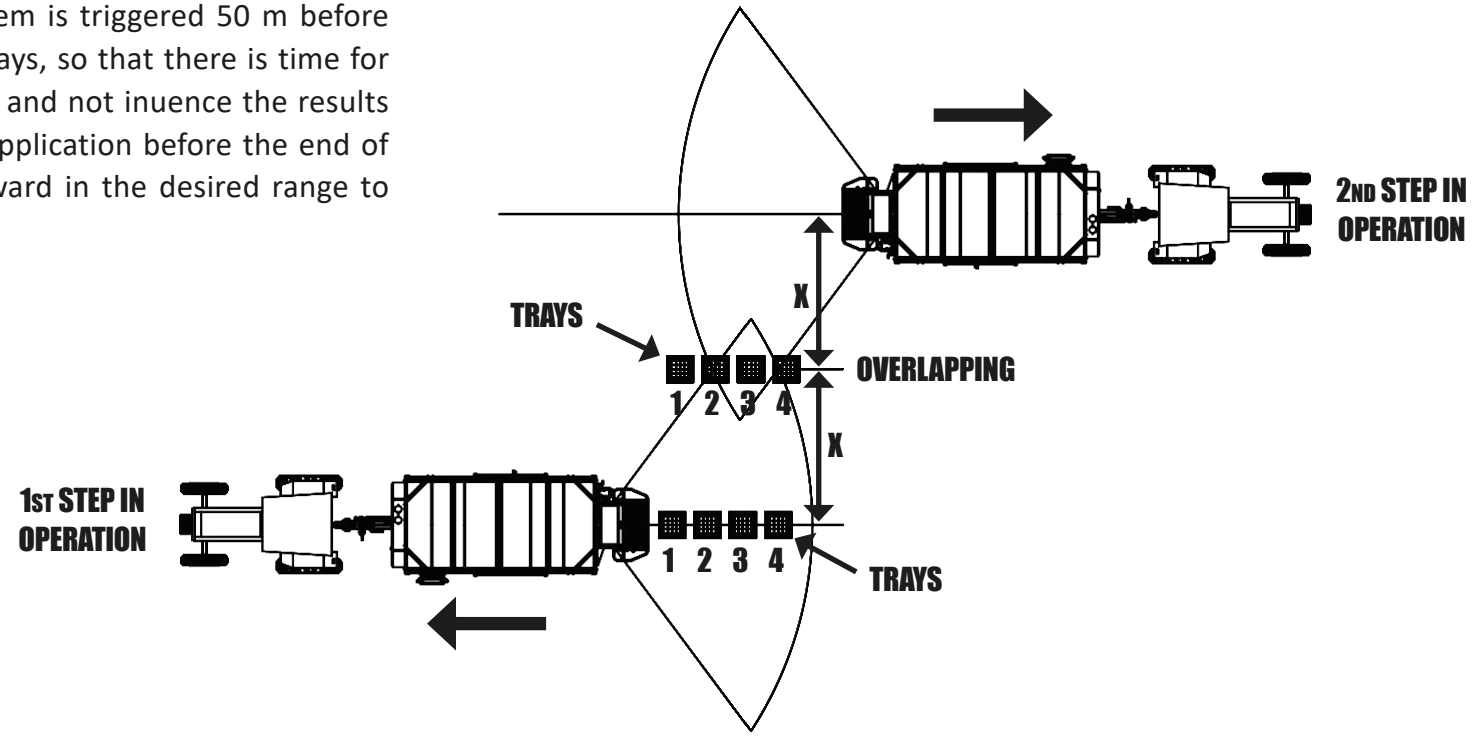
• Flow adjustment with use of trays - Part II

PROCEDURE

First, adjust **FERTILIZA´s** gate opening according to the table value to be distributed so that the adjustment procedure can start as close as possible to the ideal. Next, the product application range should also be set, as long as this range is compatible with the maximum possible of the product (example: limestone reaches a maximum of 14 m).

After, place the trays in sets of 4, in line, with one line in the direction of the tractor path and one-line parallel to this rst one, at a distance that is half the desired range, that is, if the product should reach 36 m, the trays should be 18 meters apart so the application of the product is in the middle of a tray line and the other in the 18 m signaled to verify overlapping (measure distances with measuring tape).

It is important that the distribution system is triggered 50 m before and continues in operation 50 m after the trays, so that there is time for the distribution system to get into operation and not inuence the results due to discontinuity or deactivation of the application before the end of the harvest. It should go forward and backward in the desired range to check overlapping.



⚠ ATTENTION

Do not always use the same trail every year to avoid the product´s concentration.

❗ IMPORTANT

Only use the trays to calibrate the prole and measure the application width.

▪ Adjustments

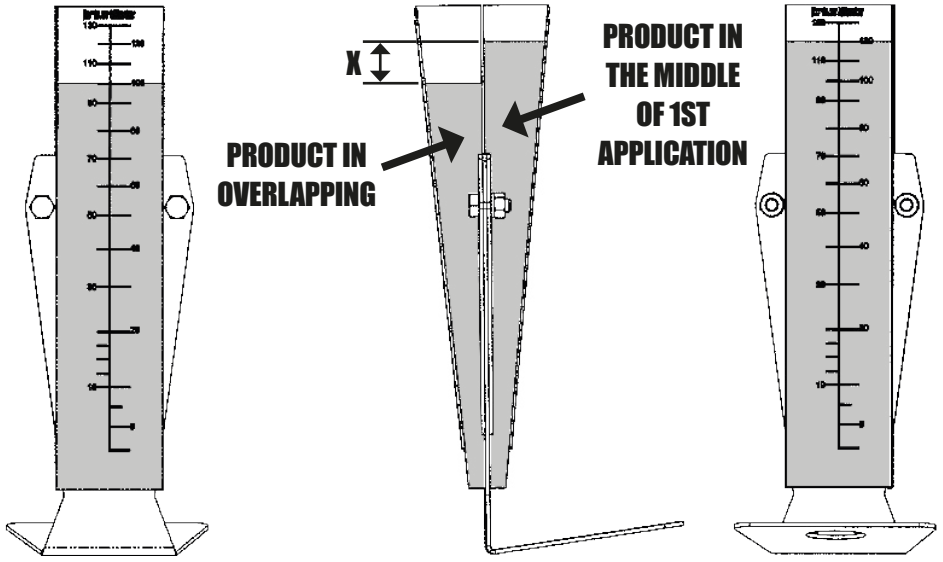
• Checking distribution range and by-pass

When nishing the application of the product over the dened area, collect the product of 4 trays placing it on one of the collector glass and the other 4 trays on another collector glass. It is very important to highlight which glass represents by-pass and which one represents the tray line below **FERTILIZA** since the levelling of the products inside the glasses indicates if the range can be increased or reduced.

The content of the glass with the overlapping product should be levelled with the content of the glass with product from the middle of the application.

EXAMPLE:

If the amount of product in the overlapping glass is smaller than in the application middle (gure 35), it means that the range is beyond ideal for application. In reality, the ideal overlapping is not taking place and is necessary to reduce the application range, that is, the distance, and then perform a new collection. If the amount of product in the overlapping glass is higher than in the application middle, it means that is necessary to increase the application range and perform a new collection later.



▪ Adjustments

• Checking product flow

Verication of products ow should be performed by relating the desired amount of product (kg/ha) with the amount collected from the trays. It is known that 1 ha is equal to 10,000 m² of area and that trays have a total area of 2 m² (each tray has 0.25 m²).

EXAMPLE: It is intended to distribute 2500 kg/ha of limestone. What is the exact adjustment and which weight should be put on trays to measure the system?

- **FERTILIZA** is adjusted and the limestone is distributed in both lines, as previously described. The products from the 8 trays are collected and weighted (e.g.: 0.8 kg).
- The following rule is used for calculation::

$$Pb = \frac{V \times A}{10.000} = (kg)$$

WHERE:

Pb - Value of weight to be collected (kg).
V - Necessary distribution rate (kg/ha).
A - Area of trays (m²).
10.000 - Conversion area equivalent to 1 ha.

CALCULATING:

$$Pb = \frac{2500 \times 2}{10.000} = 0,5\ (kg)$$

INTERPRETATION:

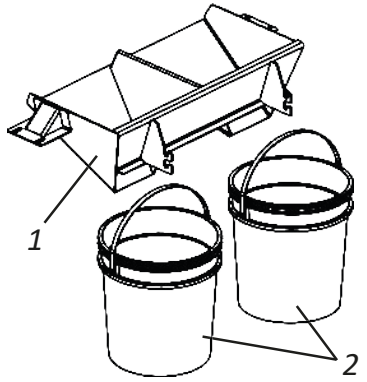
Interpreting the result of the calculation, it can be veried that, for a 2500 kg/ha ow, it is necessary to collect the weight of 0.5 kg in the 8 trays. As in this example, the value was 0.8 kg, so it is concluded that the gate opening should be reduced and a new collection performed, until the 0.5 kg rate is reached.

• Collection method

SAMPLE COLLECTOR KIT (BUCKETS)

Another way of adjusting the ow of products in the distribution is using the sample collectors.
To do that, the sample collector kit is used (buckets).

Item	Description	Amount
01	Sample Collector	01
02	18 liters' buckets	02



▪ Adjustments

• Procedure to collect samples - Part I

01 - Set the product to be applied, the dosage in [kg/ha] and the distribution width (choose the work width in the tables and the disc to be used, already observing the position of the vanes in the disc).

02 - Remove (disassemble) the distribution discs of the machine along with the deector set for fertilizer. Assemble the sample collectors set to perform the product collection.

03 - Supply **FERTILIZA** with the product to be applied and demarcate the 50 m path to simulate the application. Observe that the distance of the products output gate up to the fall from above the conveyor should be lled with products, that is, before performing the collection in the delimited path (50 m) normally distribute the product (walk with the equipment in operation) so that the start time of the product fall does not compromise the application in the 50m; After completing item 3, make sure the buckets are empty and start the application in the 50 m demarcated at the desired speed;

04 - Weight the product collected in the two buckets and perform the following relations:

$$Q = \frac{(\text{distribution width} * 50) * (\text{quantify to be distributed [kg]})}{10.000}$$

WHERE: Q = quantity to be collected in the 2 buckets;

The result of this calculation should be the collected weight in both buckets and that will amount to the desired in [kg/ha]. If the calculated weight is not obtained, the gate opening should be increased and the procedure repeated.

EXAMPLE:

Procedure to apply 70 [kg/ha] of urea 45% N PRILLIS, 2.28 mm grains diameter and specic weight of 0.78 [kg/l].

01 - Application conditions:

a) Dosage: 70 [kg/ha];
b) Discs 18-24 Fertilizers;
c) Distribution width 24m;
d) Position of the vanes: 17/49;
   I. Smaller vane 17;
   II. Larger vane 49;

▪ Adjustments

• Procedure to collect samples - Part II

02 - Remove (disassemble) the distribution discs of the machine along with the deector set for fertilizer. Assemble the sample collectors set to perform the product collection;

03 - Supply **FERTILIZA** with the product to be applied and demarcate the 50 m path to simulate the application. Observe that the distance of the products output gate up to the fall from above the conveyor should be lled with products, that is, before performing the collection in the delimited path (50 m) normally distribute the product (walk with the equipment in operation) so that the start time of the product fall does not compromise the application in the 50m;

04 - After completing item 3, certify that the buckets are empty and begin the application in the 50 m marked in the desired speed;

05 - Weight the product collected in the two buckets and perform the following relations:

$$Q = \frac{(24\ m \times 50\ m) * \left(\frac{70\ kg}{ha}\right)}{10.000} = 8{,}4\ kg$$

WHERE: Q = quantity to be collected in the 2 buckets, [kg];

In the 50 m path, estimating a distribution width of 24 m. 8.4 kg should be collected on both buckets to obtain a 70 kg/ha dosage.

▪ Systems

• Management system

FERTILIZA can be acquired in 2 forms:

01 - Without a management system, but with electric and hydraulic systems already installed for future the acquisition of a management system.
02 - With a management system (Raven CR7, Agrosystem MC-TF or Trimble GFX-750™).

• Raven Envizio PRO / Agrosystem / Trimble GFX-750™

The Raven CR7, Agrosystem MC-TF or Trimble GFX-750™ systems manage the application of conditioners and fertilizers to the soil, providing monitoring and control of the following information:

- Applications maps reading.
- Applications at fixed and variable rates.
- Includes a light bar (maintaining alignment in spreading).
- Applied area (ha).
- Applied quantity (ha).
- Daily application report.
- Fertiliza's wireless management system in the field.
- Automatic shutdown of work in already applied areas.

RAVEN CR7

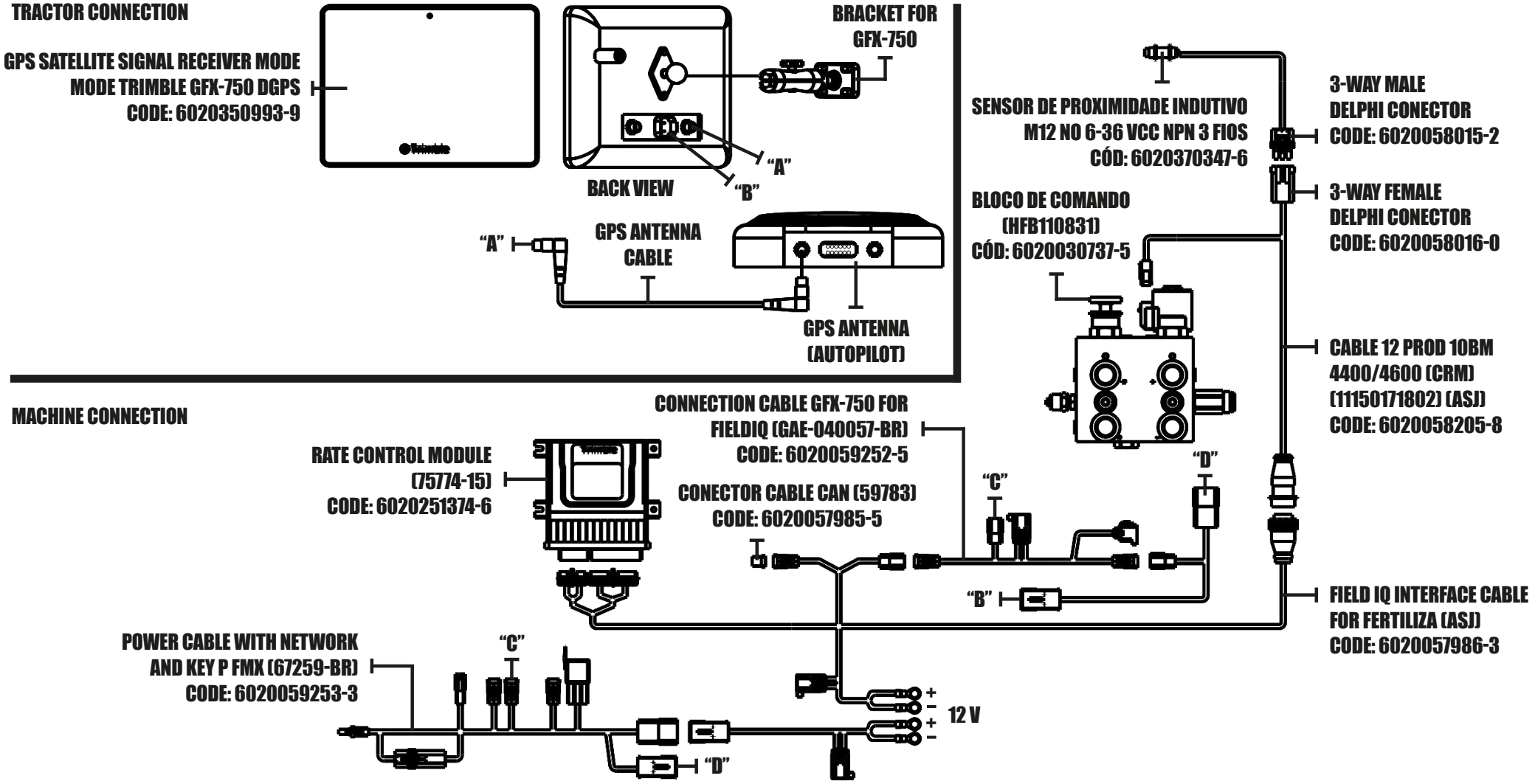
AGROSYSTEM MC-TF

TRIMBLE GFX-750™

⚠ ATTENTION **FERTILIZA is not delivered with the 3 systems above, that is, it is equipped with only 1 of them, which will be chosen at purchase.**

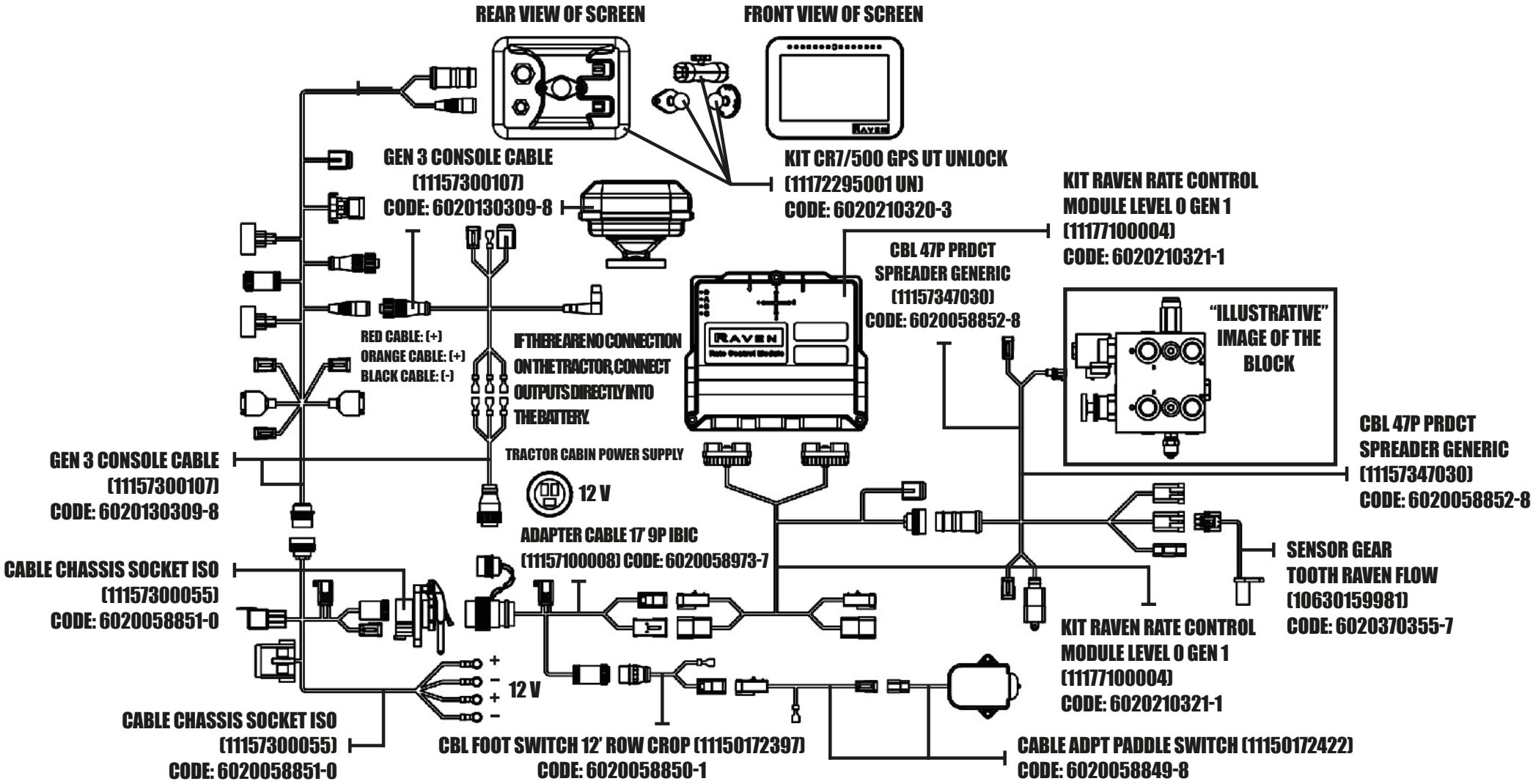
Systems

• Trimble GFX-750™ eletronic system assembly (Variable Rate) - FERTILIZA 6M³/ 8M³



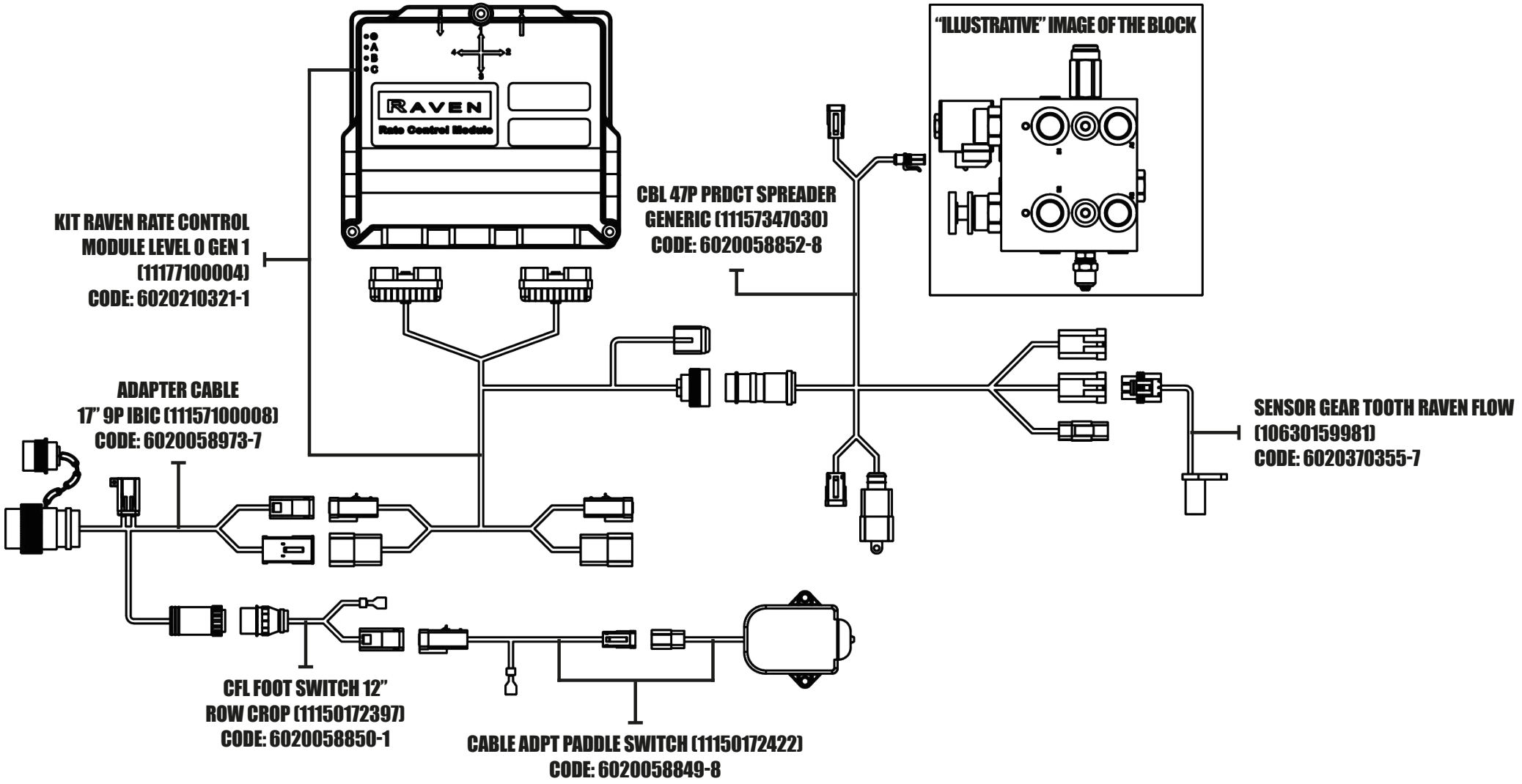
▪ Systems

• Raven CR7 eletronic system assembly (Variable Rate) - FERTILIZA 6M³/ 8M³



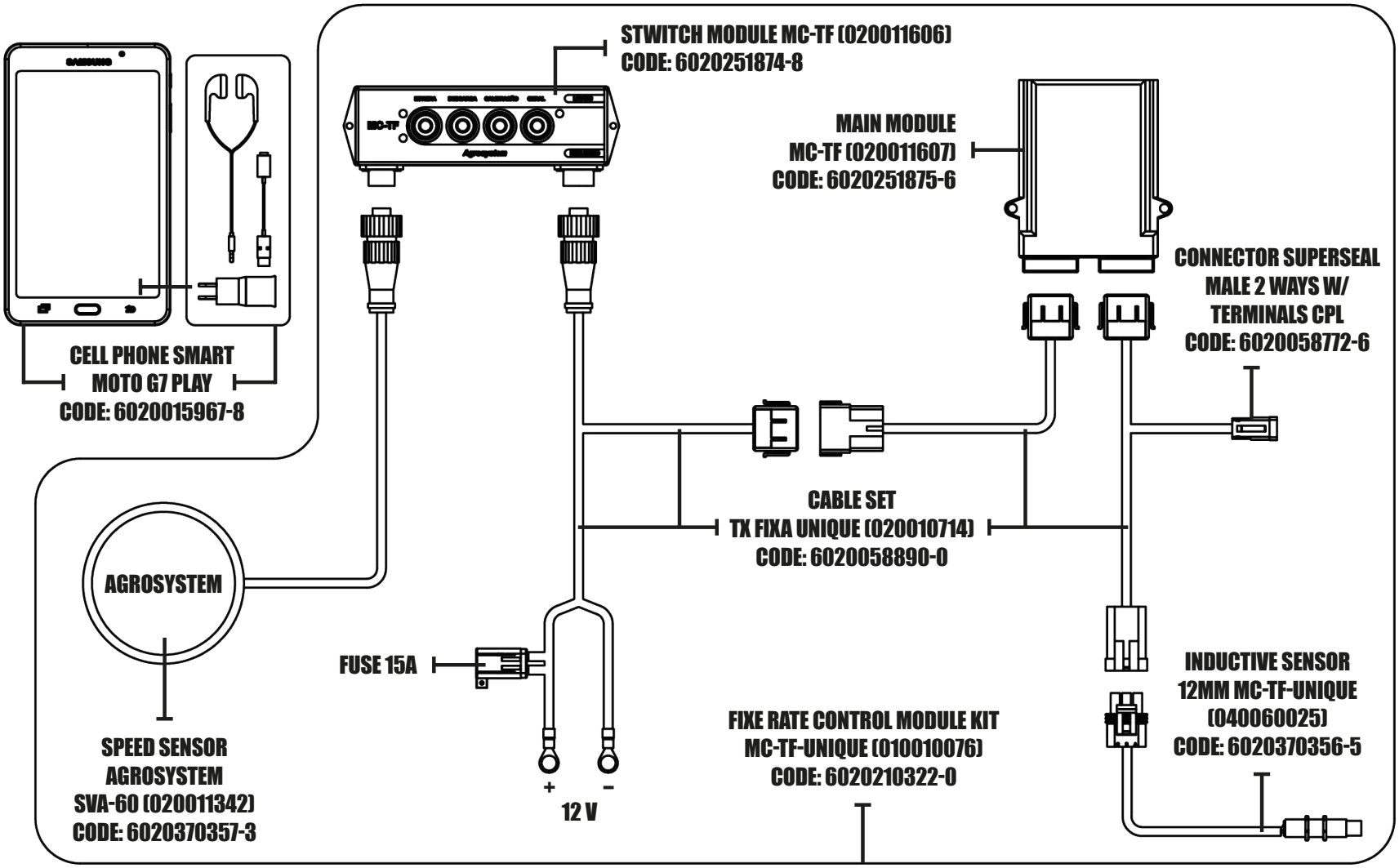
▪ Systems

• Isobus Raven CR7 eletronic system assembly (Variable Rate) - FERTILIZA 6M³/ 8M³



Systems

- Agrosystem eletronic system assembly (Fixe Rate) - FERTILIZA 6M³/ 8M³



BALDAN

▪ Trimble

• Setup instructions GFX-750™

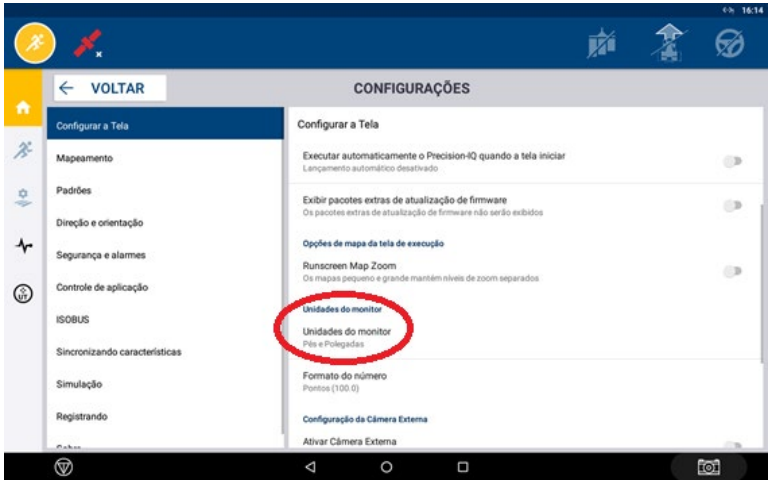
SCREEN 1

Android home screen - Select Precision-IQ

SCREEN 2

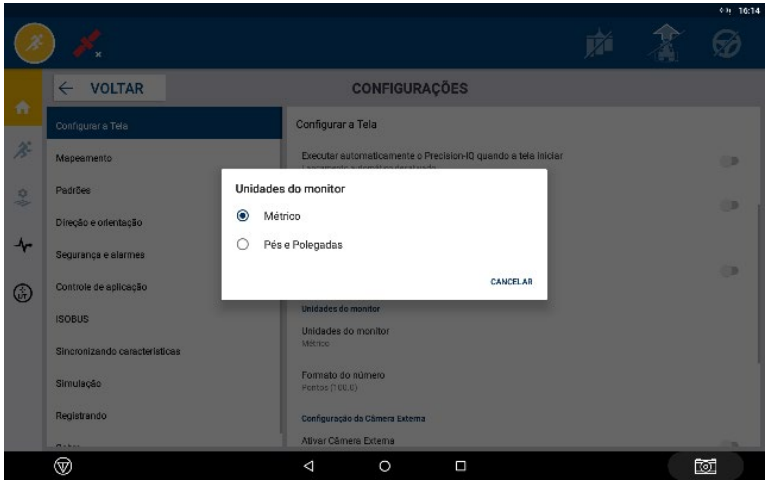
Select Settings

SCREEN 3



Select Monitor Units

SCREEN 4

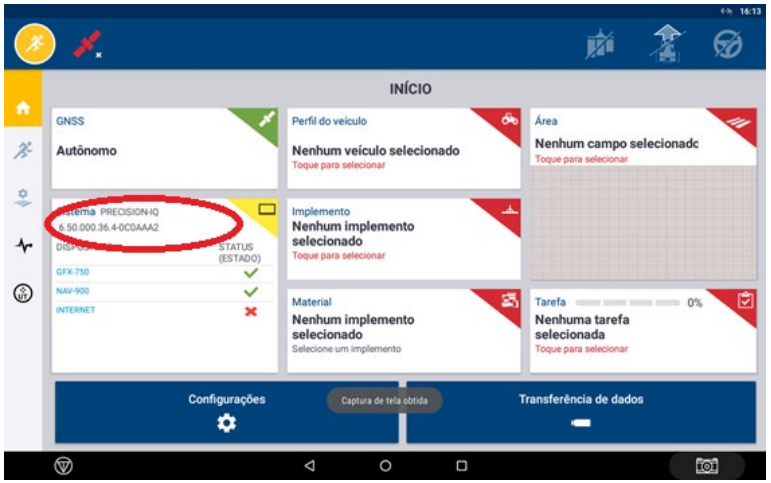


Select Metric

▪ Trimble

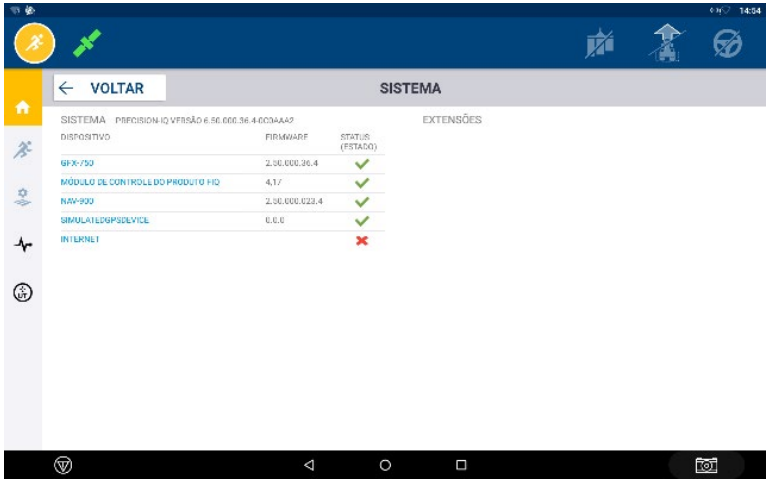
• Software update GFX-750™ - Part I

SCREEN 1



Check software version in the PRECISION-IQ System field

SCREEN 2

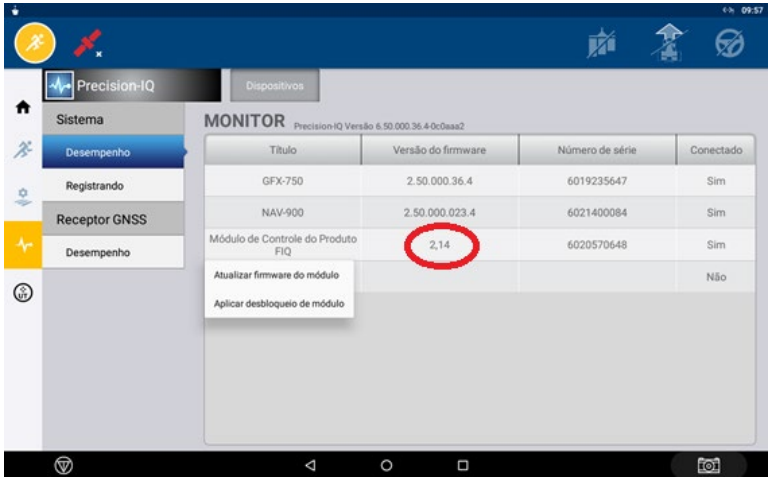


Check that the firmware version of the **FIQ PRODUCT CONTROL MODULE** is 4.17 or higher, if not updated.

SCREEN 3

Open the selected icon in red!

SCREEN 4

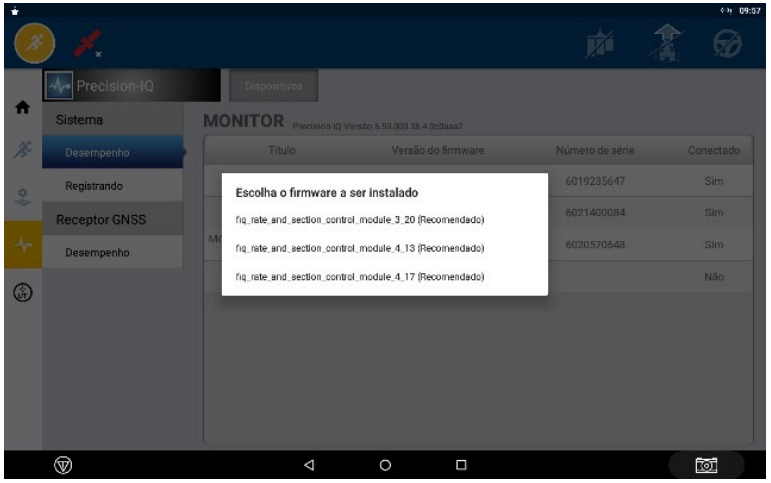


Click on the version, example: 2.14 to enable the **Update tab module firmware.**

▪ Trimble

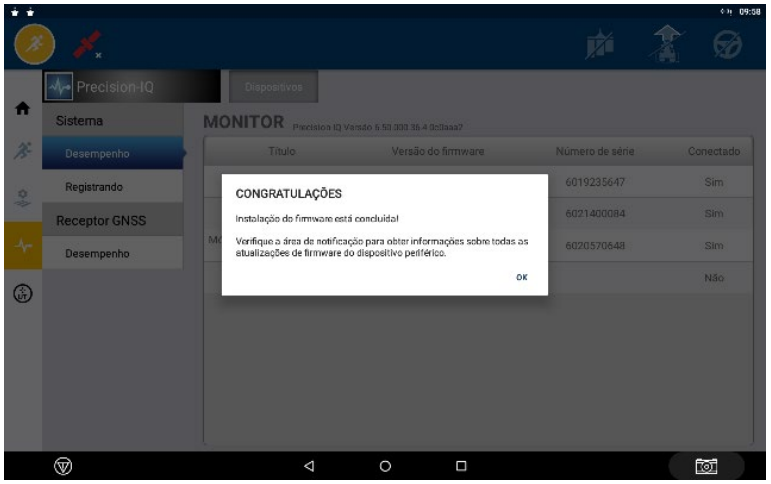
• Software update GFX-750™ - Part II

SCREEN 5



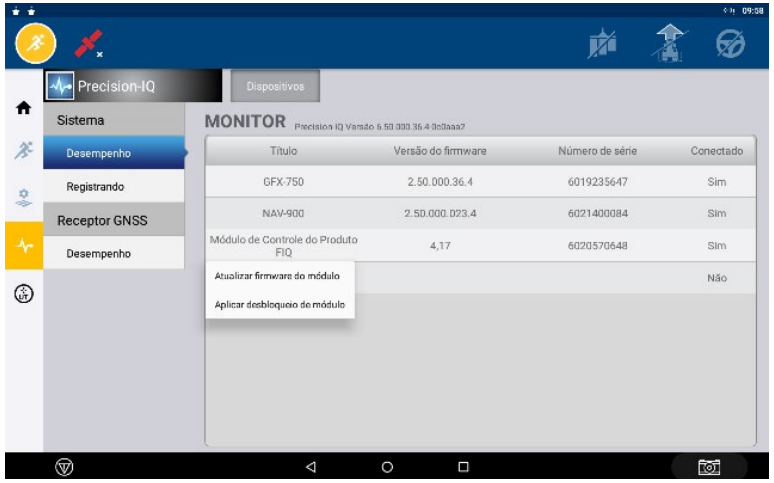
Choose the latest version, example: 4.17.

SCREEN 6



Click OK.

SCREEN 7

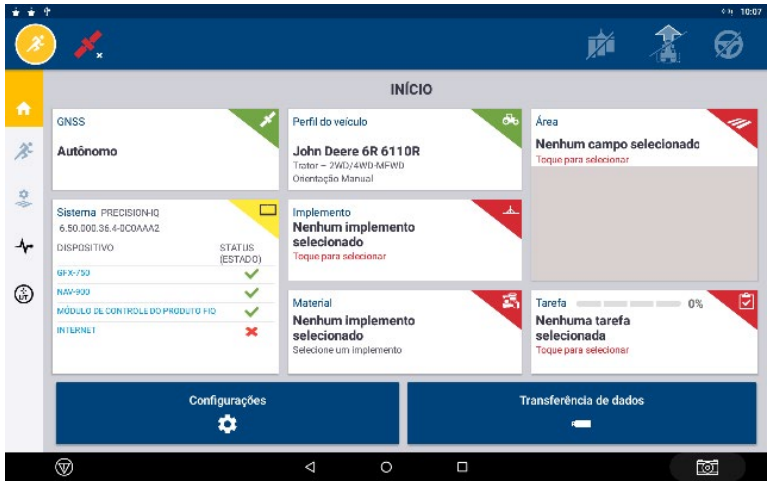


Note that the version has been updated and return to the home screen, restart the monitor and disconnect from power.

▪ Trimble

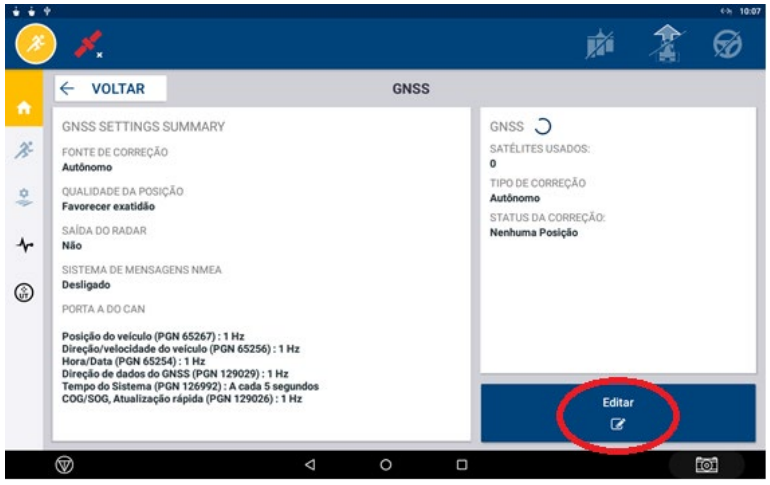
• System configurations GFX-750™ - Part I

SCREEN 1



Select the GNSS item.

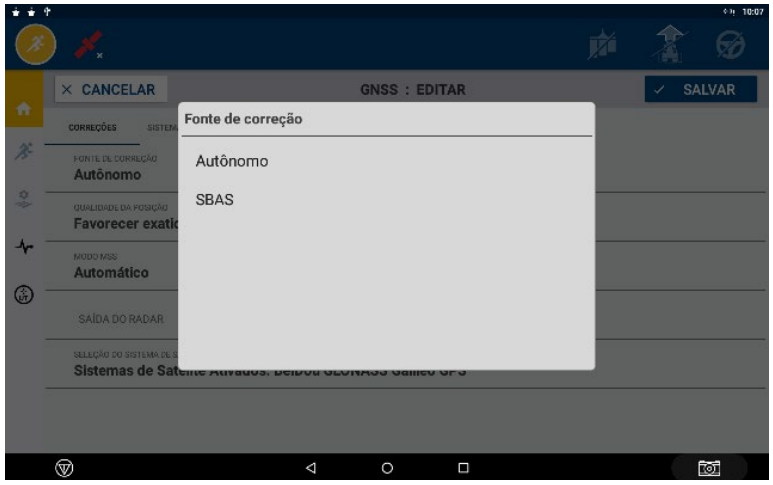
SCREEN 2



Open the edit field.

SCREEN 3

SCREEN 4

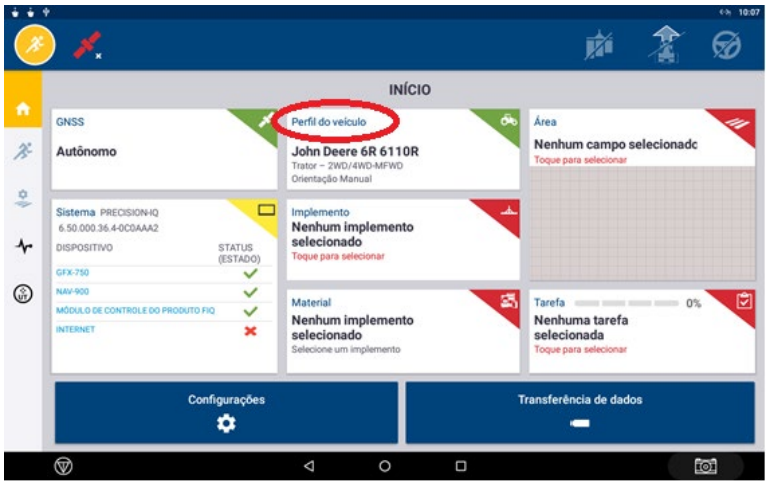


Select the correction source, example: Standalone.

Trimble

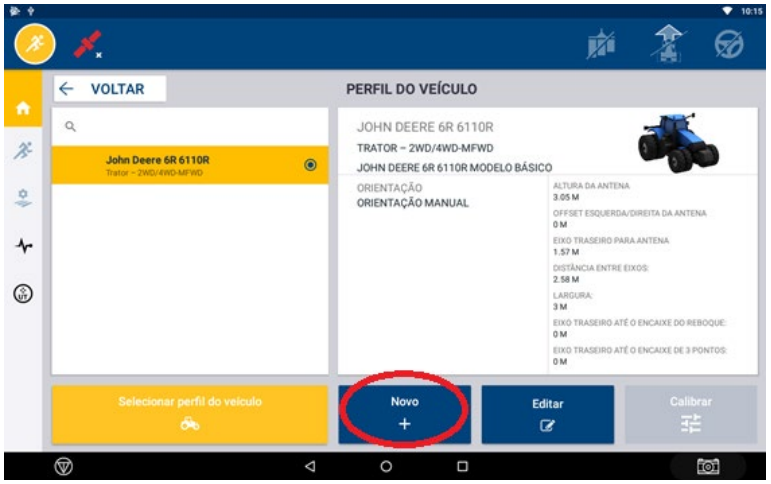
System configurations GFX-750™ - Part II

SCREEN 5



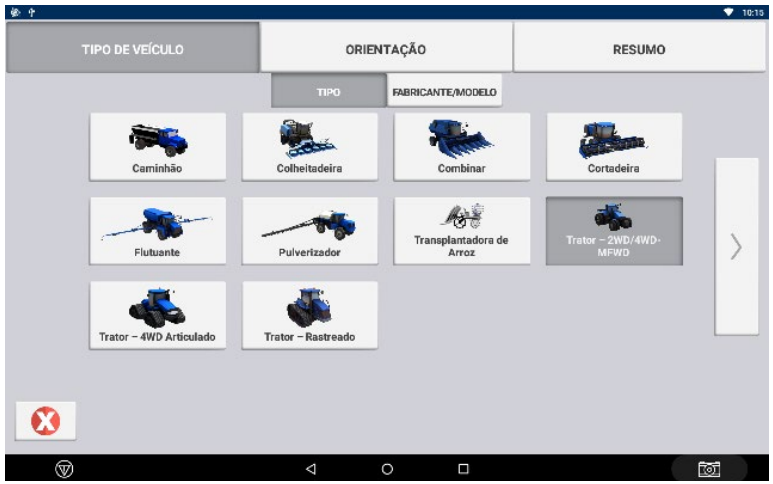
Open the field - Vehicle profile.

SCREEN 6



Select New.

SCREEN 7



Choose the type of tractor, example: 2WD/4WD-MFWD.

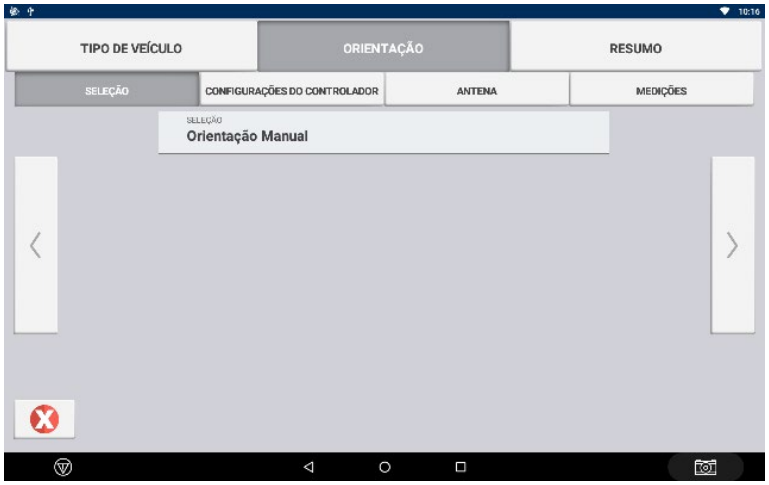
SCREEN 8

Choose the tractor manufacturer/model you are using.

Trimble

• System configurations GFX-750™ - Part III

SCREEN 9



SCREEN 10

Indicate the position of the antenna attached to the tractor roof.

SCREEN 11

SCREEN 12

Enter the width of the tractor.

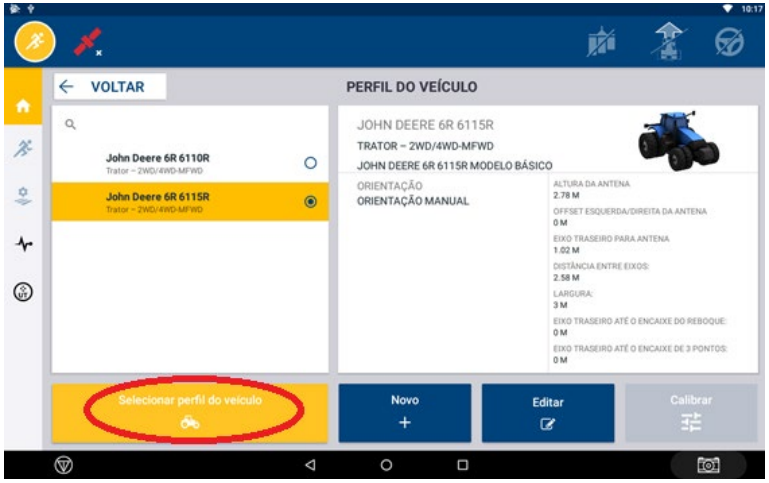
Trimble

System configurations GFX-750™ - Part IV

SCREEN 13

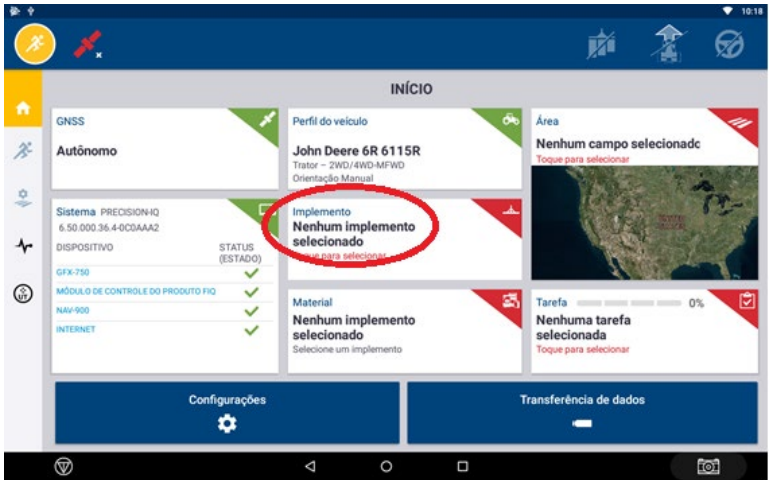
Confirm.

SCREEN 14



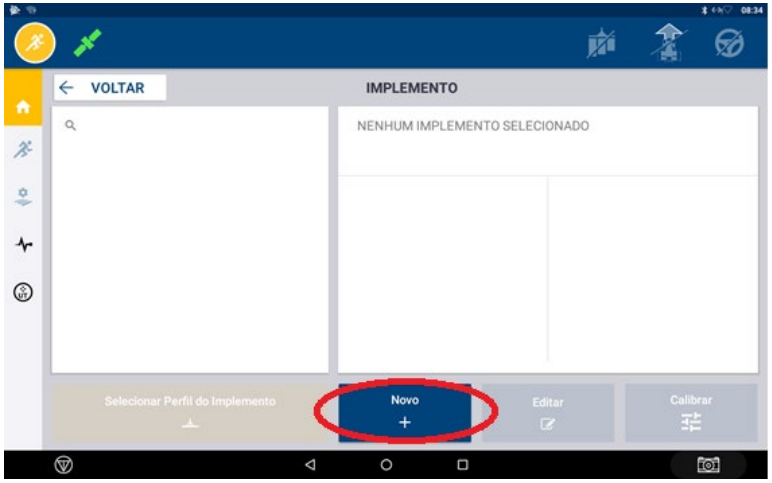
After finished - Select vehicle profile.

SCREEN 15



Select implement.

SCREEN 16

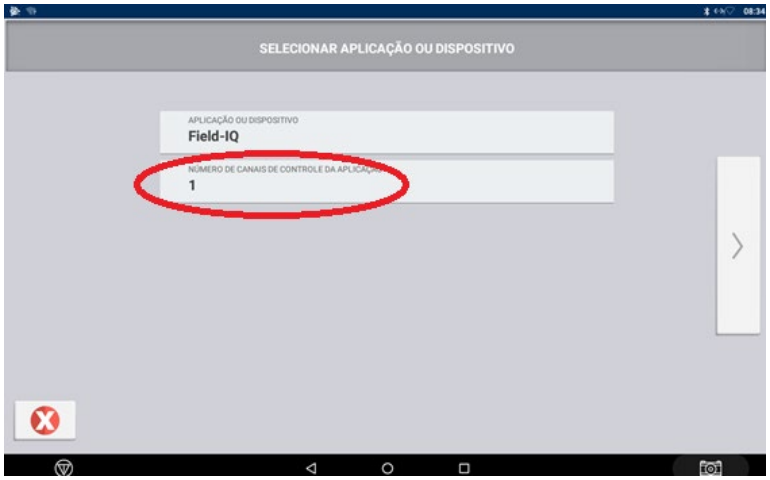


Select New.

▪ Trimble

• System configurations GFX-750™ - Part V

SCREEN 13



Select the Number of application control channels = 1.

SCREEN 14

Select Distribution.

SCREEN 15

Pull type spreader.

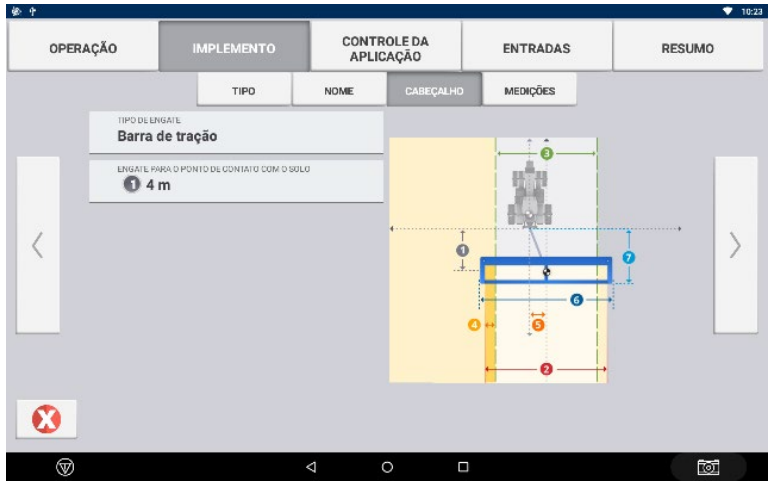
SCREEN 16

Type FERTILIZA

▪ Trimble

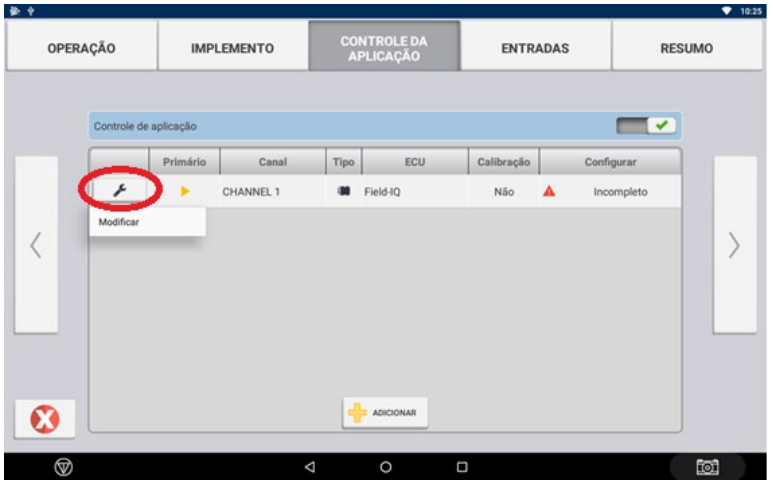
• System configurations GFX-750™ - Part VI

SCREEN 17



SCREEN 18

SCREEN 19



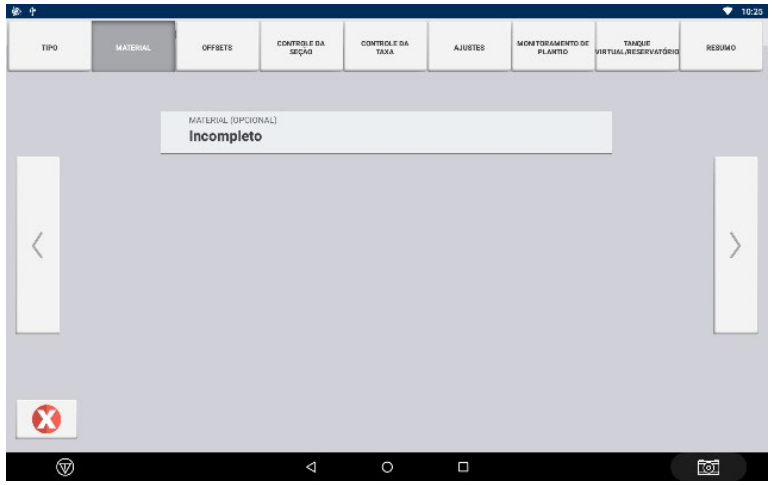
Select the red icon, then Modify.

SCREEN 20

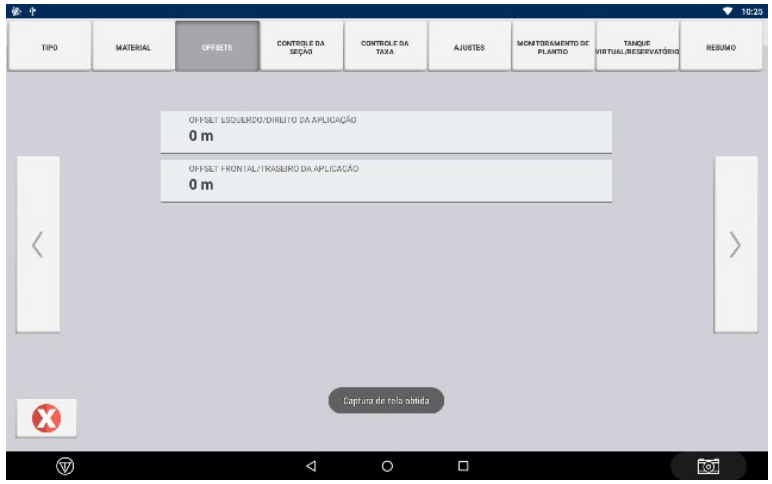
Trimble

• System configurations GFX-750™ - Part VII

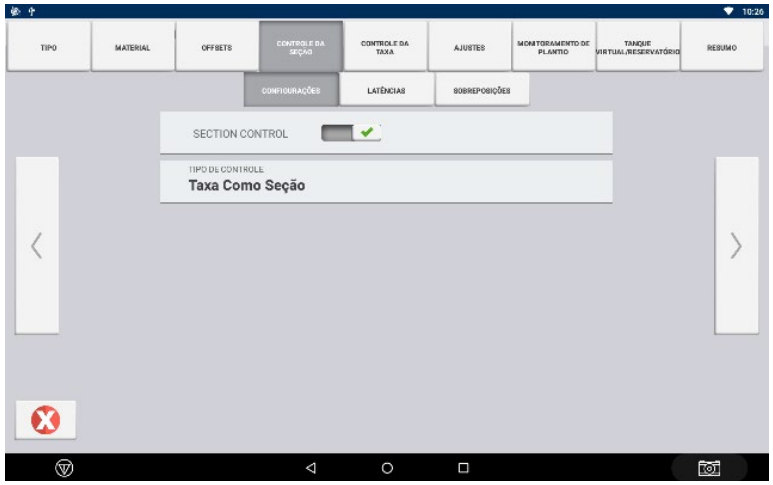
SCREEN 21



SCREEN 22



SCREEN 23



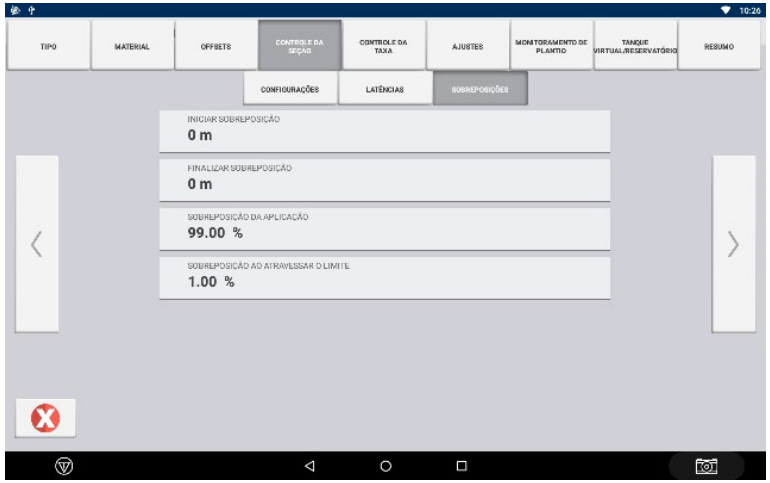
Select the control type - Rate as the section.

SCREEN 24

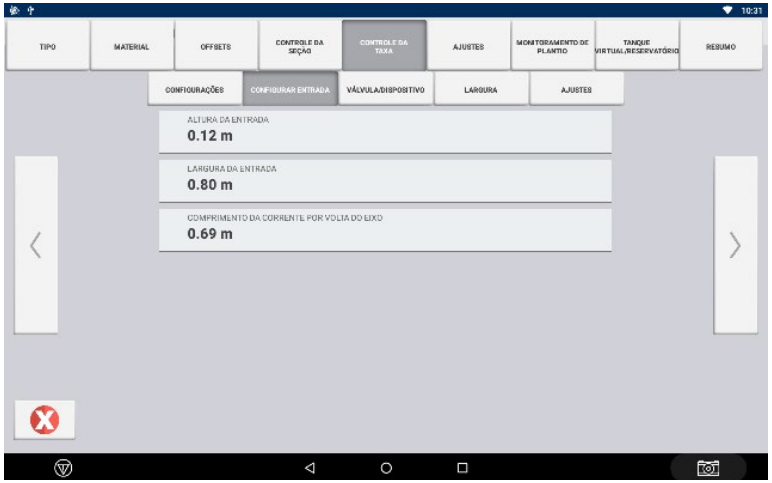
▪ Trimble

• System configurations GFX-750™ - Part VIII

SCREEN 25

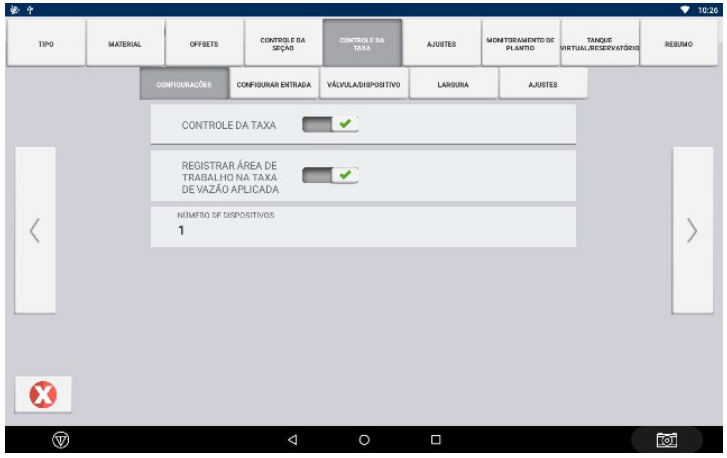


SCREEN 27

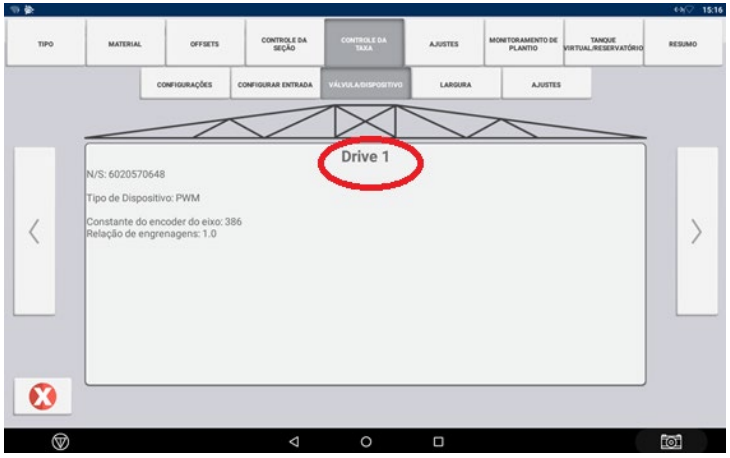


Enter the values above for the implement. The values for **the input width 0.80 m and the chain length around the axis 0.69 m are fixed!** Entrance height will vary according to the opening of the penstock chosen for each material, example: 0.12m.

SCREEN 26



SCREEN 28

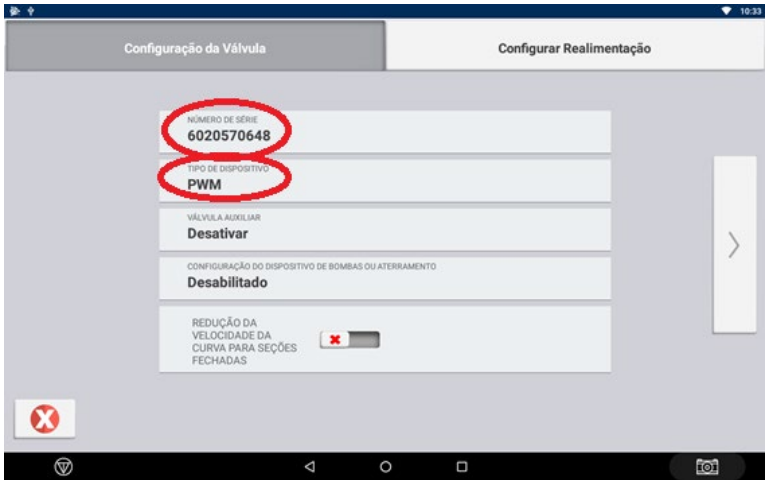


Click inside the Drive 1 field.

Trimble

System configurations GFX-750™ - Part IX

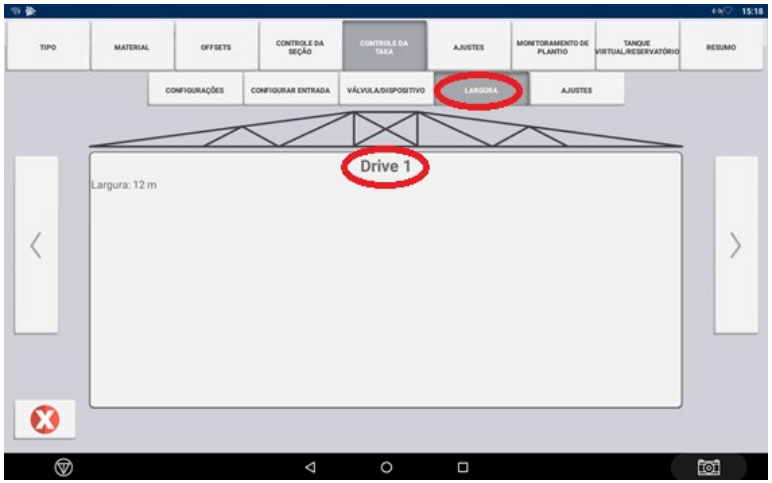
SCREEN 29



Insert Module No. / Device Type - PWM.

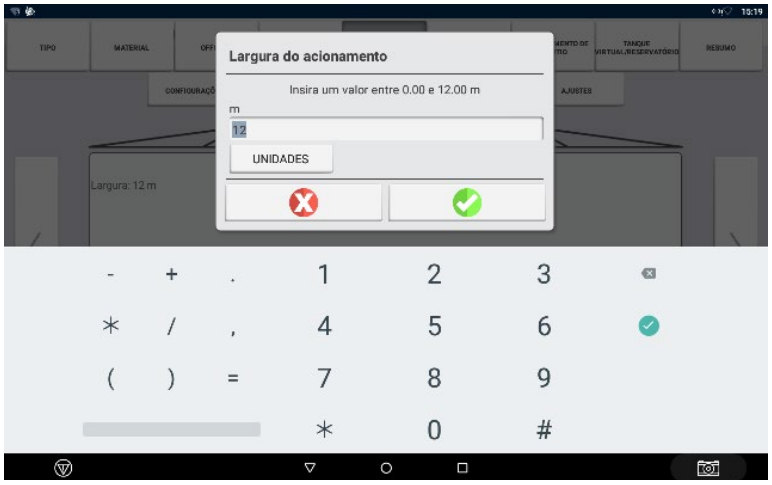
SCREEN 30

SCREEN 31



In the Width field, click inside Drive 1.

SCREEN 32



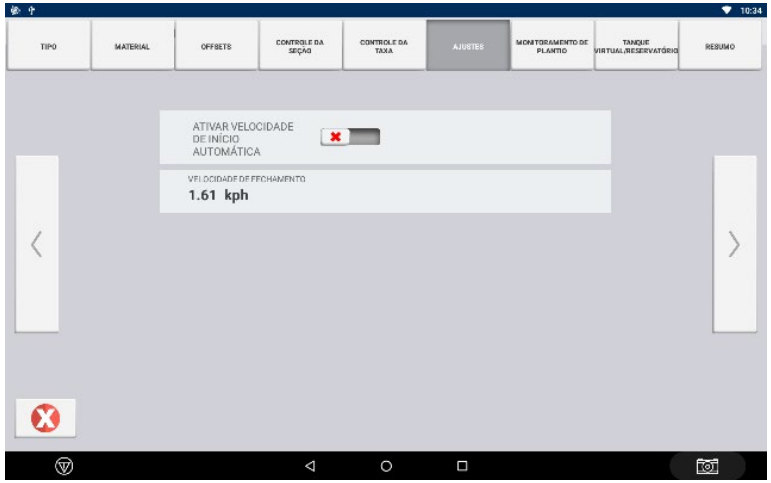
Example: Product application width = 12m. * Value will vary from according to the product to be applied.

Trimble

System configurations GFX-750™ - Part X

SCREEN 33

SCREEN 34



SCREEN 35

SCREEN 36

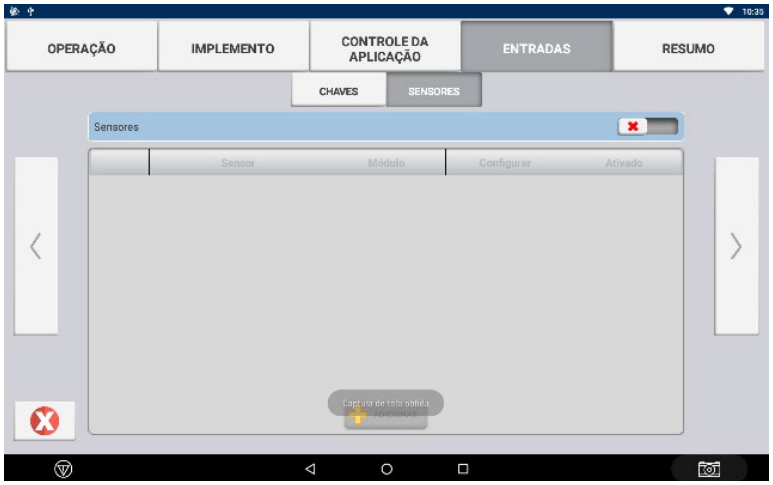
Trimble

• System configurations GFX-750™ - Part XI

SCREEN 37

SCREEN 38

SCREEN 39

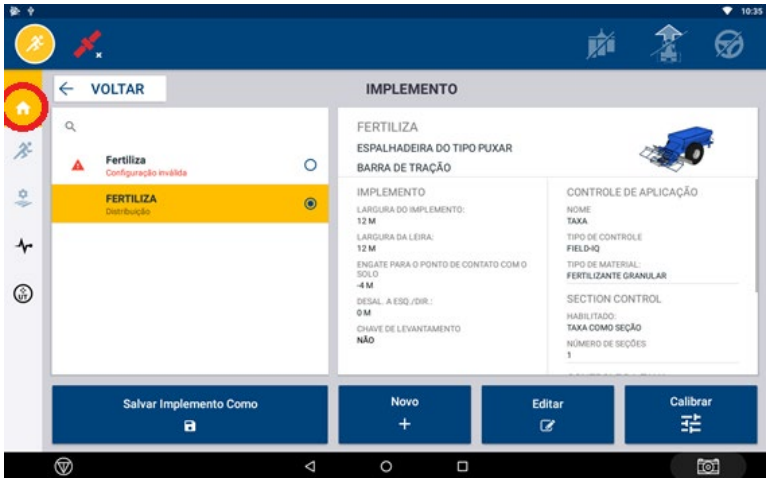


SCREEN 40

▪ Trimble

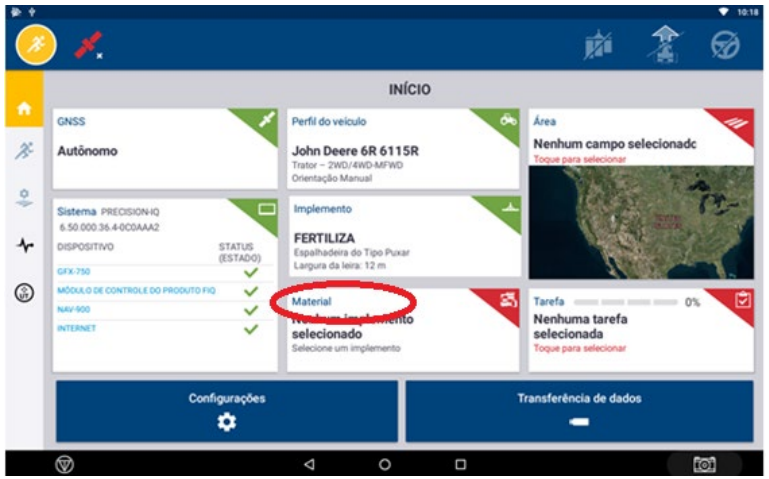
• System configurations GFX-750™ - Part XII

SCREEN 41



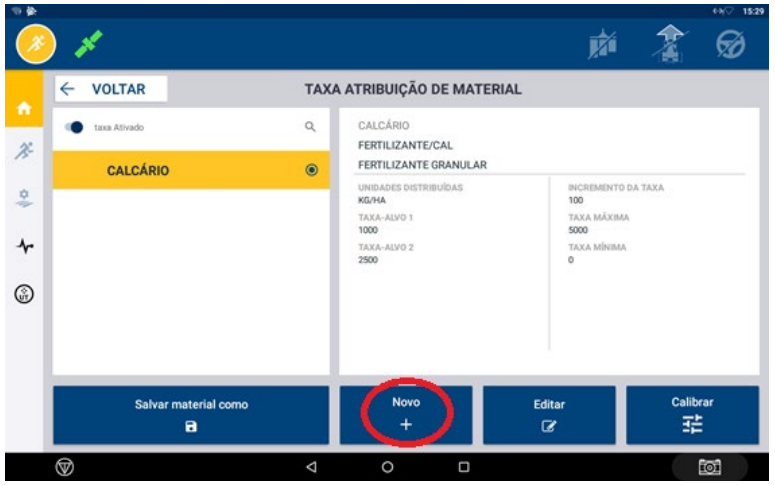
Return to home page.

SCREEN 42



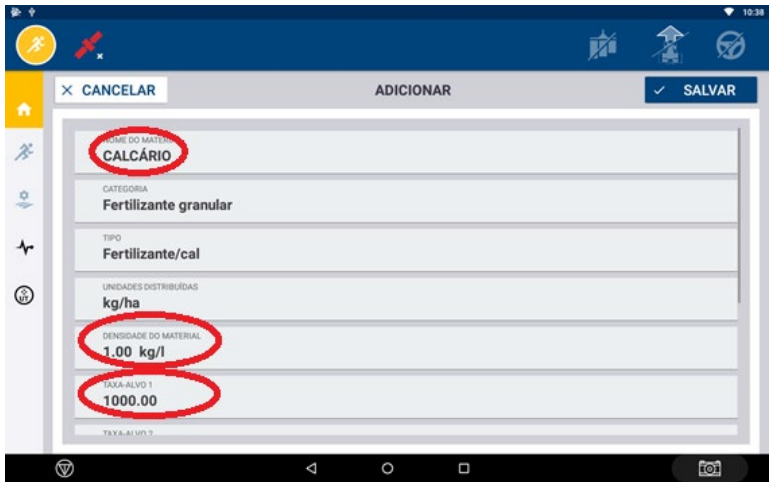
Select material.

SCREEN 43



Select New.

SCREEN 44



Items in red are only examples and will vary according to the material to be applied, while the others are fixed values that must be inserted.

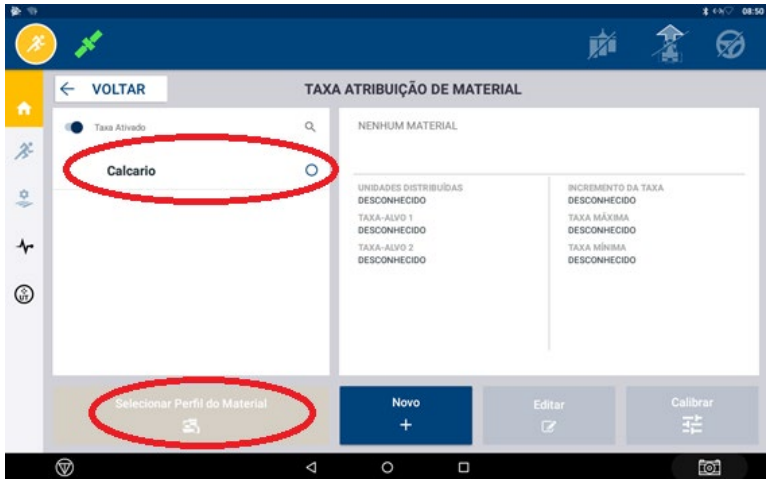
▪ Trimble

• System configurations GFX-750™ - Part XIII

SCREEN 45

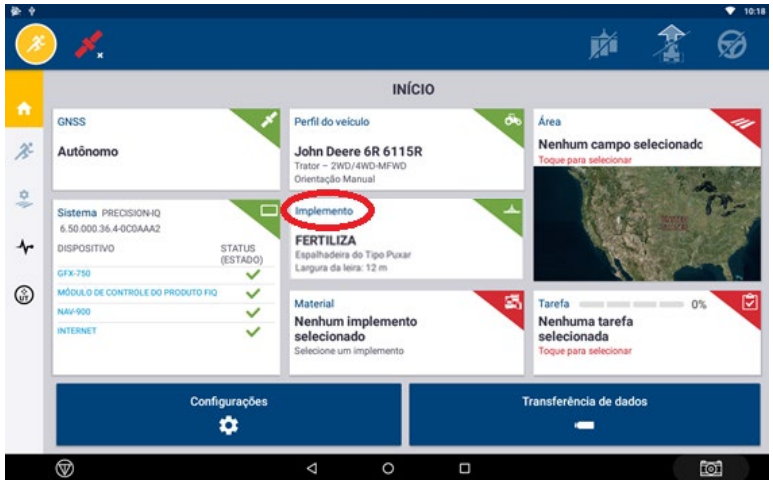
The above values are examples and will vary according to the material to be applied. Select save.

SCREEN 46



Mark the created material and click Select material profile.

SCREEN 47



On the home screen, open the implement tab.

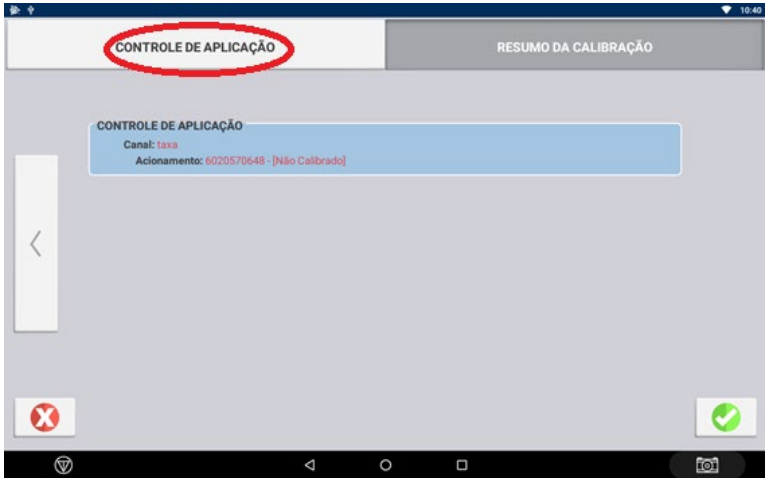
▪ Trimble

• Calibration environment GFX-750™ - Part I

SCREEN 1

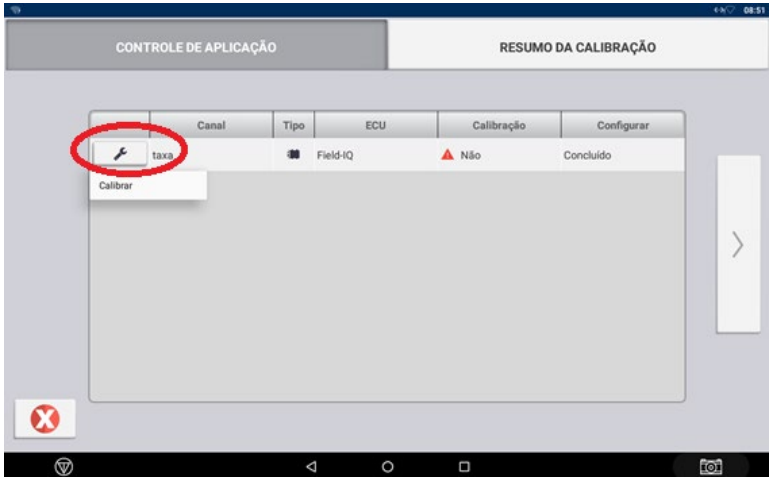
On the Implement tab, select Calibrate.

SCREEN 2



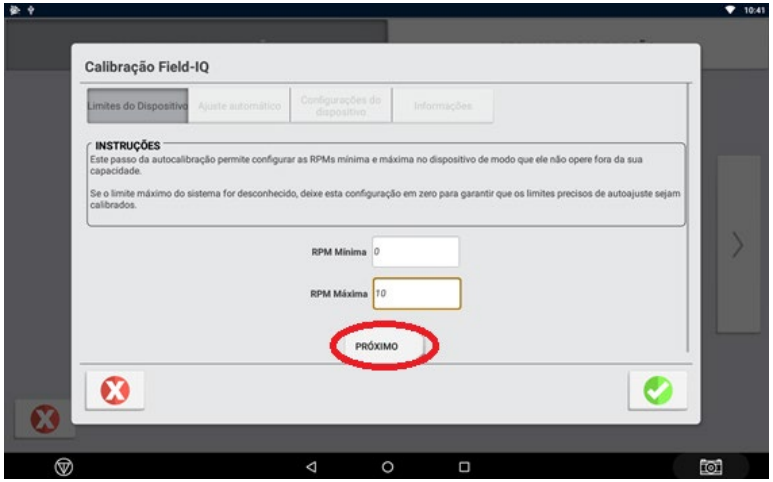
Select application control.

SCREEN 3



Select the red icon and then calibrate.

SCREEN 4

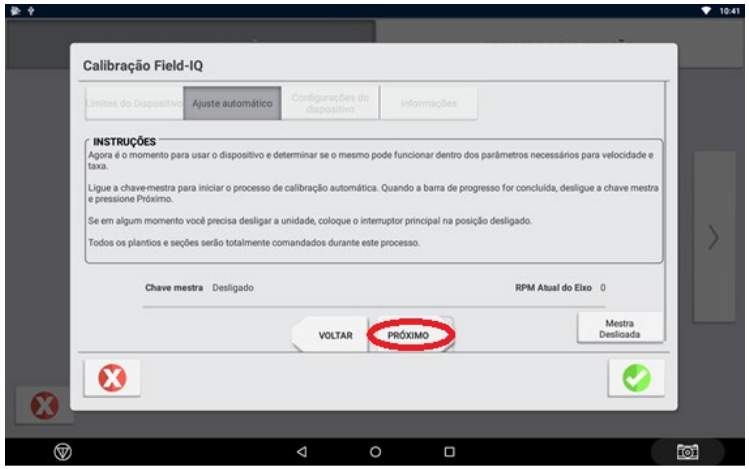


Minimum RPM values = 0 and Maximum RPM = 10 are always fixed values.
After entering the values, select Next.

▪ Trimble

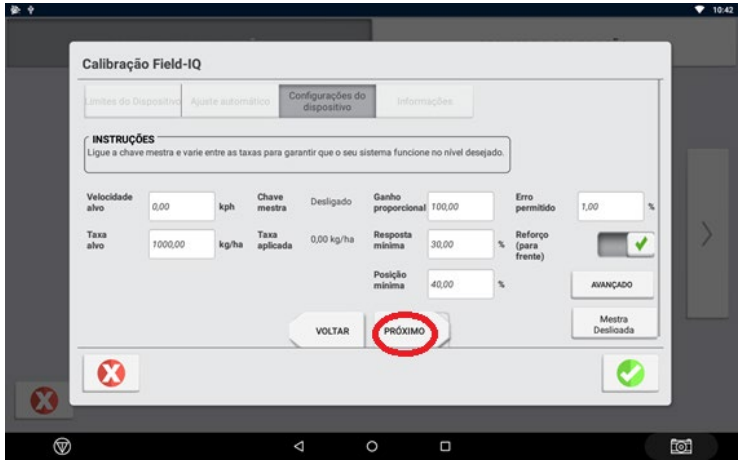
• Calibration environment GFX-750™ - Part II

SCREEN 5



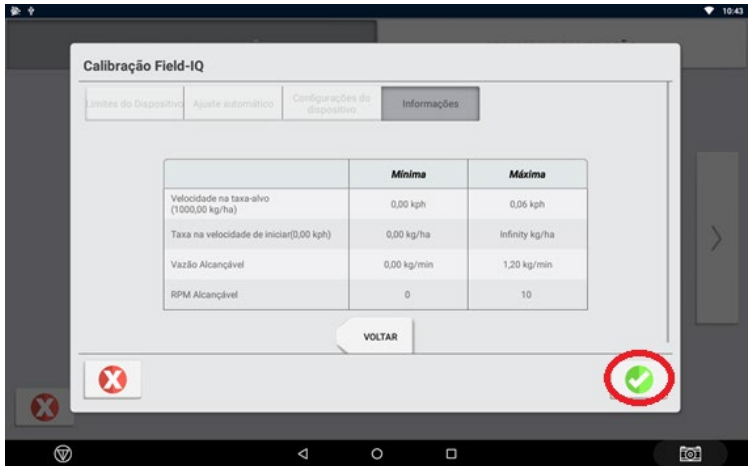
1st Step: Activate the TDP at 540 RPM
2nd Step: Turn on the button - Master key, and wait for the calibration to complete. **After finishing select Next.**

SCREEN 6



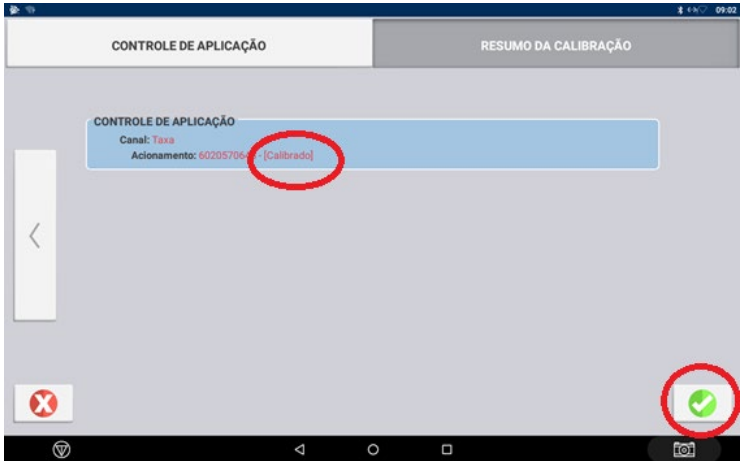
Select Next to accept the new values.

SCREEN 7



Select confirm.

SCREEN 8

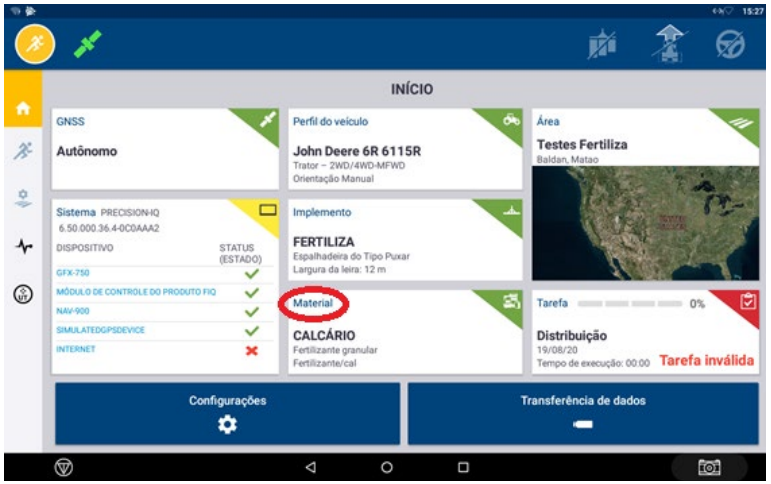


In summary of the calibration note that it now appears as "Calibrated", then confirm and return to the initial screen.

▪ Trimble

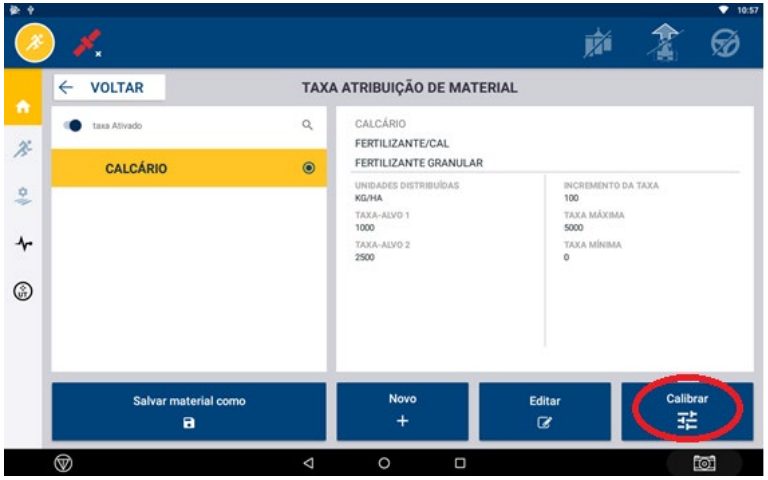
• Calibration environment GFX-750™ - Part III

SCREEN 9



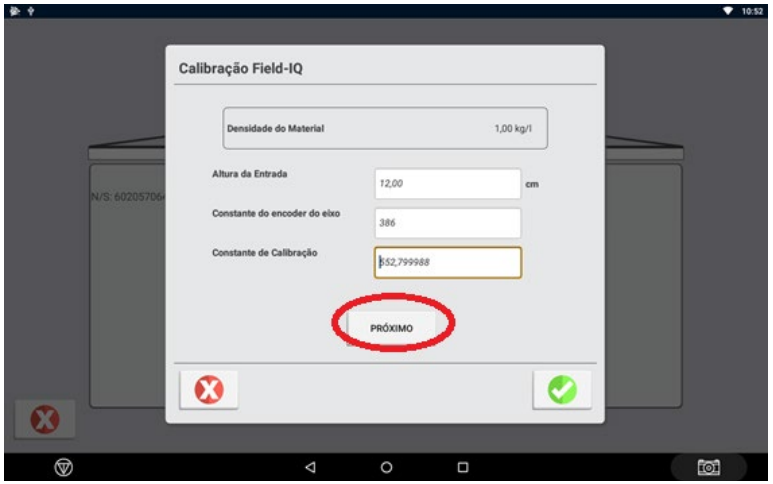
Select Material.

SCREEN 10



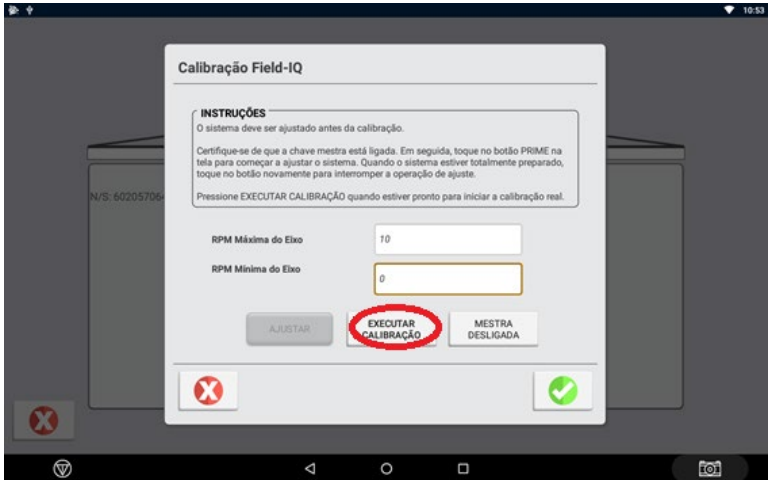
Select Calibrate.

SCREEN 11



* Important: Enter the calibration constant 552.8 (0.8*0.691*1000). Thereafter the calibration will calculate a new value.

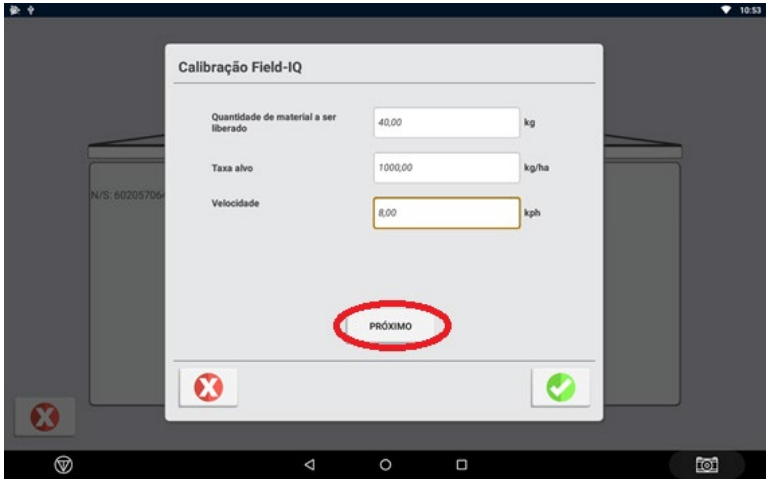
SCREEN 12



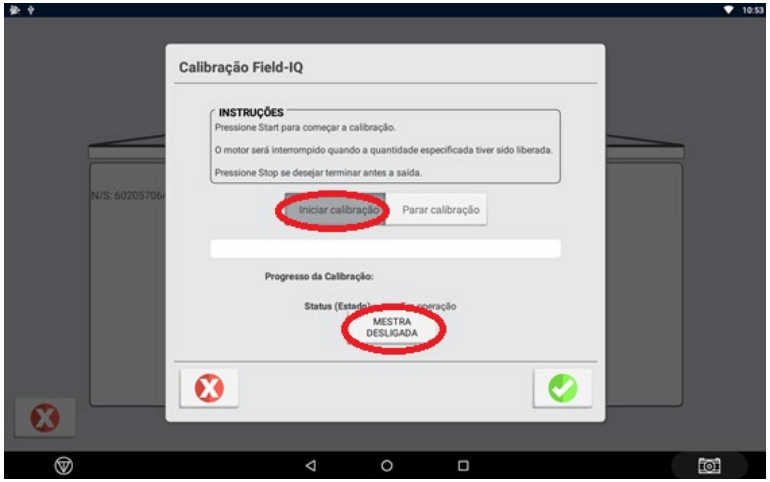
▪ Trimble

• Calibration environment GFX-750™ - Part IV

SCREEN 13

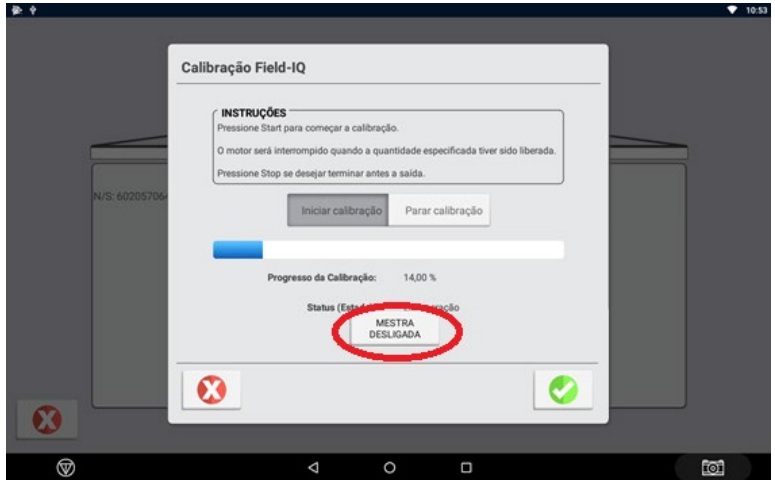


SCREEN 14



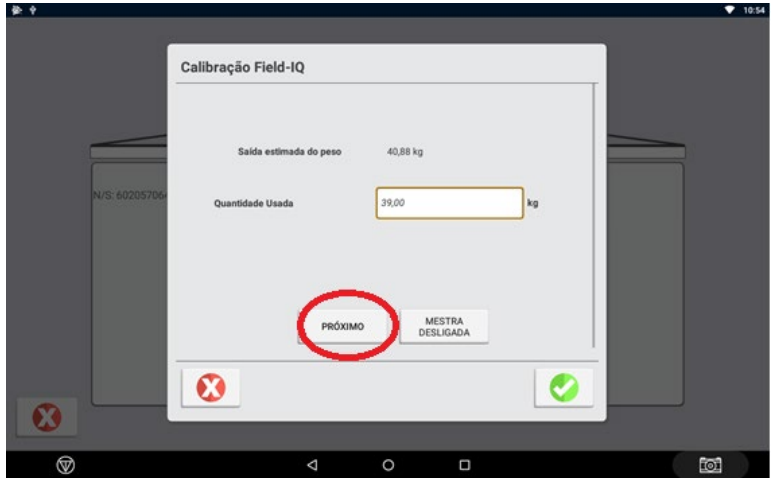
1st Step: Start the calibration, **2nd Step:** Turn on the master key.

SCREEN 15



Wait for the calibration to complete and confirm.

SCREEN 16

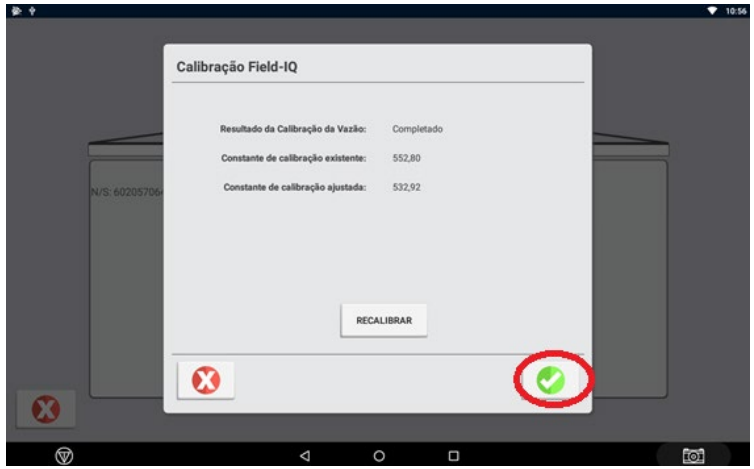


Enter the collected weight of the product and select Next.

▪ Trimble

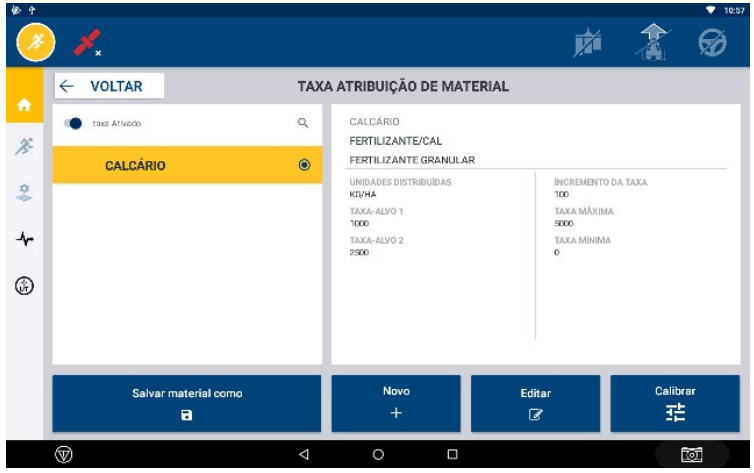
• Calibration environment GFX-750™ - Part V

SCREEN 17



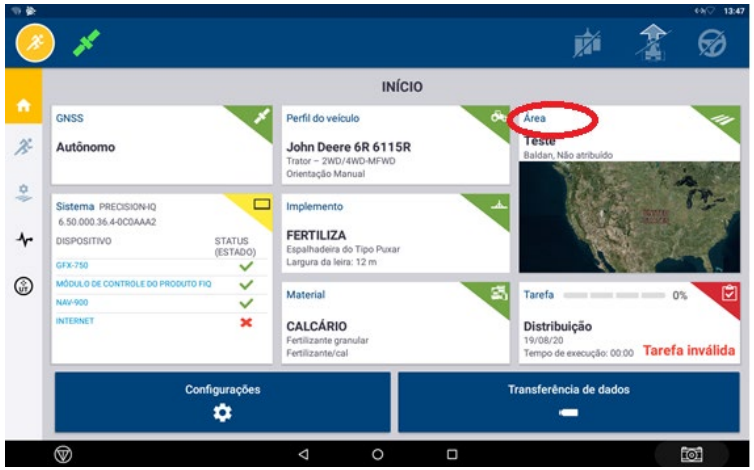
Select confirm. ***Do not press Recalibrate**, even if the system requires more calibrations! Confirm, go back to the home screen and repeat the steps again to calibrate more times.

SCREEN 18



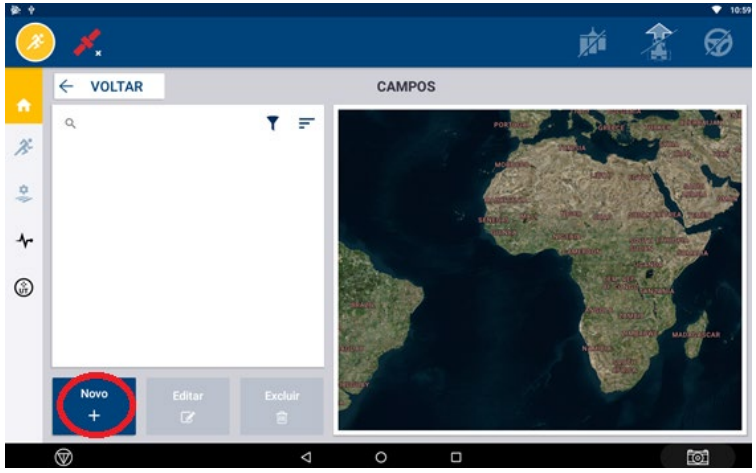
Return to the home page.

SCREEN 19



Select - Area.

SCREEN 20

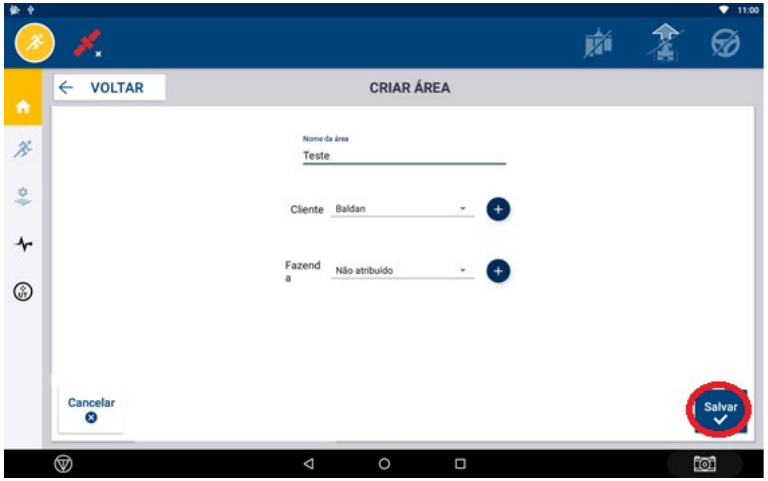


Select New.

▪ Trimble

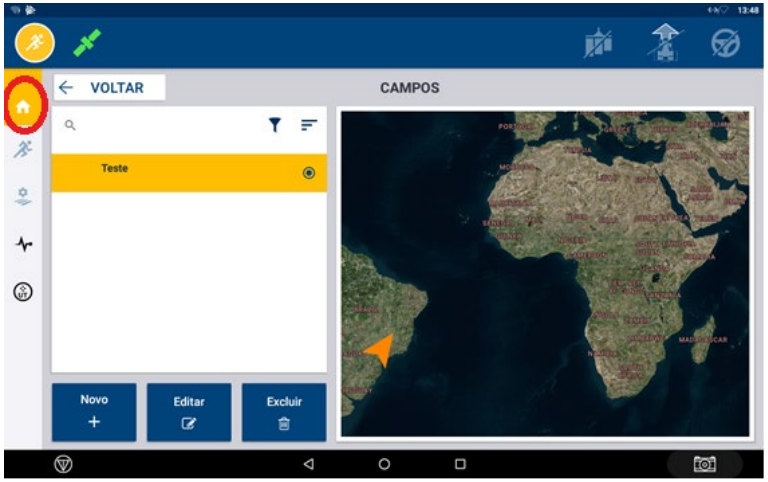
• Calibration environment GFX-750™ - Part VI

SCREEN 21



Enter the name of the area, customer and farm and select Save.

SCREEN 22

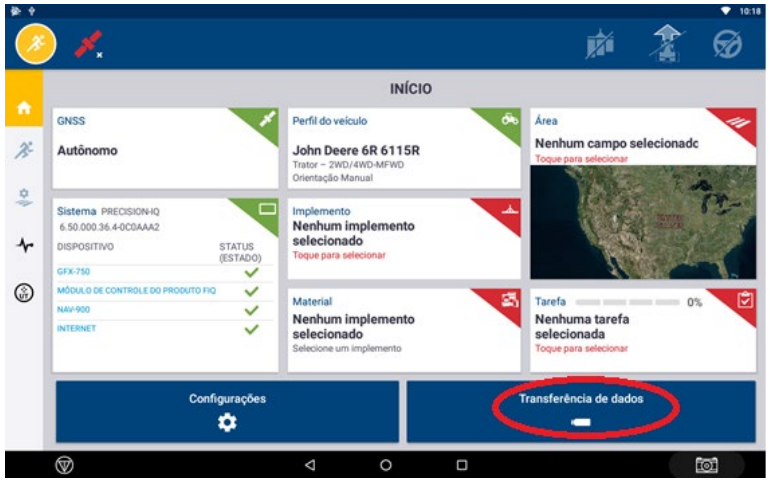


Return to the home page.

▪ Trimble

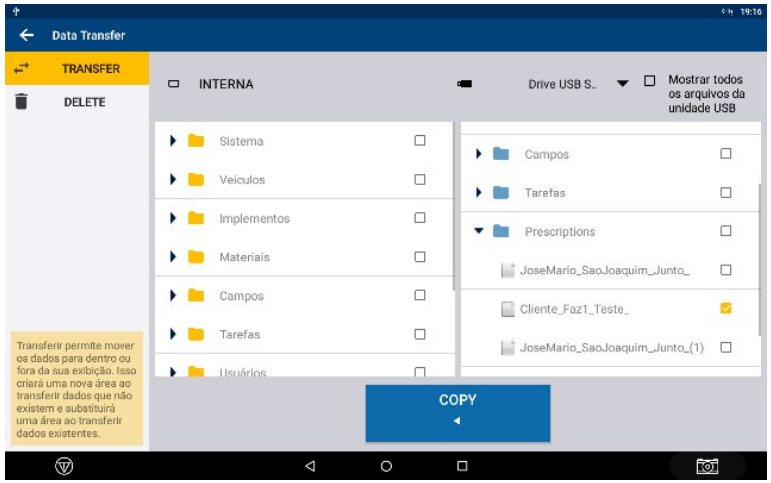
• Insert variable rate map GFX-750™ - Part I

SCREEN 1



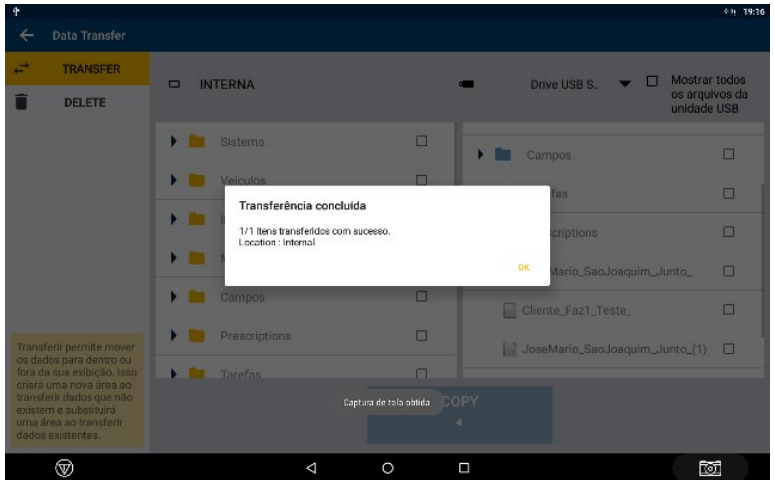
Select Data transfer.

SCREEN 2

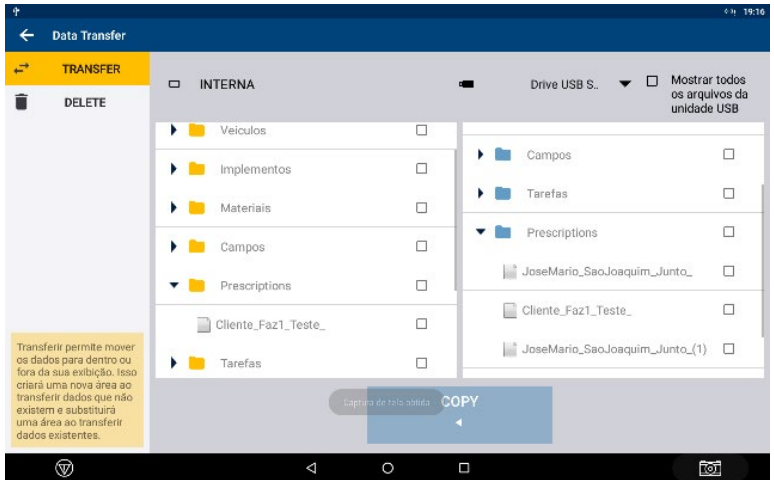


The map must be in the Prescriptions folder on the USB drive for the map to be read correctly! Select the variable rate map.

SCREEN 3



SCREEN 4

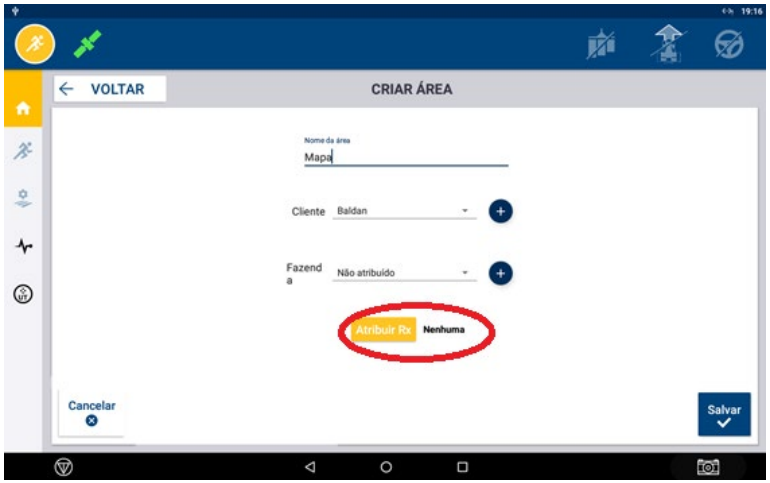


After the transfer, return to the initial screen and select the area field.

Trimble

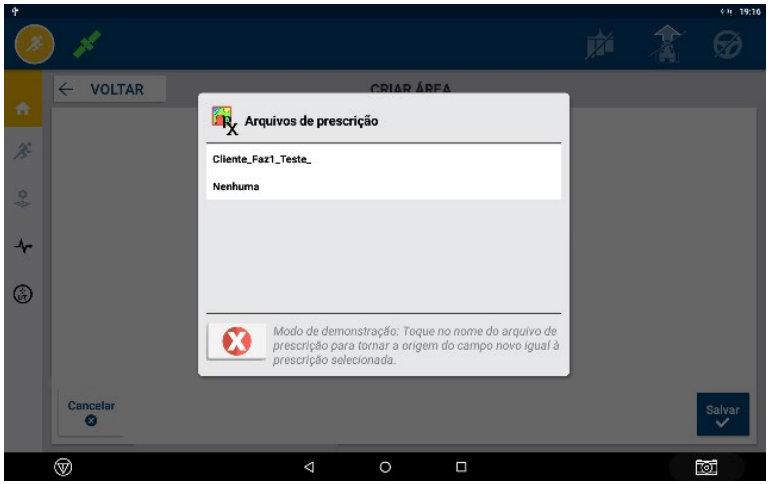
• Insert variable rate map GFX-750™ - Part II

SCREEN 5



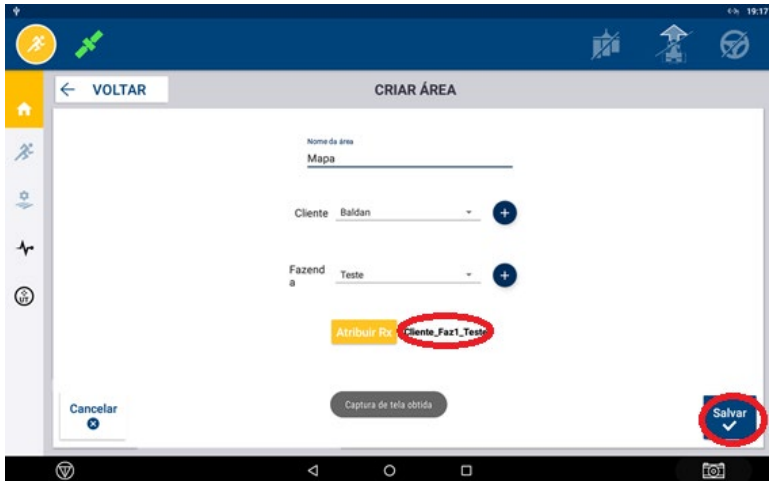
Select Assign Rx.

SCREEN 6



Select the downloaded map.

SCREEN 7



Note that the map has been loaded and select save.

SCREEN 8

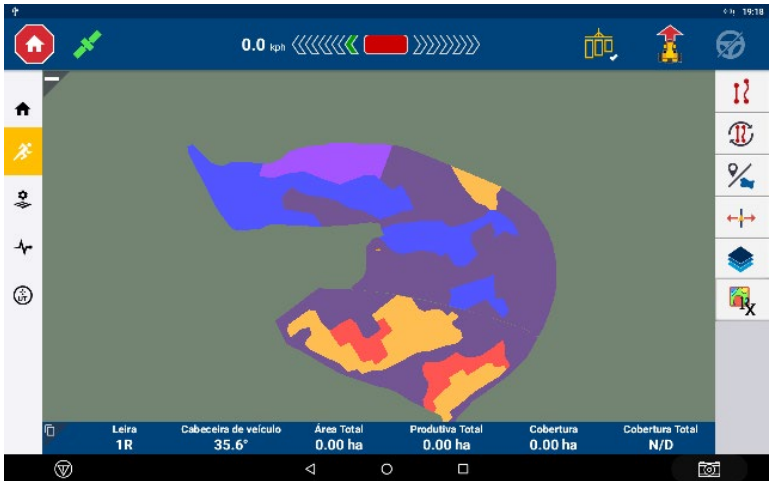
On the operation screen, select the map on the created channel.

▪ Trimble

• Insert variable rate map GFX-750™ - Part III

SCREEN 9

SCREEN 11



SCREEN 10

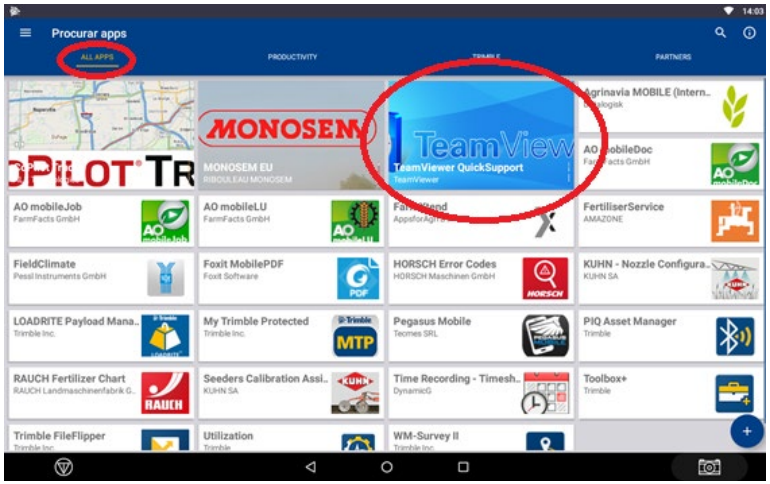
▪ Trimble

• Remote maintenance (Teamviewer APP) - Part I

SCREEN 1

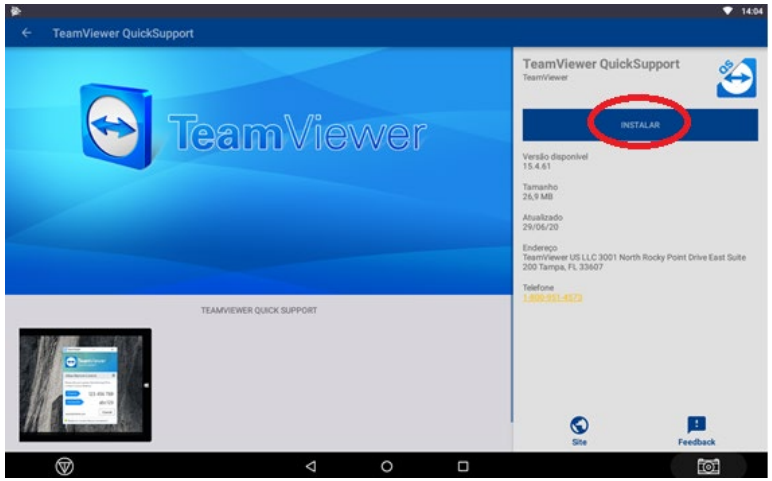
On the Android home screen, select the App Central icon.

SCREEN 2



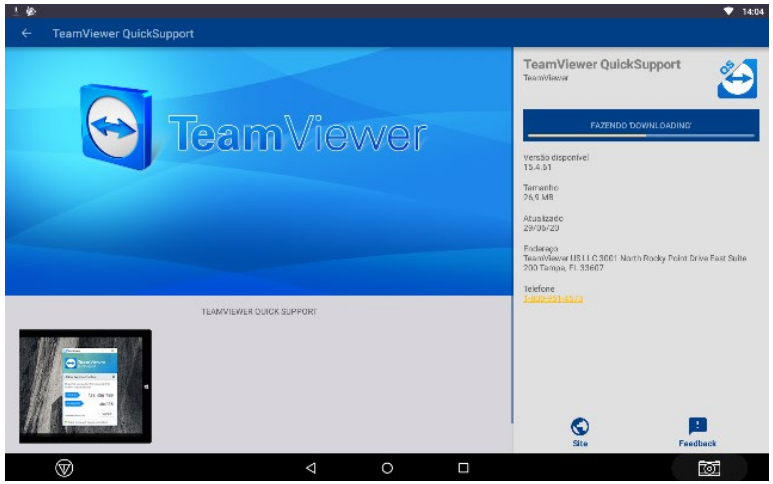
On the App Central screen, select ALL APPS and then TeamViewer.

SCREEN 3



Select Install and wait for the download. * For this, the GFX must be connected to Wi-fi.

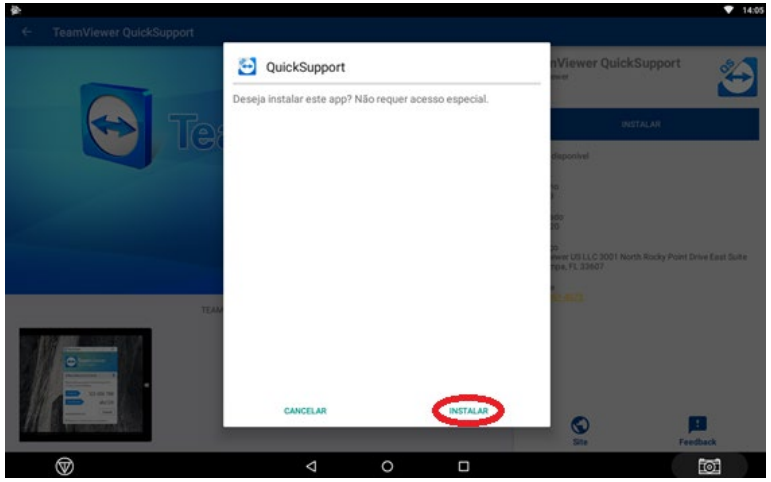
SCREEN 4



▪ Trimble

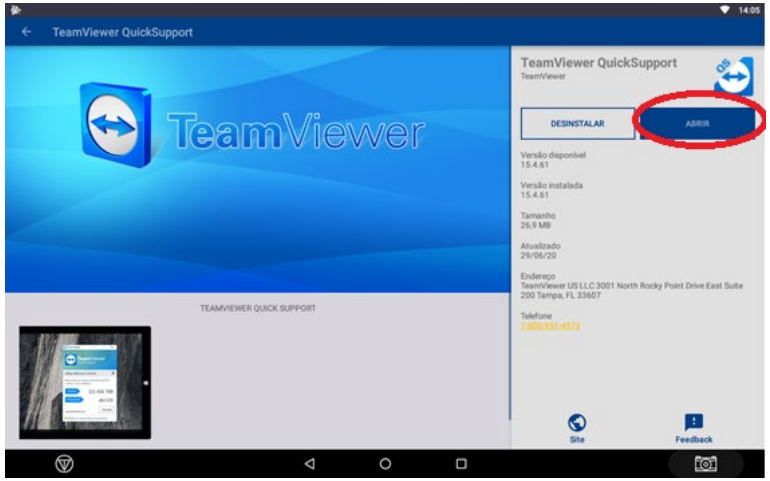
• Remote maintenance (Teamviewer APP) - Part II

SCREEN 5



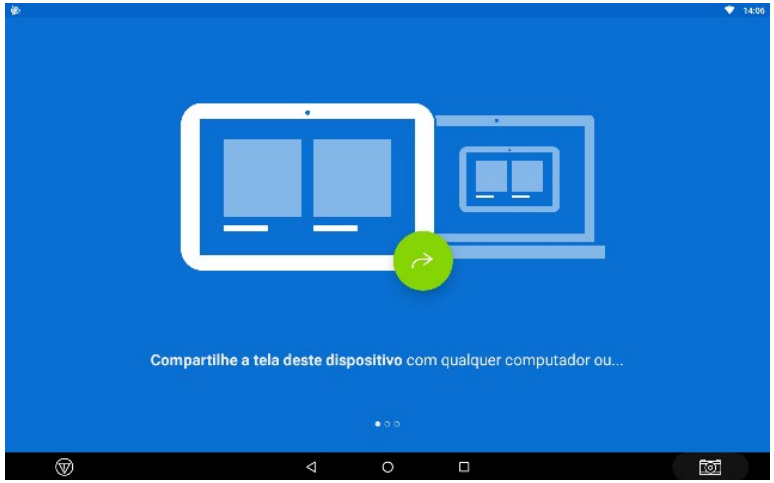
Select Install.

SCREEN 6

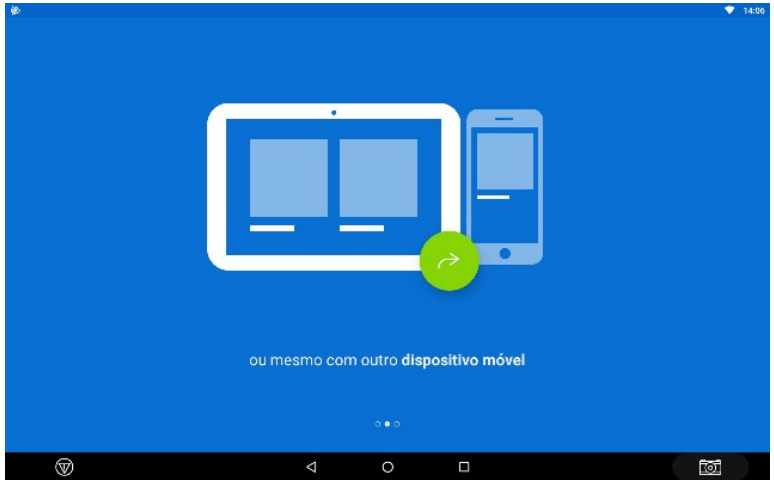


Open the APP.

SCREEN 7



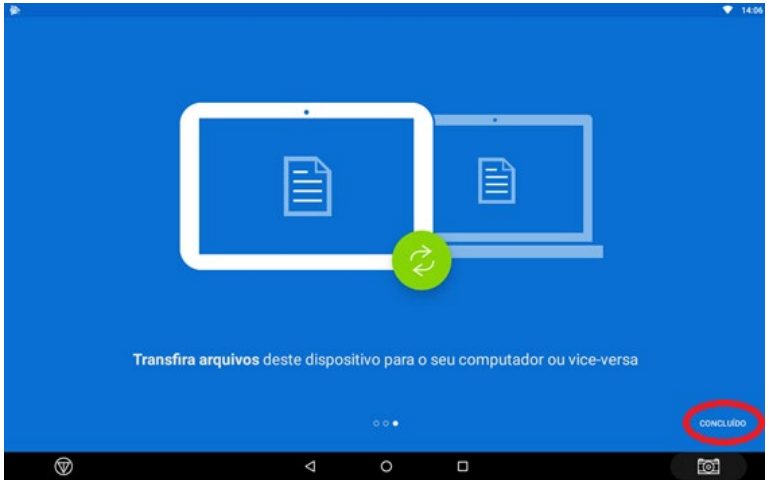
SCREEN 8



Trimble

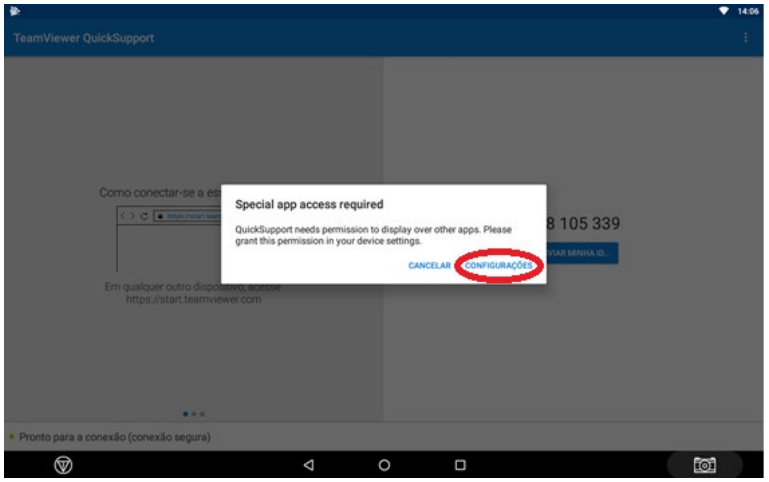
Remote maintenance (Teamviewer APP) - Part III

SCREEN 9



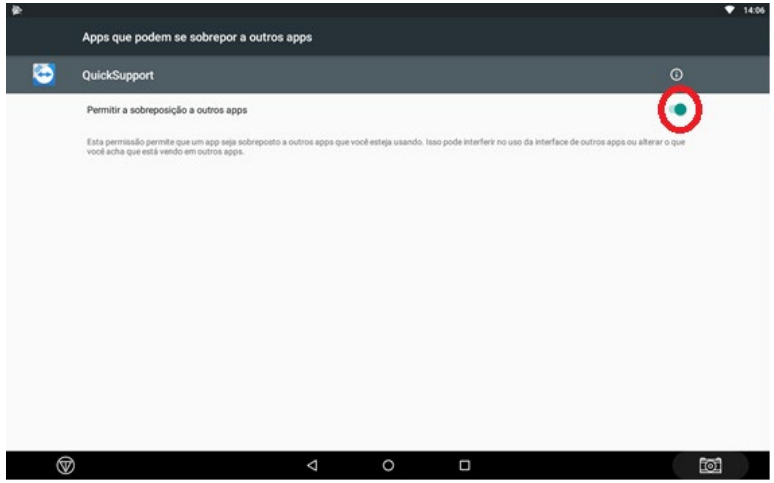
Select Done.

SCREEN 10



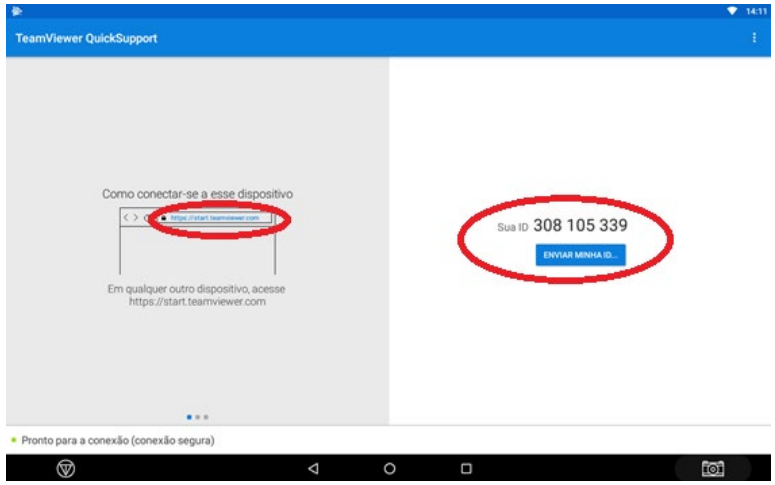
Select settings.

SCREEN 11



Enable the option Allow overlay to other apps.

SCREEN 12

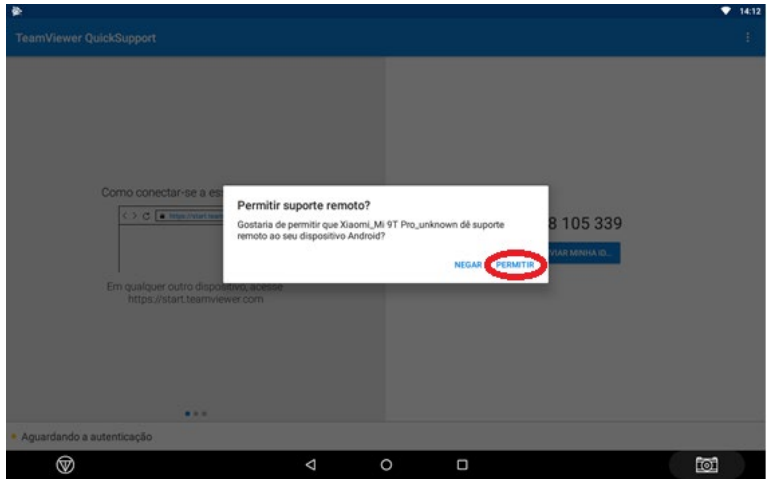


Wait for your ID to appear on the screen, when it appears, type in the APP of the remote device or on the website above.

▪ Trimble

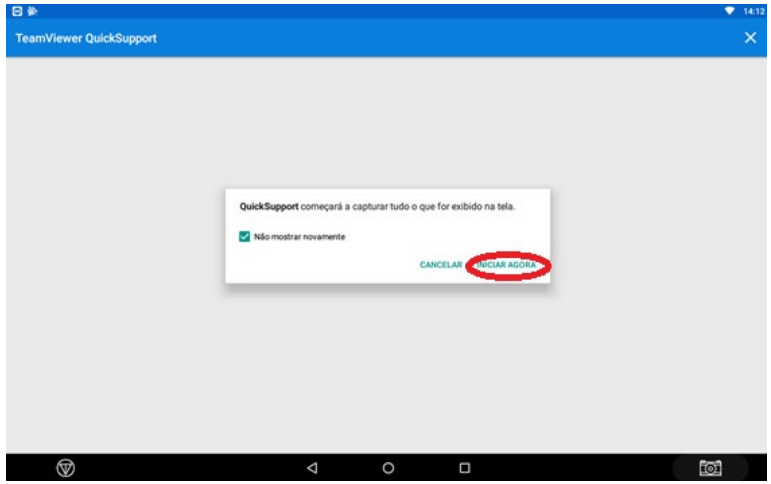
• Remote maintenance (Teamviewer APP) - Part IV

SCREEN 13



Select Allow to allow your device to access the GFX-750 screen.

SCREEN 14



Select Start now to release access.

Raven

• Settings (System Raven CR7 / Isobus) - Part I

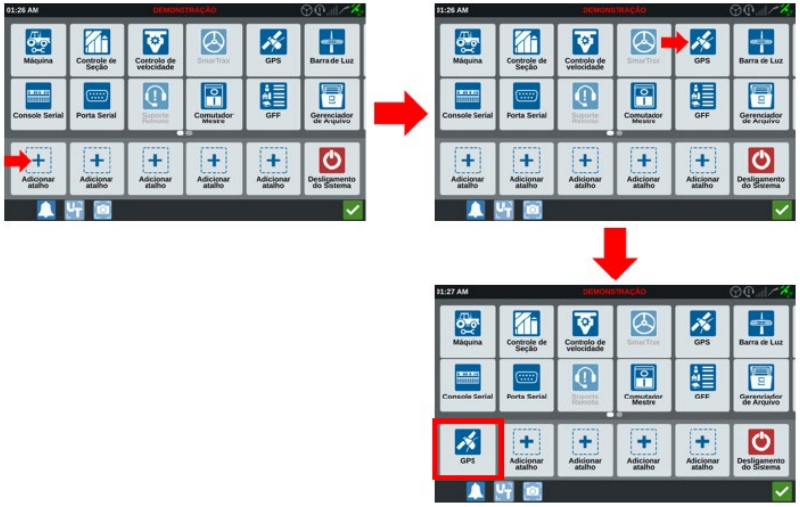
SETTINGS PAGE

Press the button on the settings page.

To view other settings, slide the page left or right.

ADD SHORTCUT

You can add shortcuts to the most commonly used settings. Select one of the "Add Shortcut" buttons and then select the setting you want to assign.



REMOVE SHORTCUT

You can remove a shortcut by selecting it and then pressing the small button  .

Raven

• Settings (System Raven CR7 / Isobus) - Part II

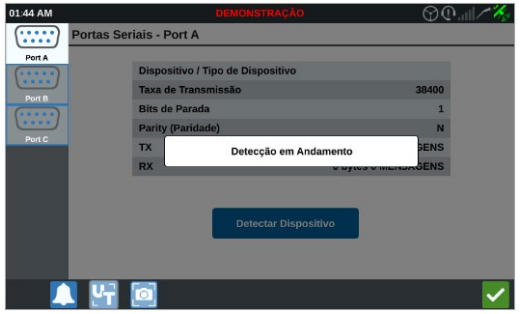
CONFIGURATION ORDER

This is a suggested order for an initial basic setting. It is important that these items are set up before operation. Your CR7 will guide you through some of these settings on the first system boot. Please check the set-up items and set up the ones that are still necessary.

1. SERIAL PORT

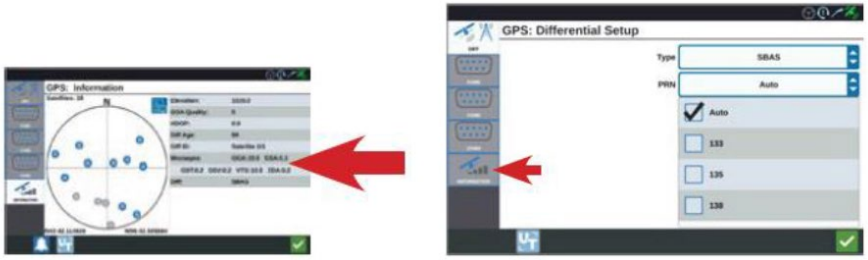
Your CR7 will automatically detect your 500S™ or 600S™ Raven antenna. If GPS is not detected, you can choose PORT A and press the "Detect Device" button. After detection, your GPS device will be listed in the Devices section.

If your device is still not detected, check for correct voltage. The receiver must also be connected to the 3-pin round connector (Specific Input for GPS Receiver Connection on CR7™) or the 9-pin COM1/DGPS connector (for cable adaptors for Raven's previous field computers.



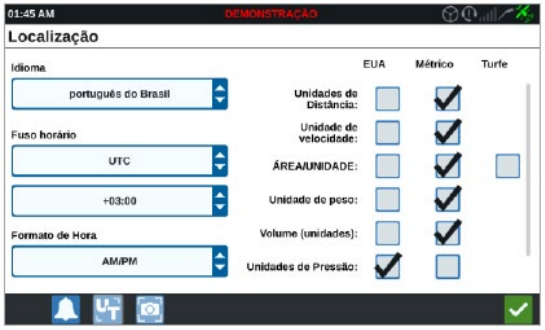
2. GPS

If your CR7 is connected to a Raven 500S™ or 600S™ antenna you can set up differential values. It is recommended to keep it in Auto unless otherwise noted. The other COM ports should not require setting up. You can also view information about satellites by pressing the information button.



3. LOCATION

You can set up Language, Time Zone, and application units in this section. You can choose any combination of units based on your operation needs/preferences.

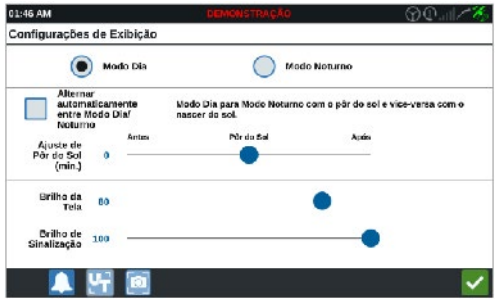


Raven

• Settings (System Raven CR7 / Isobus) - Part III

4. SCREEN

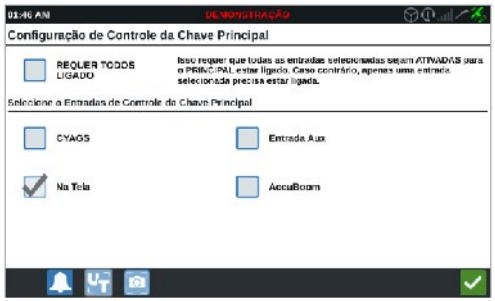
You can set up two displays for daytime or nighttime operations by customizing screen and lightbar brightness for each one. The brightness setting for the lightbar affects both the built-in lightbar and an external lightbar (if connected).



At any time, you can switch between day and night mode by returning to this page or by simply adding a specific widget (indicated at the side) to the work screen.

5. MASTER SWITCH

You can connect an external or implement switch to your CR7 tm or also use a Master Switch widget to enable covered area mapping. You can also configure how these switches will work, jointly or separately, as required.



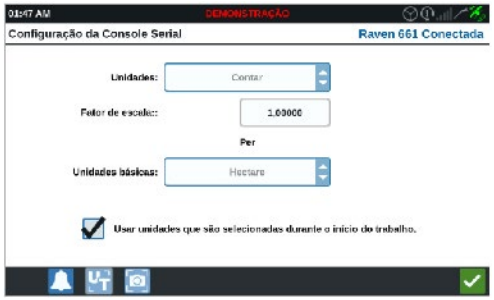
6. LIGHTBAR

You can set up the sensitivity that your lightbar red lights (CR7 tm or external) will light up. You can also revert the indication if necessary.

7. CONSOLE SERIAL

If your CR7 tm is connected to a Raven Serial Console (SCS4xx or SCS6xx) then you need to check the units, scaling factor, and base units as this information is not transferred from your serial console to the CR7 tm .

Check the CR7 tm Serial Console tab for additional information on how to set up the correct units when you performing product control.



Raven

• Settings (System Raven CR7 / Isobus) - Part IV

8. MACHINE

If you did not set up your machine with the installation wizard, you can set it up here.

Select New Setting option and continue with the indicated procedures. For more information, refer to the Machine Setting Guide on the CR7 tm .

If you took your CR7 tm to another machine, you will need to configure this new machine.

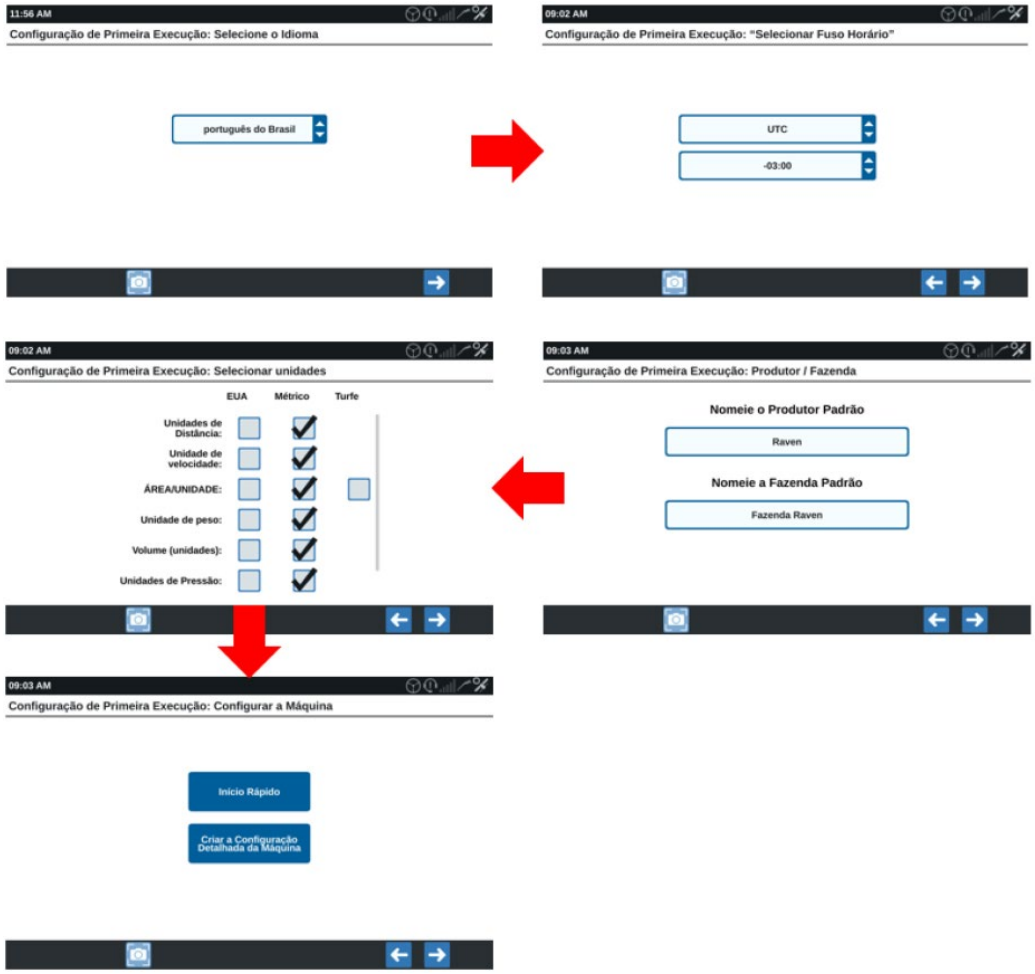
To do this, press the Reset button to create a new machine, just like you did the first time.

If you just need to update the machine measurements, select the edit button.

▪ Raven

• Setting up the machine in the CR7 (System Raven CR7 / Isobus) - Part I

FIRST START UP



QUICK GUIDE

The installation wizard will guide you through the initial configuration of the machine. But if you need to check these settings, or change them, go to the Machine icon on the settings page.

CREATING MACHINE SETTINGS

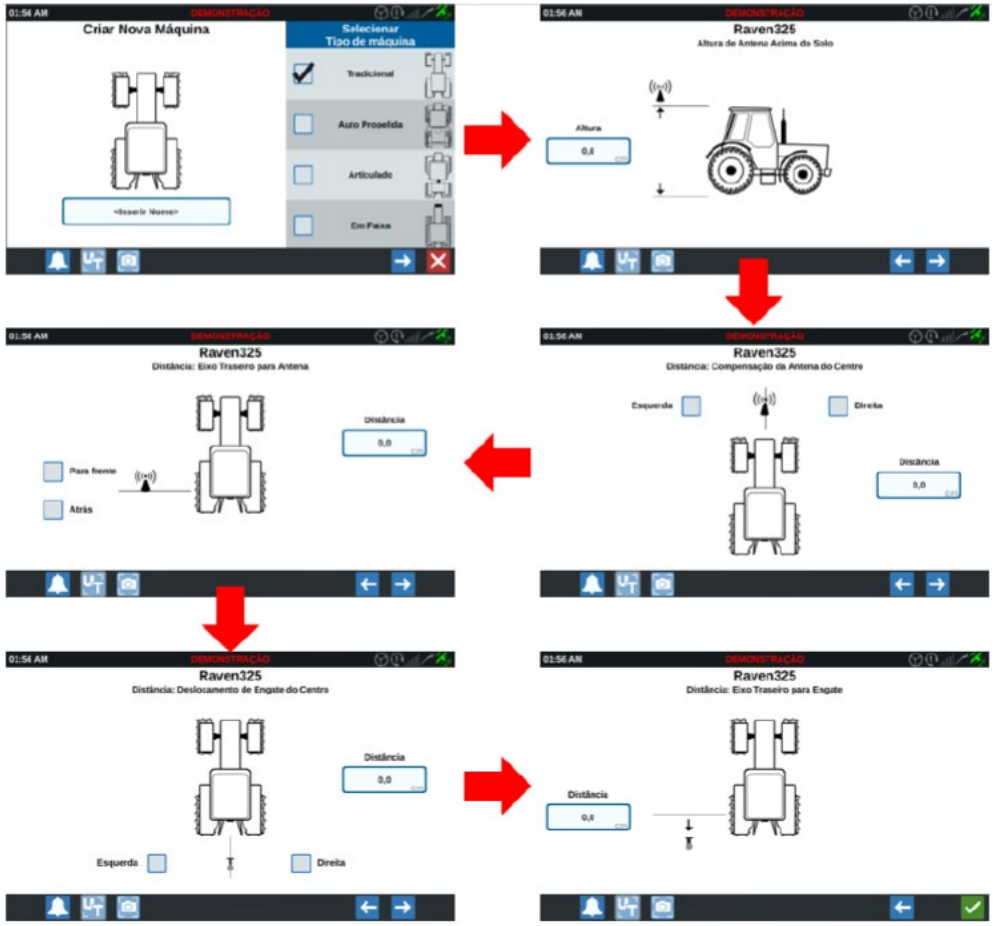
You can enter detailed measurements of your tractor or spray products the first time you perform the installation or later when you want to change the machine's measurements/settings.

The CR7™ Measurement Checklist will help you with the necessary steps to finish the installation. Select the New Configuration button and then press Create New Machine.

Raven

• Setting up the machine in the CR7 (System Raven CR7 / Isobus) - Part II

On the left side, select Machine Type and enter its name. Click the blue arrow to advance and proceed with the installation. See the example for a conventional tractor.



MOUNTED EQUIPMENT (TRACTORS/SPRAYERS)

You will need to add/mount equipment to your machine. Some examples are spray bars (for sprayers), any implement mounted to tractors or Raven Serial Consoles (Tractors and Sprayers).

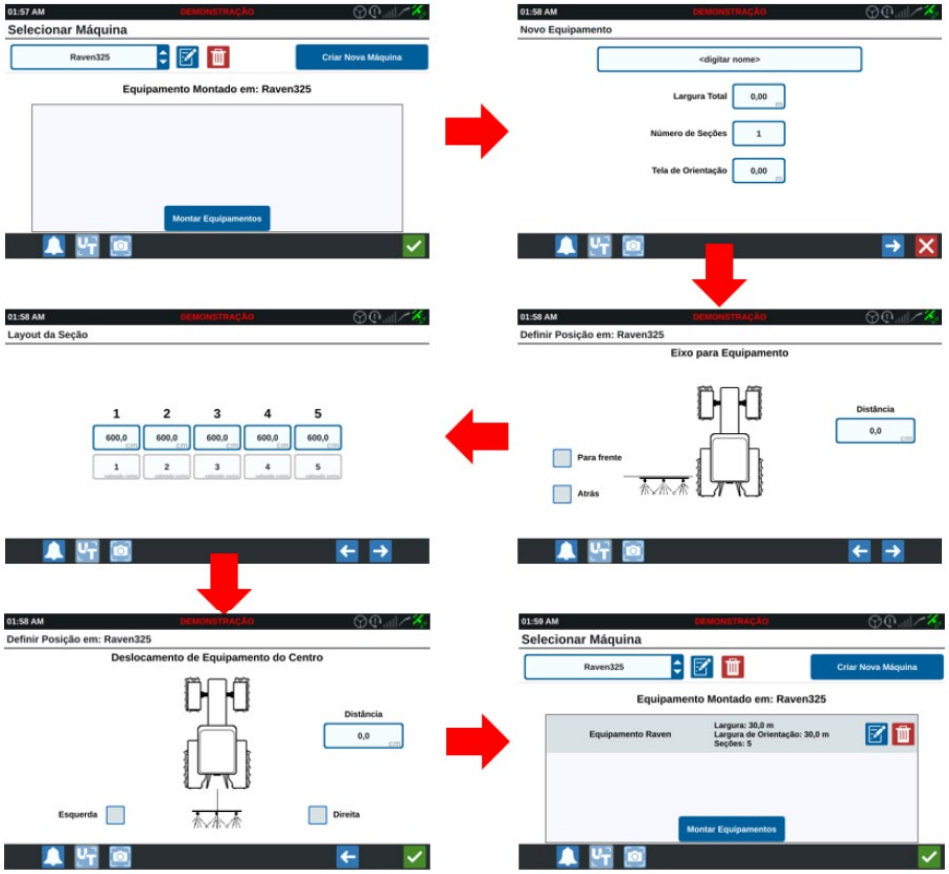
Select the Edit button and then press Mount Equipment.

▪ Raven

• Setting up the machine in the CR7 (System Raven CR7 / Isobus) - Part III

MOUNTED EQUIPMENT (TRACTORS/SPRAYERS) CONTINUED

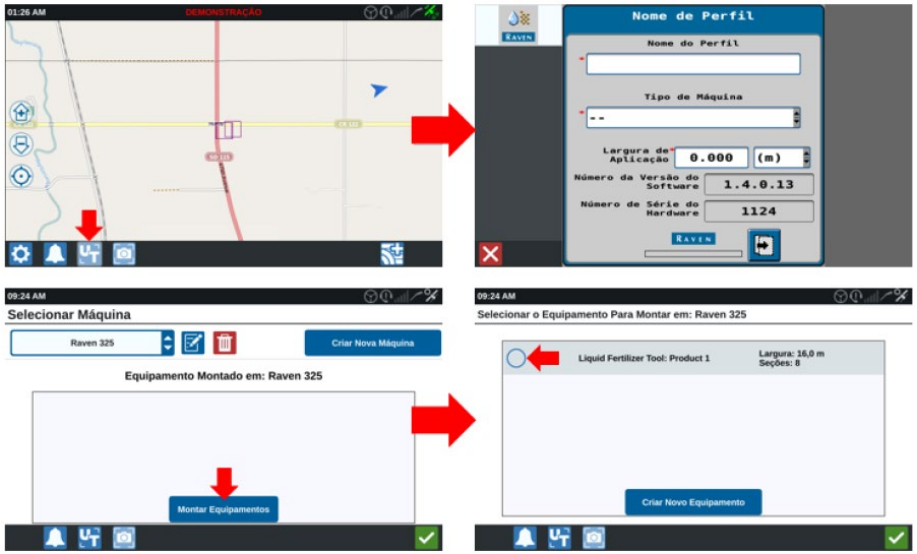
The CR7™ Measurement Checklist will help you with the necessary steps to set up your machine. Press Create New Equipment and follow the indicated set up steps.



ISO MOUNTED EQUIPMENT

If you have a Raven Rate Control Module (RCM) or Hawkeye® system first you will need to set up your ISO equipment via the Universal Terminal.

After you finish setting up through the Virtual Terminal, your equipment will be available in the implement inventory.



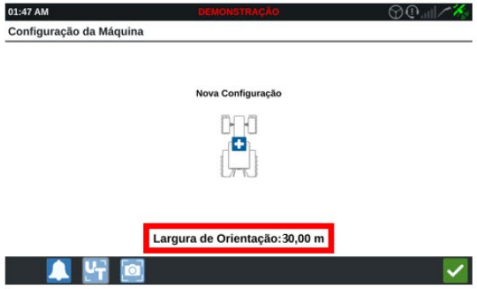
Raven

• Setting up the machine in the CR7 (System Raven CR7 / Isobus) - Part IV

CHANGING MOUNTED EQUIPMENT (TRACTORS)

You can check for mounted equipment in Orientation Width in machine settings.

No mounted equipment



A mounted equipment

To change the mounted equipment, select the Edit button on the machine and then the Delete button to uncouple and return the equipment to the inventory.

At the end, confirm the action you really want to uncouple this equipment.

Press the Mount Equipment button and then select the equipment you want to dock or create a new one by pressing Create New Equipment.

DELETING INVENTORY EQUIPMENT

If you do not own an equipment you previously set up in CR7™, you can delete it from the inventory. Initially, uncouple the equipment from the machine, making it return to the inventory (only if you have not yet replaced the machine). With the implement back to inventory, select it and click the Delete button of the equipment you want to remove.

Raven

• Setting up the machine in the CR7 (System Raven CR7 / Isobus) - Part V

CREATING A NEW MACHINE (MOVE CR7)

You can save different types of machine in which you use CR7™ and interchange the equipment mounted on them. After changing your machine CR7™, press the Edit button and then Create New Machine. You will be guided by the setup of this new machine, as shown in the section Creating Machine Settings in this guide.

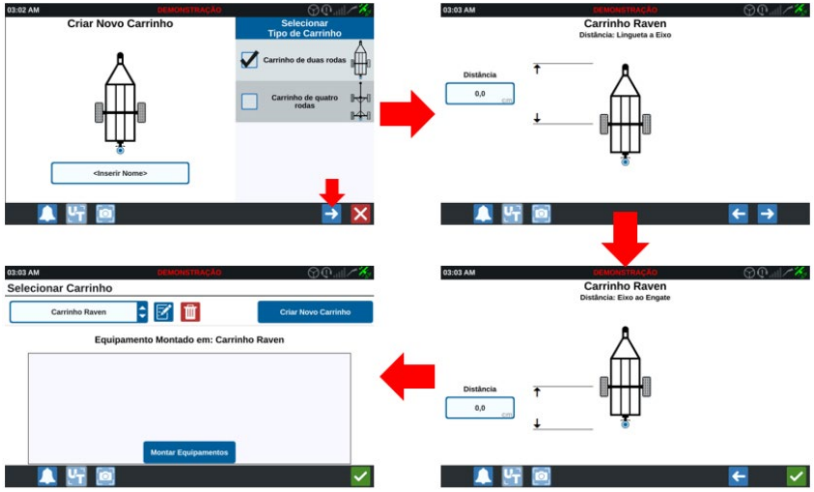
CHANGING MACHINE SETTINGS

To change the settings of the machine you are moving in your CR7™ press under the machine and then select the desired setting. You can then select the equipment that will be mounted into this other machine.

COUPLED WHEELED EQUIPMENT (TRACTORS)

If you have a **wheeled equipment** to be attached to the tractor, you need to add it to your machine settings. Select Add Equipment Design and then Create New Cart.

Choose between the options of *Two-Wheel Cart* and *Four-Wheel* Cart and name this equipment. Press Next and proceed with the setting up process as required.

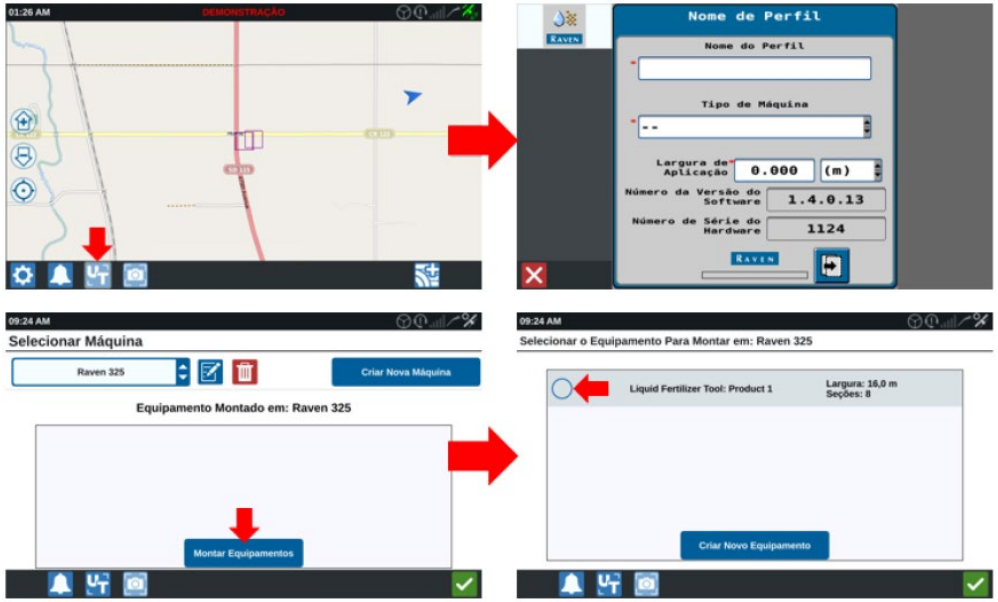


Raven

• Setting up the machine in the CR7 (System Raven CR7 / Isobus) - Part VI

COUPLED WHEELED ISO EQUIPMENT

If you have a Raven Rate Control Module (RCM) or a Hawkeye® System and it is mounted to a **wheeled equipment**, you must first set it up in the Universal Terminal area. Then, the equipment will be available in the equipment inventory.



CHANGING COUPLED WHEELED EQUIPMENT

To change coupled wheeled equipment, press under the cart and then, in the list that appears in the upper left corner, select the cart you want to couple.

If you have not yet added any cart to the inventory, press Create New Cart and configure your device. When done, be sure to couple it.

Raven

• Setting up the machine in the CR7 (System Raven CR7 / Isobus) - Part VII

UNCOUPLING WHEELED EQUIPMENT

If you want to remove all carts from your equipment inventory, or want to delete the last one you added, press the Reset button.

After resetting, you will need to reload the machine settings. Select New Setting and then select the machine that is using your CR7™.

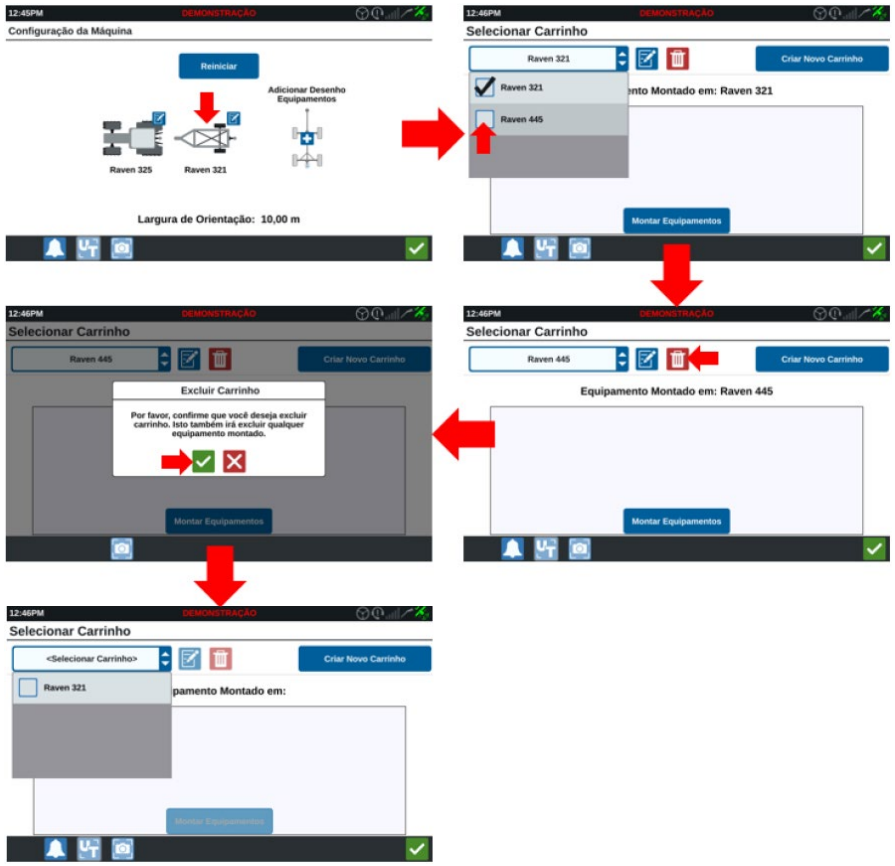
Now you can add any of your other equipment to the machine because your inventory is still available.

Raven

Setting up the machine in the CR7 (System Raven CR7 / Isobus) - Part VIII

DELETING UNCOUPLED WHEELED EQUIPMENT

If you no longer have a certain **wheel equipment**, press under the cart and then select the cart you want to remove. Press the delete button.



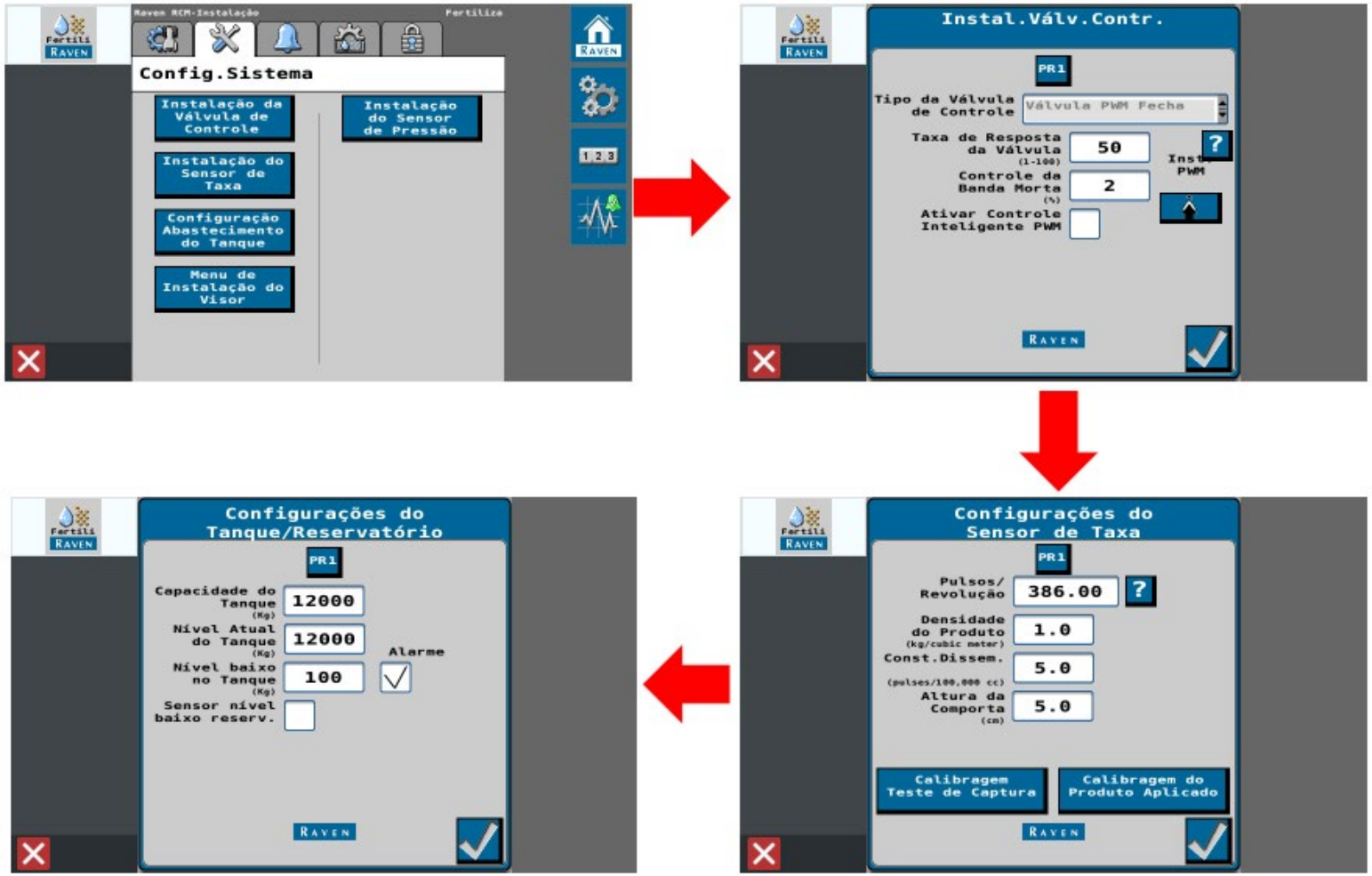
DELETE COUPLED WHEELED EQUIPMENT

If you will no longer use a certain **wheeled equipment** that is still attached to your machine, you will need to select another equipment before removing it. Press under the coupled cart and then select another cart to couple. Once the cart you want to delete is no longer coupled, follow the procedures in the section Deleting Uncoupled Wheeled Equipment.

Raven

• Setting up instructions (System Raven CR7 / Isobus)

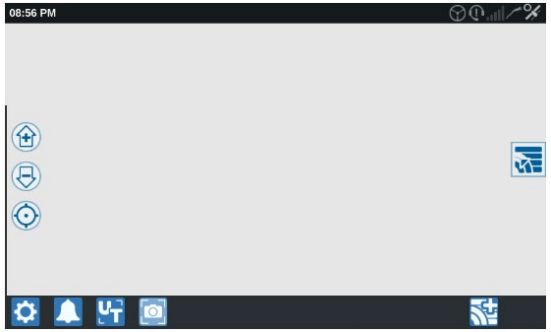
On the settings screen within the virtual terminal, set up the options Control Valve Installation, Rate Sensor Settings, and Tank Settings as shown in the images below.



Raven

• Work settings (System Raven CR7 / Isobus) - Part I

MAIN SCREEN



The main screen is gray because no street map has been loaded. See the Street Maps quick guide to see how to create and upload a map into the CR7™.

	Zoom +		Terminal Universal (UT)
	Zoom -		Novo trabalho em um novo campo
	Configurações		Novo trabalho em um campo já existente/ Retomar um trabalho
	Alarmes		

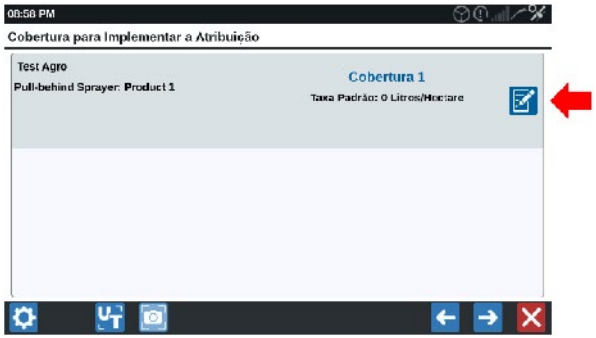
NEW WORK IN A NEW FIELD

Select the New Work button in New Field. All works in the CR7™ must be assigned to a field. Enter Producer, Farm, field name and your work name. Press the Next button.

PRODUCT CONTROL

If you are not performing product control, just press the Next button to access the work.

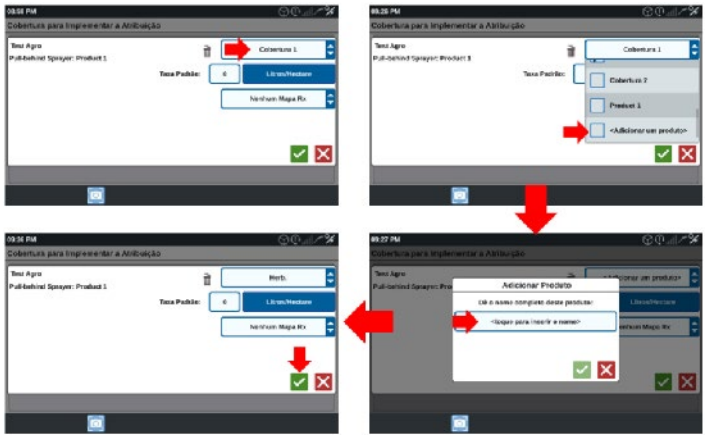
However, if you are performing product control, press the Edit button to enter details of your work.



You can enter the name of a product, a grain blend or any description by selecting the Product, as indicated in the pictures below. You can choose one of the existing products or press <Add product> to create a new one. Then, press the OK button.

Raven

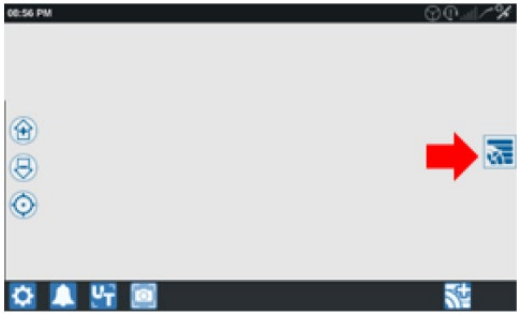
• Work settings (System Raven CR7 / Isobus) - Part II



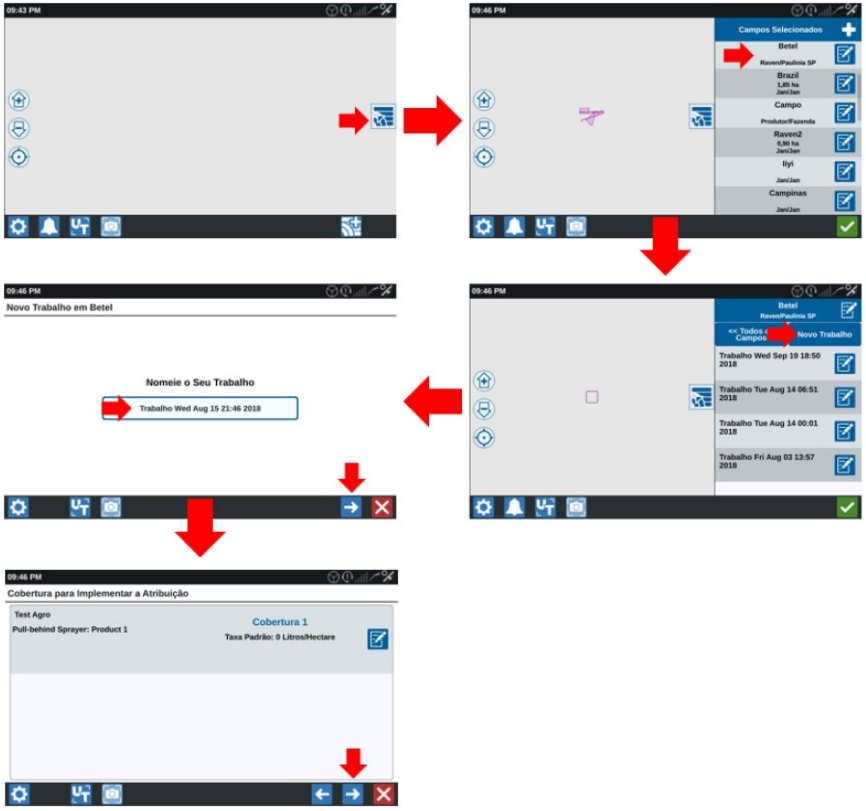
If you are performing product control with a Serial Raven Console (SCS 44x/66x), please see the CR7™ quick guide - Serial Console Settings for more information on how to configure the application units.

NEW WORK IN AN EXISTING FIELD

From the start screen of your CR7™, select the icon 



Select the field where you want to start a new work. Press New Work, name it, and then press the Next button. See the Product Control section of this quick guide for more information on this next page.

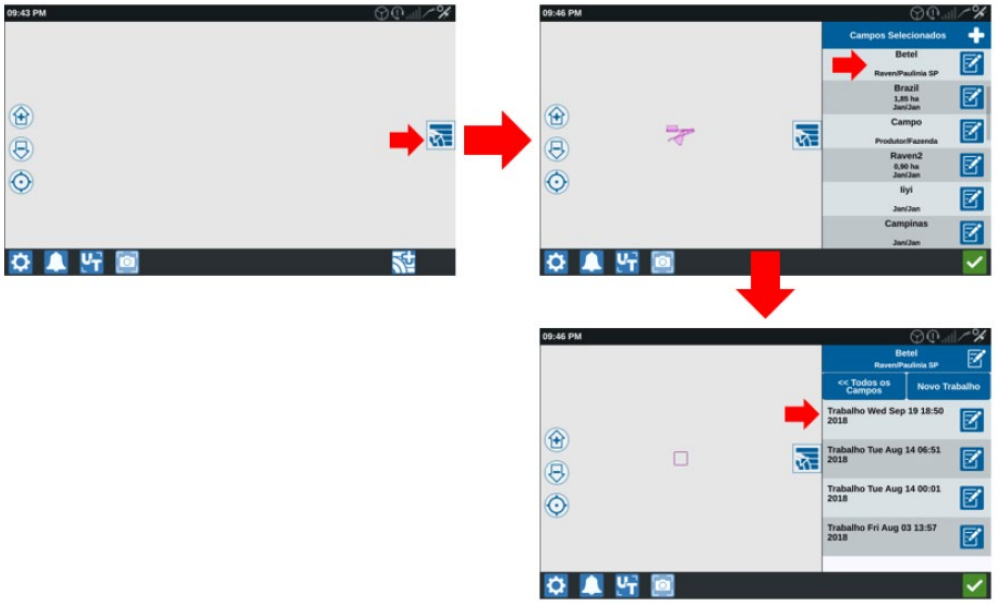


Raven

• Work settings (System Raven CR7 / Isobus) - Part III

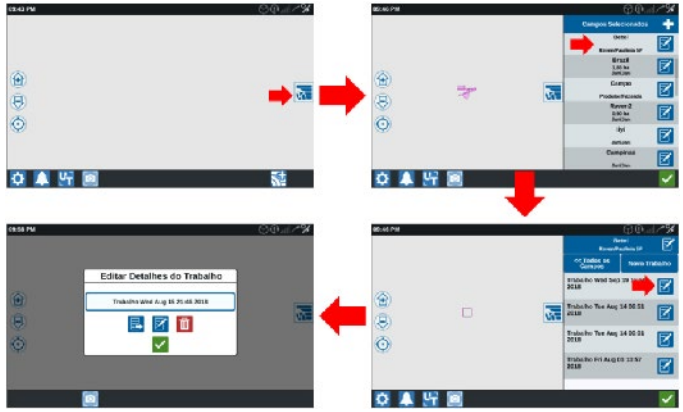
RESUME WORK IN AN EXISTING FIELD

From the start screen of your CR7™, select the icon 

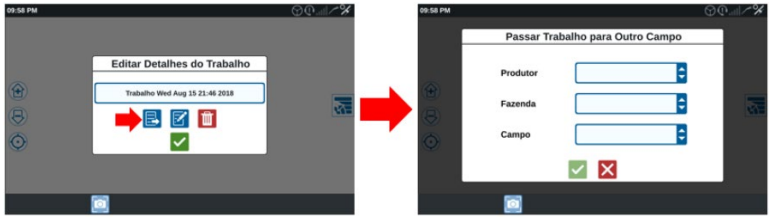


EDIT WORK DETAILS

At the start screen of your CR7™, select the icon  , choose a field, then press the Edit button of the work whose details you want to edit.



You can change Producer, Farm and Field associated with this work by pressing the symbol 

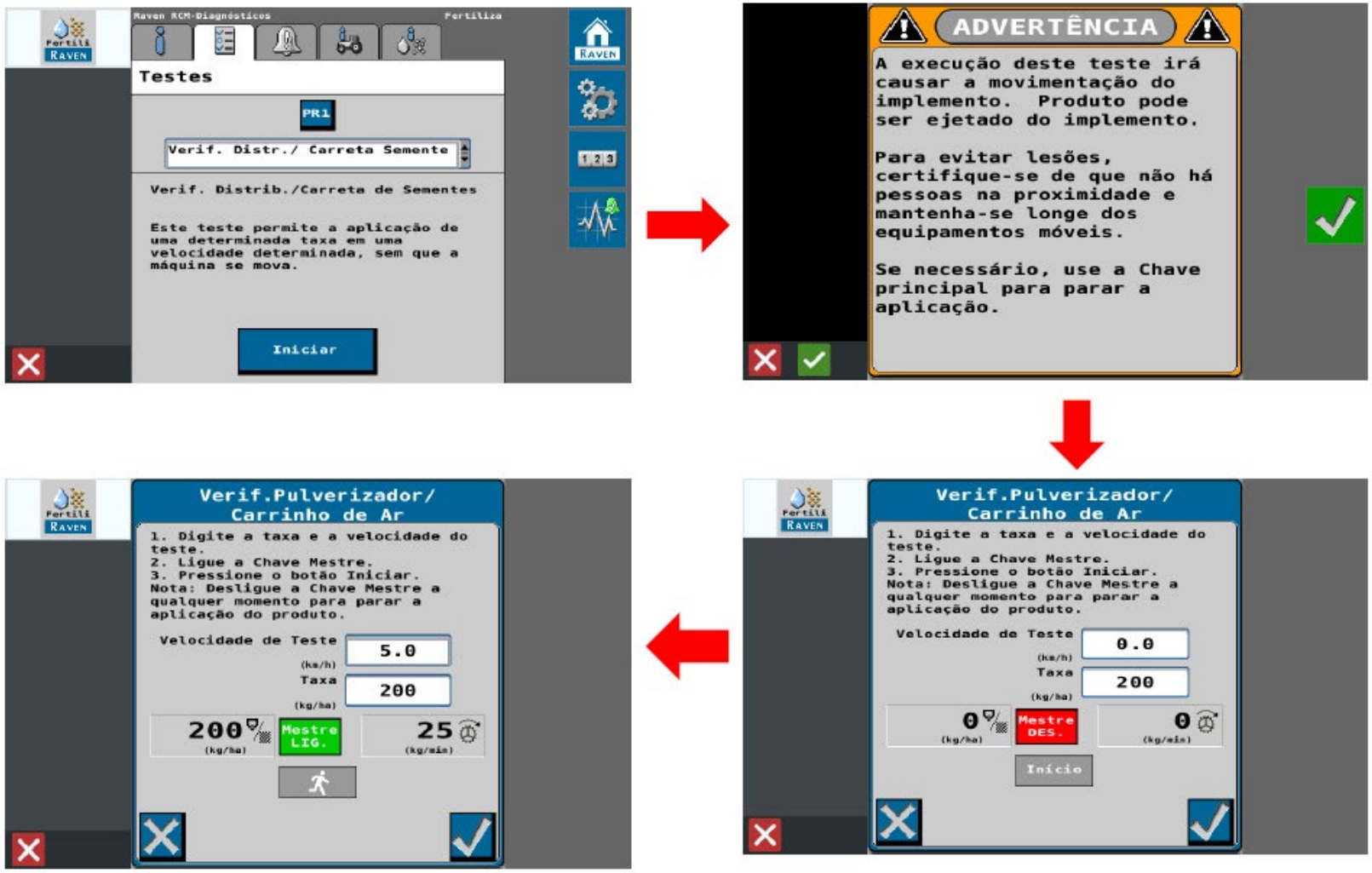


If you are performing product control, select the icon  and edit the default rate, units of measure, and add or remove prescription maps for a specific work.

▪ Raven

• Static testing (System Raven CR7 / Isobus) - Part I

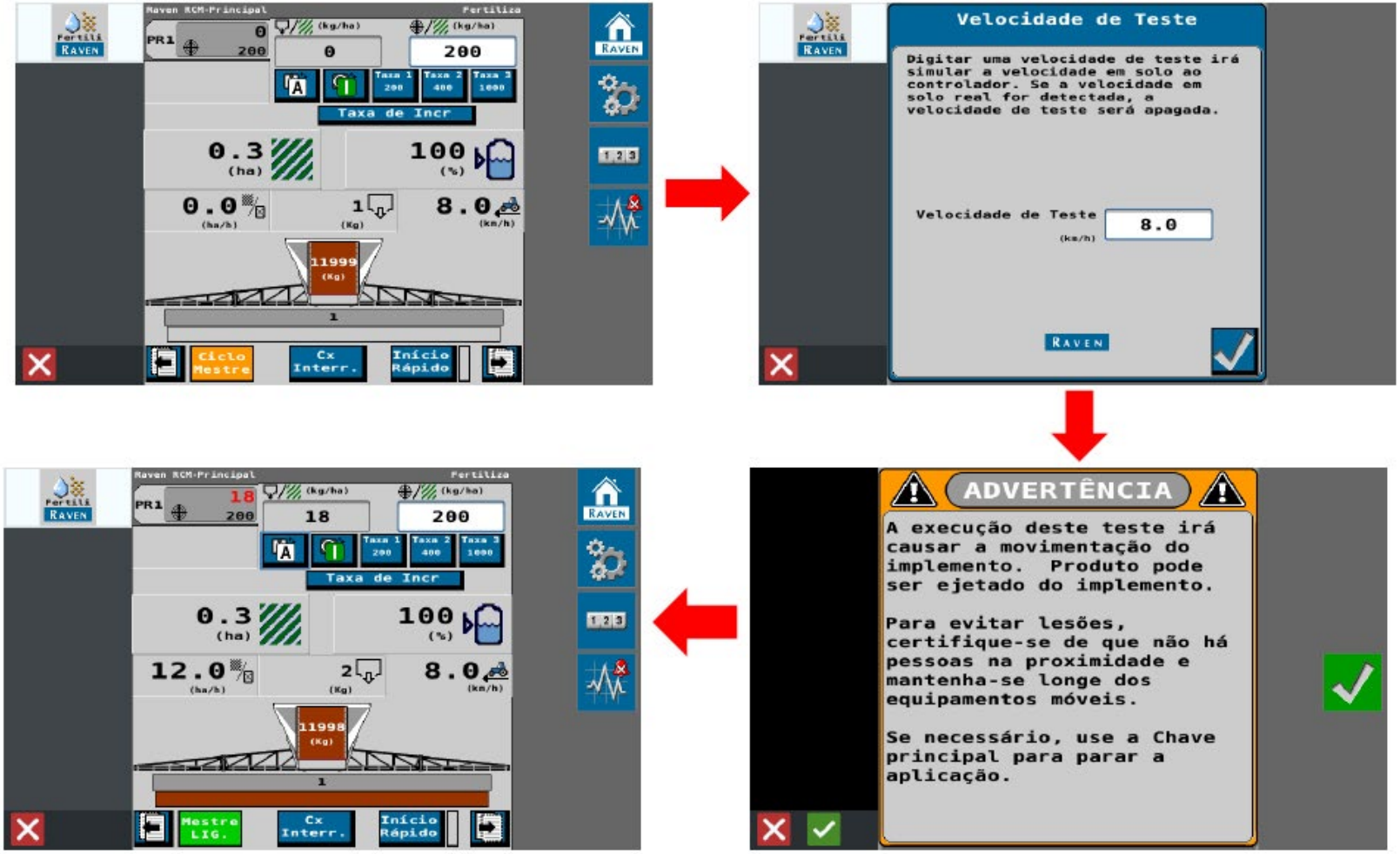
On the UT diagnostics screen, choose the Testing option. Then the check seed spreading/cart option and follow the steps below:



Raven

Static testing (System Raven CR7 / Isobus) - Part II

Another important static test to check if the entire system is working can be done on the UT work screen, so choose a simulated speed (as shown below) and ensure that there are no people in the surroundings and stay away from moving parts like dishes discs and belt.

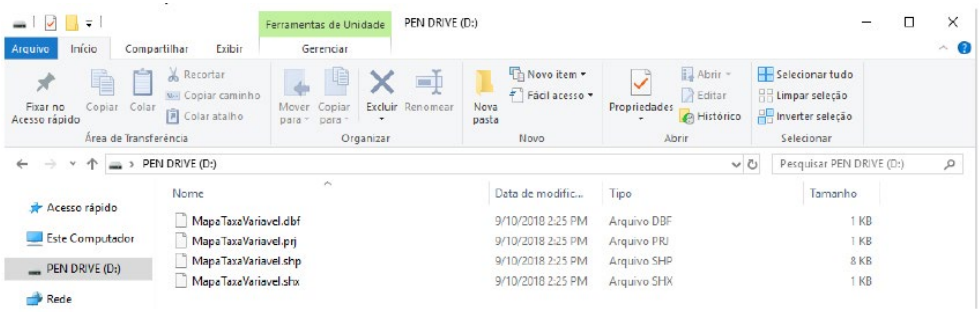


Raven

• Application at variable rate (System Raven CR7 / Isobus) - Part I

LOCATION OF PRESCRIPTION MAPS (USB)

Prescription maps (.shp, .shx, and .dbf) should be copied to the root of your thumb drive.



LOADING A PRESCRIPTION MAP

Insert your flash drive into the CR7™ and then press Manager and File on the settings page. Select the USB option as source, select the Prescriptions option, and then choose your file. Select the Copy button.

ASSIGNING A PRESCRIPTION MAP TO A WORK

When starting a work, you must provide its details. After you provide Producer, Farm, and Field details and name the work, you are directed to a page named "*Coverage to Implement Assignment*" On this screen, press the Edit button. Press under "*No RX Map*" and then select the prescription map you want to use for this work. If you are making an application with more than one product, then all of your active products will be listed. Press the Edit button to assign only the products you want for the map you have selected.

Then in the second column of options that appeared, press under the "*Select Classification Column*" option and select the Rate option. Check the details of your work, and if everything is OK select the OK button and then the Next button to start work.

Raven

• Application at variable rate (System Raven CR7 / Isobus) - Part II

ASSIGNING A PRESCRIPTION MAP TO A WORK (CONTINUED)

Your *Product Rate* widget will indicate that your rate is based on data from the prescription file you uploaded, and according to the zone on the map you are on.

LOOK-AHEAD SETTINGS IN THE PRESCRIPTION MAP

You can change the response rate when you move from one prescription zone to another. Look-Ahead scans areas in front of the machine, which you have not yet reached, but will do so soon. In this way, valve adjustment and control are carried out before the rate changes, helping to reach the rate more quickly.

On the settings page, select the Speed Control icon and then adjust the Look-Ahead option, with value in seconds.

▪ Agrosystem

• Agrosystem system - Part I

SETTING THE DEVICE:

To start the software operation, it is necessary to provide two main data: the module's password and MAC address.

The default password is "admin" which enables the user to access all system features. This option is especially indicated to technicians at the startup of the equipment or to most experienced users, since it allows changing constants that define the basis of the module operation.

With any other password, the software will limit the setup options, giving access only to the data required for the normal operation of the equipment.

Agrosystem

• Agrosystem system - Part II

Then, enter a valid MAC address.

This address refers to the module in operation. The address syntax follows an established rule and consists of 6 sets of 2 alphanumeric characters separated by colons (as in the example below).

The address is printed on a label attached to the MC-TF module and must be entered exactly as printed, with no spaces.

The option to enter the address is accessed by the Settings key of your smartphone. From the first connection, the address is recorded and represents the default value.

▪ Agrosystem

• Agrosystem system - Part III

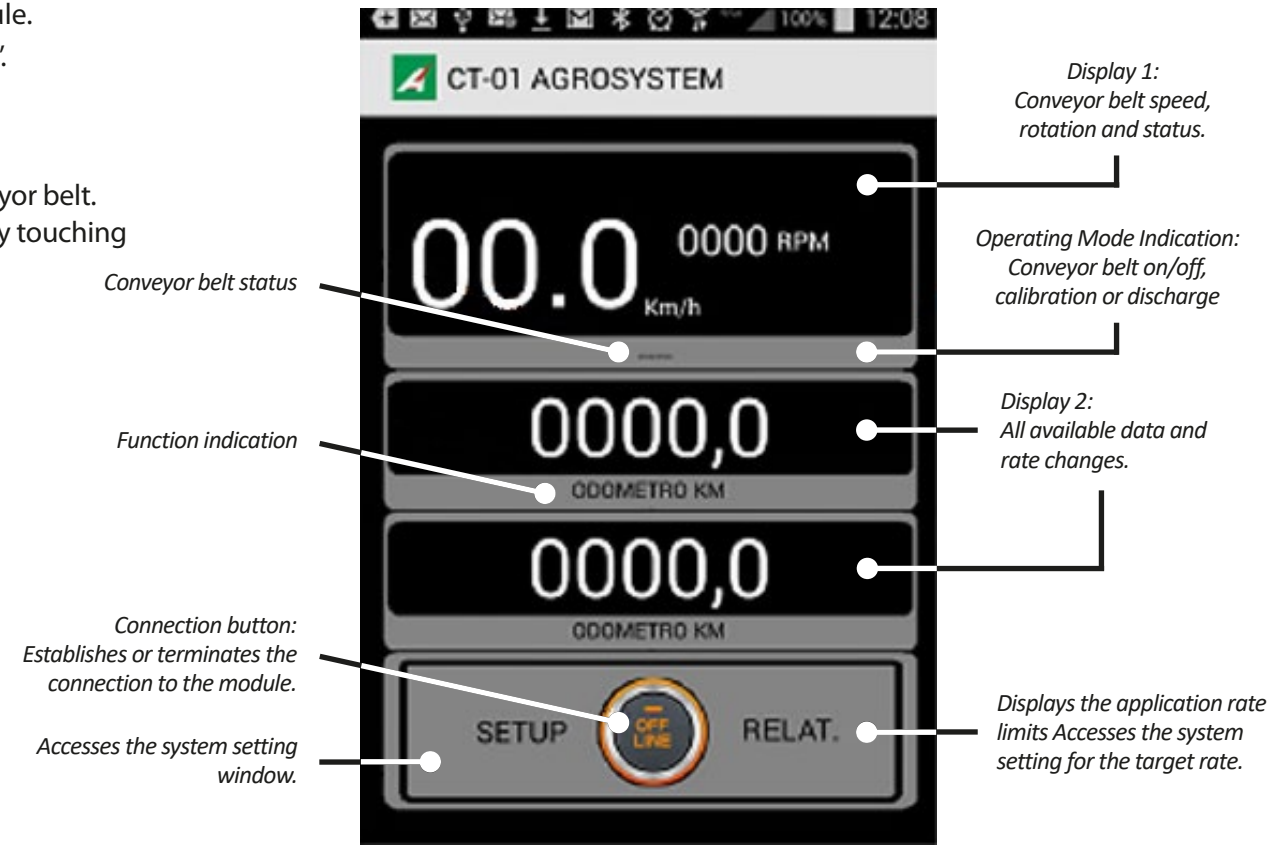
HOME SCREEN AND BASIC OPERATION:

The figure below depicts the initial screen of the application and its features.

Start the operation, connect the application to the MC-TF module.
The connection is established by touching the connect "button".
The Home screen shows 3 displays and a button bar:
Setup, Connection and Reports.

Display 1 shows the speed and rotation information of the conveyor belt.
Displays 2 and 3 can be changed to show different information by touching the function display at the bottom of the window.
The following information can be selected:

- Odometer in Km *;
- Odometer in Ha *;
- Conveyor belt tachometer (RPM);
- Disk tachometer (RPM);
- Target Rate in Kg/ha;
- Target disk rotation (RPM).



* The odometers can be reset by pressing on the numbers of the display 10 times in a row.

The "Reports" button displays the minimum and maximum speed limits at which the system will be able to properly modulate the conveyor belt.

Agrosystem

• Agrosystem system - Part IV

SETUP SCREEN:

The setup screen enables the user to change (with the administrator password) all the operating parameters of the module. Namely:

- Maximum operating speed of the equipment (in km h);
- Width considered as valid application range (in mts).
- Number of conveyor belt feedback teeth (pulses/revolution);
- Number of disk feedback teeth (pulses/revolution);
- Proportional and integral constants of the PIO control. This data may vary depending on the machine model used;

The following screen shows some data calculated from the setup information and others obtained by the conveyor belt automatic setting procedure.

The application speed limits are defined by the maximum and minimum rotation of the conveyor belt.
Thus, there are two ways to achieve such information: one by directly entering the data, and the other by means of the conveyor belt automatic setting procedure.
This procedure will be required at the startup of the machine or module (machine manufacturers may determine this data, thus, dismissing this procedure) or for fault diagnosis.

▪ Agrosystem

• Agrosystem system - Part V

Upon selecting the "CONVEYOR BELT AUTOMATIC SETTING" option, a warning window is displayed next, and a new validation is required.

For this procedure, the system initiates the opening of the proportional valve to the operational limit, accelerating the conveyor belt to maximum rotation.
The test requires a few minutes to complete and should be performed observing the required safety procedures.

At the end of the procedure, new minimum and maximum rotation values •are defined and a new ratio may be calculated by touching the "CALC" button.
The new data is transferred to the module by touching "EXIT".
This procedure can adjust the module to the actual working conditions provided by the machine and, if necessary, also provide data for fault checking and determination of operating limits.
When a new ratio is validated, a new sampling will be required.

⚠ ATTENTION

For this procedure, the FERTILIZA bucket must be completely empty.

Agrosystem

Agrosystem system - Part VI

CALIBRATION PROCEDURE:

The sampling procedure is performed through the MC-TF module's button set (calibration button).

When started, the conveyor belt will rotate the equivalent of the machine's movement by 50 meters.

⚠ ATTENTION | **The movement of the conveyor belt can lead to accidents. The user must observe the proper safety procedures for a risk-free operation.**

Agrosystem

• Agrosystem system - Part VII

CALIBRATION PROCEDURE:

At the end of the procedure, a new Android screen is displayed:

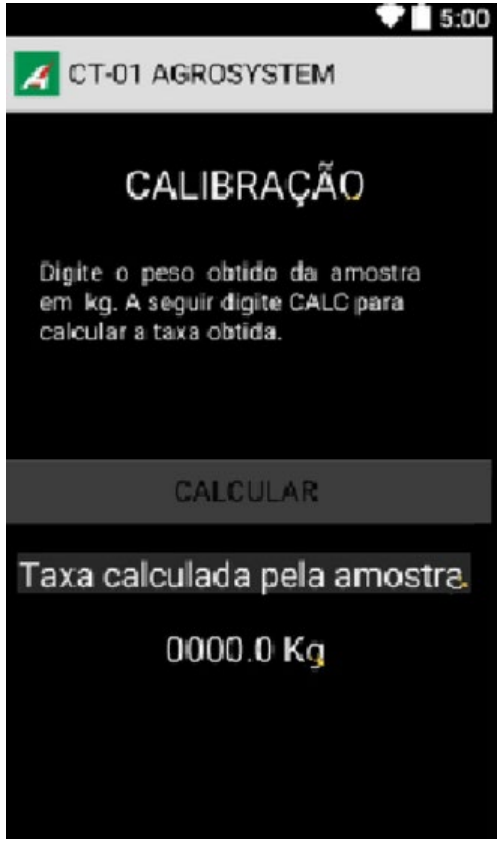
The value obtained from the sample (kg) can be entered.
By touching the "calculate" button, the new application rate will be displayed (Kg/Ha).

This calculation formula is as follows:

$$TA = \frac{AM * 10.000}{(LA*50)}$$

WHERE:

TA - Target rate (kg/Ha).
AM - Weight obtained from the sample (kg).
LA - Width of application (mts).



Agrosystem

• Agrosystem system - Part VIII

In the home screen, in displays 2 and 3, it is possible to select the target rate information. The rate change option will only be available with the conveyor belt switched off.

The user may change parameters by touching the arrow keys at the bottom of each display. The data transfer to the MC-TF module is automatically made 5 seconds after the changes are completed.

The ability to change rates directly through Android makes the operation of the machine easier. The task can be performed without resorting to new adjustments of the gate and, as a result, new samplings.

When the target rate is increased, it forces the system to work at higher rotations on the conveyor belt, thus decreasing the maximum speed of application.

Based on the data entered, the application speed limits are calculated. Using the "REPORTS" button, the user may visualize the possible minimum and maximum speed values.

▪ Operations

• Recommendations for operation

The preparation of the **FERTILIZA** and the tractor will allow you to save time in addition to a better result in field work. The following suggestions may be helpful to you.

01 - Before starting work, carry out a complete review on **FERTILIZA**. All points of the machine must be lubricated, check the oil level of the gearbox and retighten the nuts and bolts. Also check the locking of the pins and cotter pins.
02 - The ideal working rotation is 540 rpm at PTO. Check the corresponding rotation on the engine, in the tractor manual. This rotation in the tractor engine varies from tractor to tractor.
03 - Before refueling the **FERTILIZA**, check that there are no foreign objects inside the bucket, check that the bucket coupling is complete and level. Place the support bracket in the transport position and keep the tractor drawbar fixed.
04 - Always check conveyor belt tension.
05 - Recommended average speed is 6 to 7 km/h.
06 - The distance between the passes must be constant so as not to compromise the uniformity of the distribution.
07 - **FERTILIZA** in work operation must work with protections and safety devices. Do not work without guards or safety devices.
08 - During the entire work, keep the engine rotation constant, avoiding variation in the average speed of the tractor, so that there is no inefficiency or failures in the distribution of the product.
09 - Do not transport the filled **FERTILIZA**, as it could be damaged. Fill **FERTILIZA** only at the workplace.
10 - Do not move from one area to another with the **FERTILIZA** filled.
11 - If **FERTILIZA** is stocked and for some reason it will remain in the field, place a waterproof tarp to avoid possible humidity.
12 - When filling the **FERTILIZA** with a bag or a wheel loader, position yourself on the sides of them. Do not let any person or animal stay in the risk area.
13 - When filling the **FERTILIZA** with a wheel loader, allow the material to flow freely without hitting the wheel loader on the **FERTILIZA** bucket, thus avoiding damage to the **FERTILIZA** bucket.
14 - During work, do not allow people or animals to be within the reach of the fertilizer spreader by the spreading discs.
15 - The weight of the product is related to its granulometry and density.

In case of doubt, never operate or handle FERTILIZA, consult Post Sales.
Phone: 0800-152577 / Email: posvenda@baldan.com.br

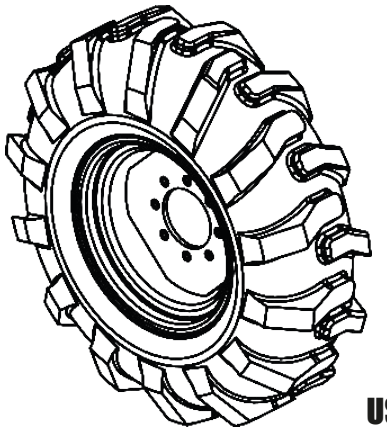
▪ Maintenance

FERTILIZA was developed to provide you with maximum performance under terrain conditions. Experience has shown that the periodic maintenance of certain parts of the **FERTILIZA** is the best way to help you avoid having problems, so we suggest checking.

• Tire pressure

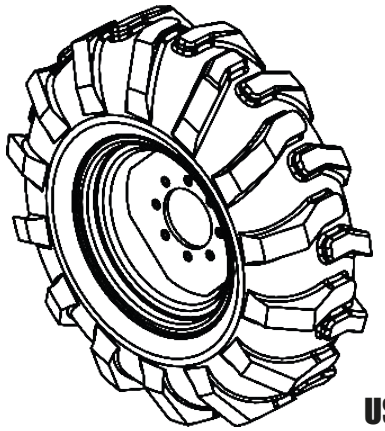
Tires must always be correctly calibrated, avoiding premature wear due to excess or lack of pressure and ensuring precision in distribution.
Before calibrating the tires, check the model used in your **FERTILIZA** and check the correct calibration below.

FERTILIZA 6M³
TIRES 12.5/80-18" TL 10 LINERS / RIM W 9,00" X 18"



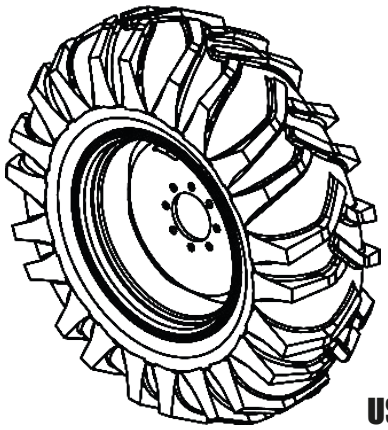
USE: 45 LBS/POL²

FERTILIZA 6M³
TIRES 12.4.24 / RIM W 10" X 24"



USE: 31 LBS/POL²

FERTILIZA 8M³
TIRES 14.9.24 12 LINERS / RIM W 12" X 24"



USE: 48 LBS/POL²

⚠ ATTENTION

Never weld the wheel mounted with the tire, the heat can cause the air pressure to rise and cause the tire to burst.

When inflating the tire, position yourself next to the tire, never in front of it.

For tire inflation, always use a containment device (inflation cage).

Mount the tires with suitable equipment. The service must only be carried out by persons qualified for the work.

❗ IMPORTANT

When inflating tires, do not exceed the recommended inflation pressure.

NOTE

The tractor's tire pressure must be made in accordance with the manufacturer's recommendation.

▪ Maintenance

• Lubrication

Lubrication is essential for the good performance and durability of the **FERTILIZA** moving parts, contributing to savings in maintenance costs.

Before operating, carefully lubricate all grease fittings, always observing the lubrication intervals on the next page. Ensure the quality of the lubricant, regarding its efficiency and purity, avoiding using products contaminated by water, earth and other agents.

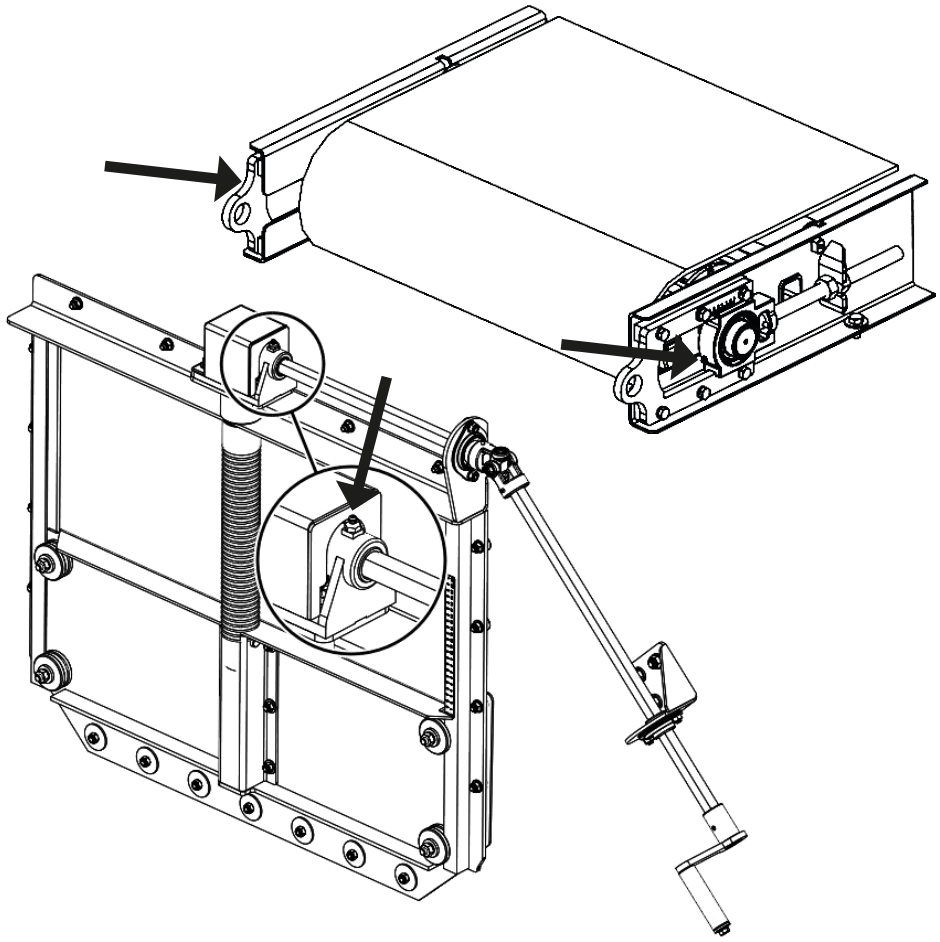
• Table of greases and equivalents

Manufacture	Recommended grease types
Petrobrás	Lubrax GMA-2
Atlantic	LithoRow 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
ValvoRow	Palladium MP-2
Petronas	Tutela Jota MP 2 EP
	Tutela Alfa 2K
	Tutela KP 2K

⚠ ATTENTION

For manufacturers and/or equivalent brands not listed in the table, check the manufacturer's technical manual.

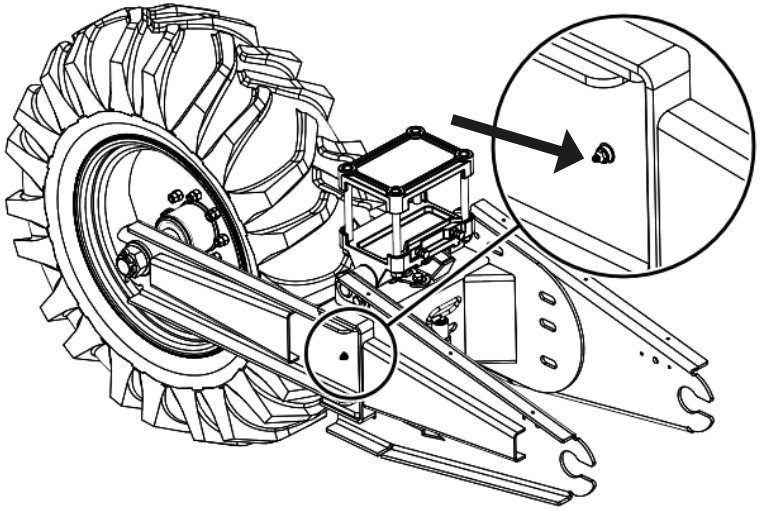
• Lubrication every 8 working hours

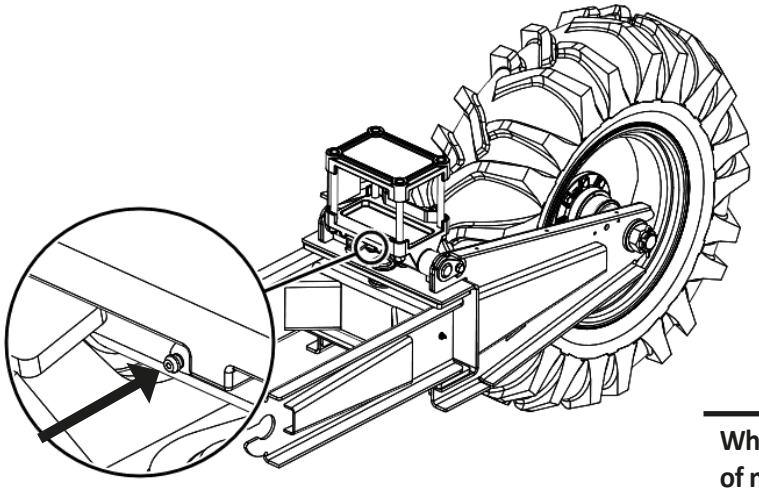


⚠ ATTENTION **When lubricating the FERTILIZA, do not exceed the amount of new grease. Enter a sufficient amount.**

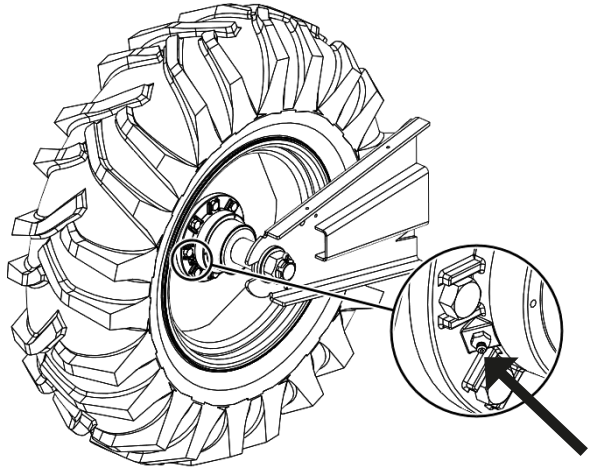
▪ Maintenance

• Lubrication every 10 working hours

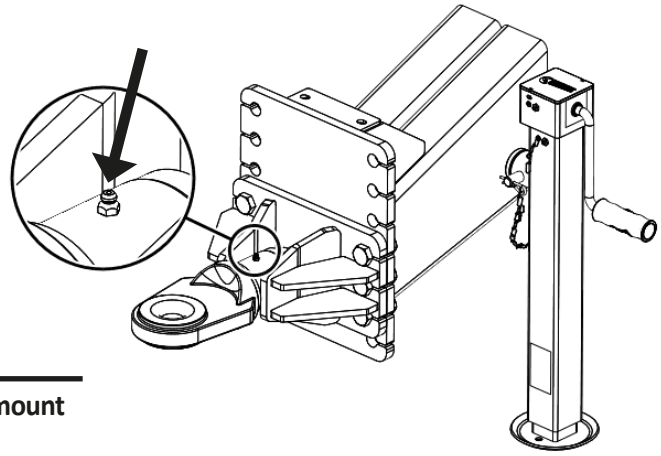




• Lubrication every 24 working hours



• Lubrication every 30 working hours



⚠ ATTENTION

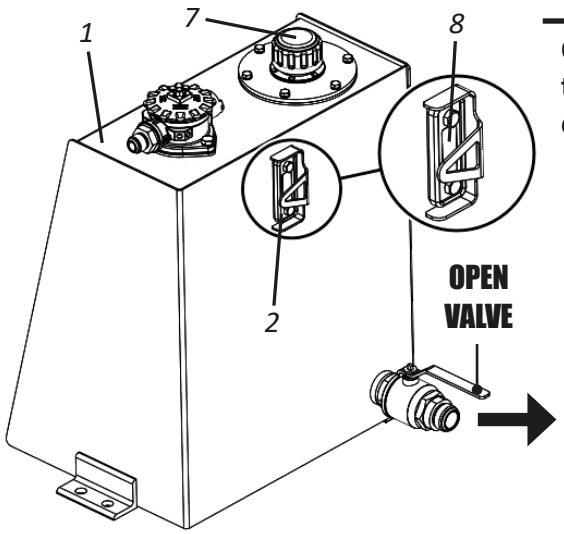
When lubricating FERTILIZA, do not exceed the amount of new grease. Enter a sufficient amount.

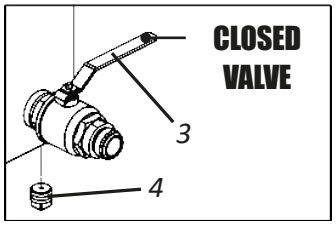
▪ Maintenance

• Tank oil change

Periodically check the oil level in the oil tank (1) through the level indicator (2) and refill as necessary. To change the oil in the tank (1), proceed as follows:

01 - First, close the valve (3) of the oil tank (1).
02 - Then remove the drain plug (4) letting all the oil in the tank (1) run out.
03 - Then, clean the inside of the oil tank (1) and replace the drain plug (4).
04 - Then, loosen the nut (5) turn the cover (6) opening it, remove the air filter cover (7), fill with the hydraulic oil recommended below, remembering that the oil tank capacity is 80 liters.
05 - Then replace the air filter cover (7), turn the cover (6) closed and tighten the nut (5). Then open the valve and start the tractor, leaving the **FERTILIZA** in operation for a few minutes, moving all the functions at idle in order to fill all the piping and engine.
06 - After operation, check the oil level through the sight glass (8) of the level indicator (2). If necessary, add more oil to the tank (1) until it reaches the sight glass (8).





IMPORTANT

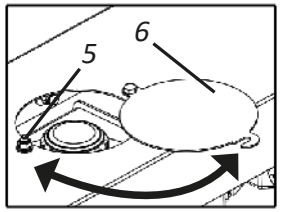
Check that there are no impurities in the oil. At the inlet of the tank (1), there is a sieve that we recommend that each person filled with water cleans it.

NOTE

Do not add oil above level. Use only the recommended oil: Tellus 68 ISO-HL.
Change the oil every 1200 working hours.

ATTENTION

Do not start the tractor engine when it is running out of oil from the tank. Ignoring this warning could damage the system's hydraulic motor.



▪ Maintenance

• Suction filter replacement

Replace the suction filter (1) after the first 100 working hours. Before changing the suction filter (1), remove the protection plate (2), to do so, proceed as follows:

01 - Loosen screws (3), nuts (4), screws (5), flat washers (6), nuts (7) and remove the plates (8).

02 - Then loosen the screws (9), flat washers (10) and nuts (11) and remove the protection plate (2).

03 - Then close the valve (13) of the oil tank (14).

04 - Then loosen the screws (15), lock washers (16) and remove the air filter (17), flange and fixing gasket (18).

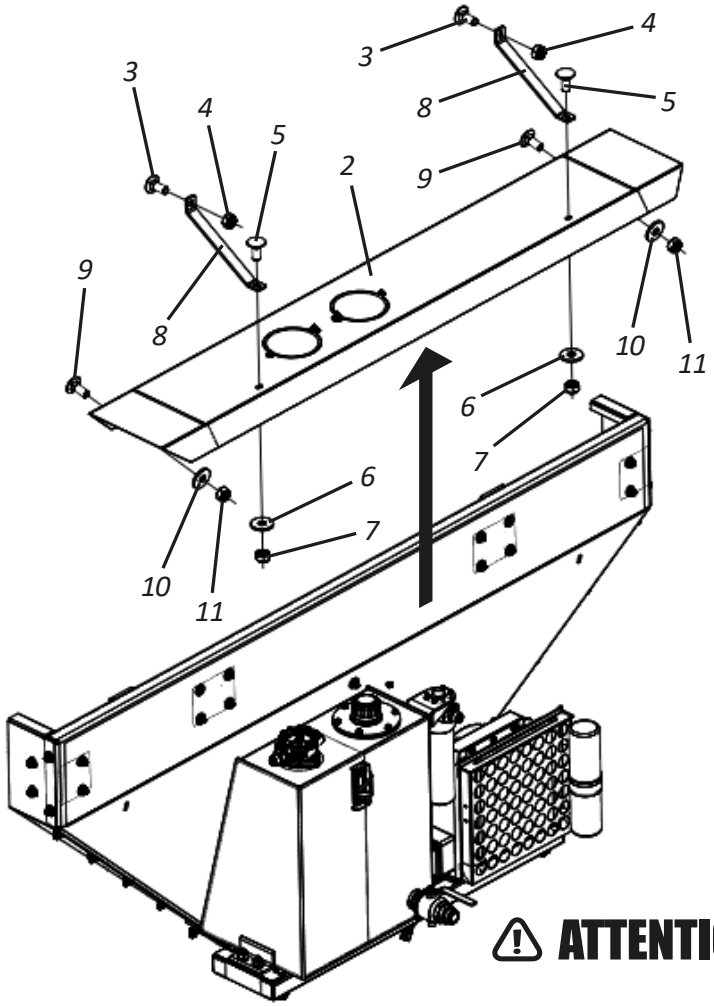
05 - Then, remove the drain plug (19) letting all the oil in the oil tank (14) run out.

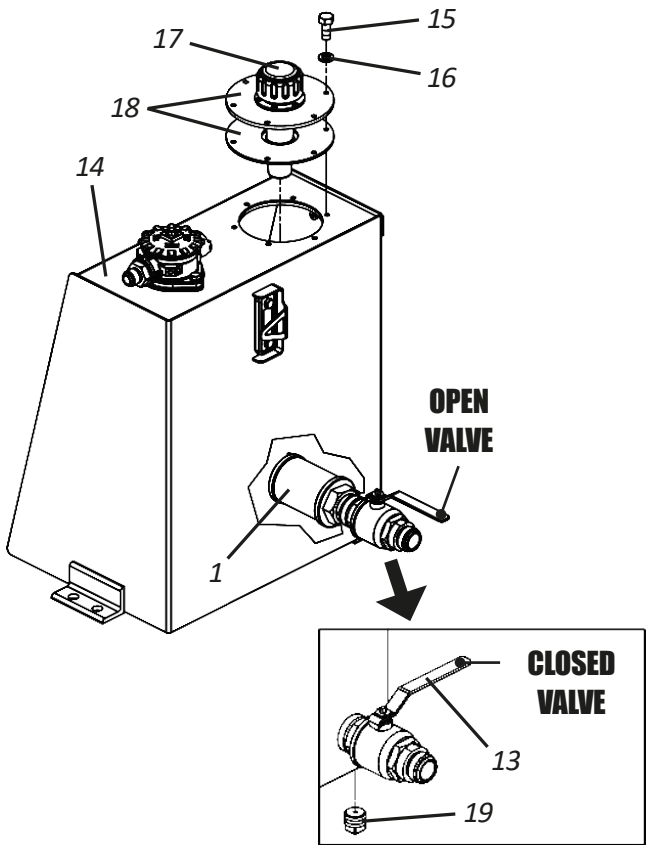
06 - Afterwards, clean the inside of the oil tank (14) and change the suction filter (1).

07 - Then, replace the drain plug (19), assemble the flange and fixing gasket (18) and the air filter (17).

08 - Then, remove the air filter cover (17) and fill with hydraulic oil.

09 - Finish by replacing and fixing the protection plate (2).





⚠ ATTENTION

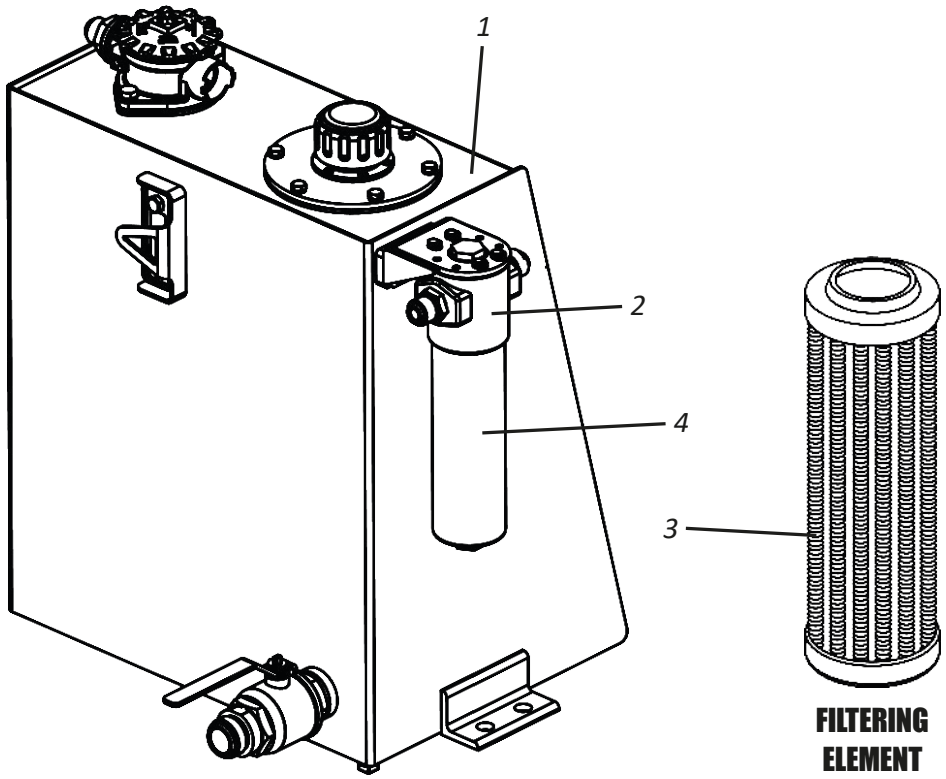
The fall of products above the hydraulic system may damage it. Therefore, do not work on or transport FERTILIZA without the protection plate (2).

▪ Maintenance

• Changing the filter element

The oil tank (1) has the pressure filter (2). To maintain the effectiveness of the filtration, it is necessary to change the filter element (3) located inside the pressure filter (2) between 100 and 200 working hours. To change the filter element (3), proceed as follows:

01 **-** First, release the cover (4) from the pressure filter (2).
02 **-** Then replace the filter element (3).
03 **-** Then replace the cover (4) on the pressure filter (2).



⚠ ATTENTION | **Do not start the tractor engine when changing the filter element.**

NOTE | **For even greater precision on the right time to change the filter element (3), we recommend checking it periodically. The greater the precision in changing the filter element (3), the lower the risk of oil contamination.**

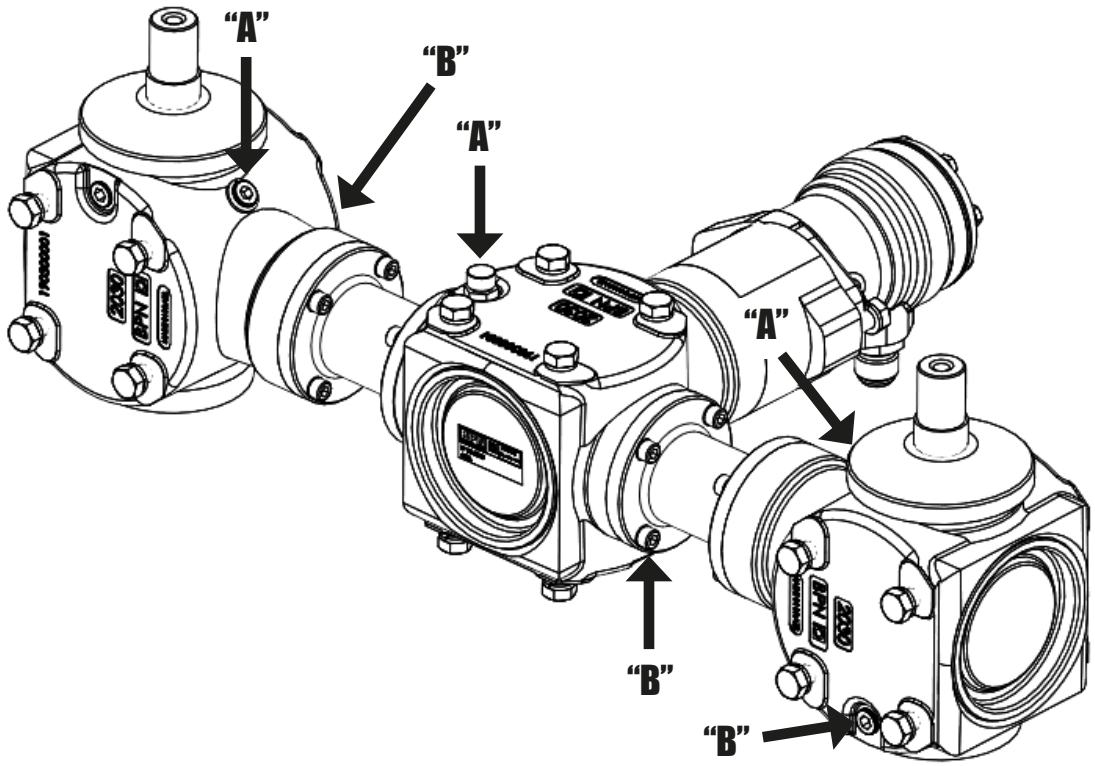
▪ Maintenance

• Triple gearbox oil change

Periodically check the oil level of the triple box, as it cannot work with low or contaminated oil level. Refill the triple box whenever necessary through the **"A"** plug of each box that makes up the set. To change the triple gearbox oil, proceed as follows:

01 - First, remove the drain plug **"B"** from each box that makes up the set and let all the oil in the triple box run out. Then replace them.

02 - Then, remove plug **"A"** from each box that makes up the set and fill the triple box with 3 liters of oil (1 liter in each box that makes up the set) allowing air to escape and the accommodation of oil throughout the transmission. . Then replace them.



⚠ ATTENTION

The total amount of oil in the triple box is 3 liters (1 liter in each box that makes up the set).
Carry out the first oil change after 50 hours of work.
Periodically change the oil every 500 hours, making sure there are no leaks.
Use only the specified oil: SAE 90 EP (with extreme pressure additives).
When using a particular brand of oil, avoid topping up with oil of a different brand and specification.

❗ IMPORTANT

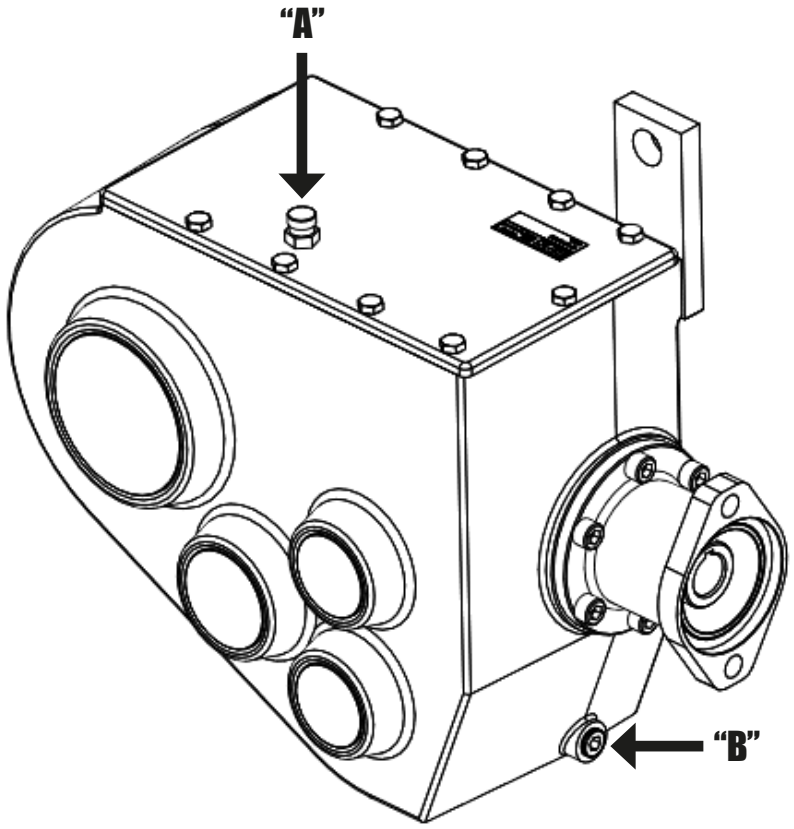
At the end of the season, we recommend cleaning the external surface of the triple box and applying oil to prevent corrosion.
When not in use, FERTILIZA must be kept in a covered place, avoiding the action of rain and sunlight, especially in the triple box.

▪ Maintenance

• Gearbox oil change

Periodically check the oil level of the gearbox, as it cannot work with low or contaminated oil level. Refill the gearbox whenever necessary through plug **"A"**. To change the gearbox oil, proceed as follows:

01 **-** First, remove the drain plug **"B"** and let all the oil in the gearbox drain out. Then replace the drain plug **"B"**.
02 **-** Then, remove plug **"A"** and fill the gearbox with 7 liters of oil. Then replace plug **"A"**.



⚠ ATTENTION

The total amount of oil in the gearbox is 7 liters.
Carry out the first oil change after 50 hours of work.
Periodically change the oil every 500 hours, making sure there are no leaks.
Use only the specified oil: SAE 90 EP (with extreme pressure additives).

❗ IMPORTANT

At the end of the season, we recommend cleaning the external surface of the gearbox and applying oil to prevent corrosion.
When not in use, the FERTILIZA must be kept in a covered place, avoiding the action of rain and sunlight, especially in the gearbox.

🔍 NOTE

Plug "A" also has a breather function, as it has a dipstick for monitoring the oil level, which must be completed when necessary.
When using a particular brand of oil, avoid topping up with oil of a different brand and specification.

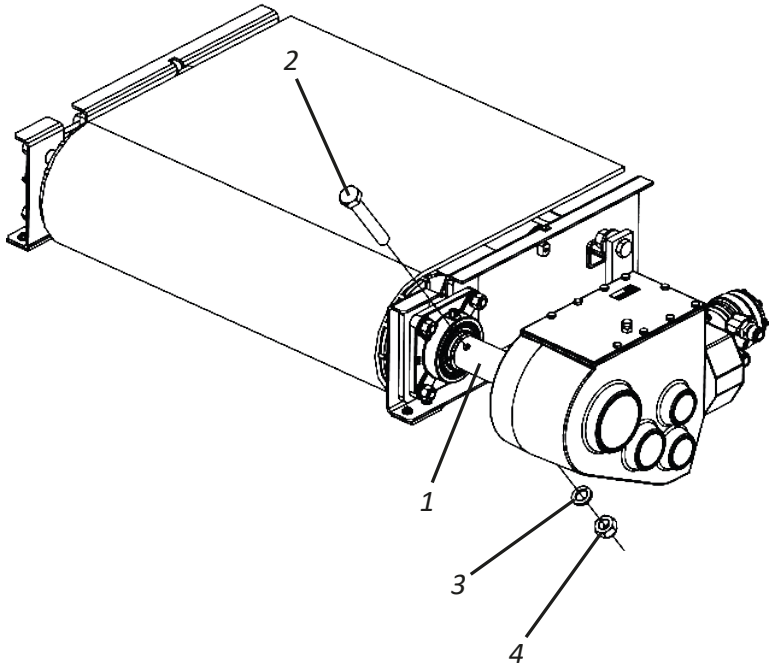
▪ Maintenance

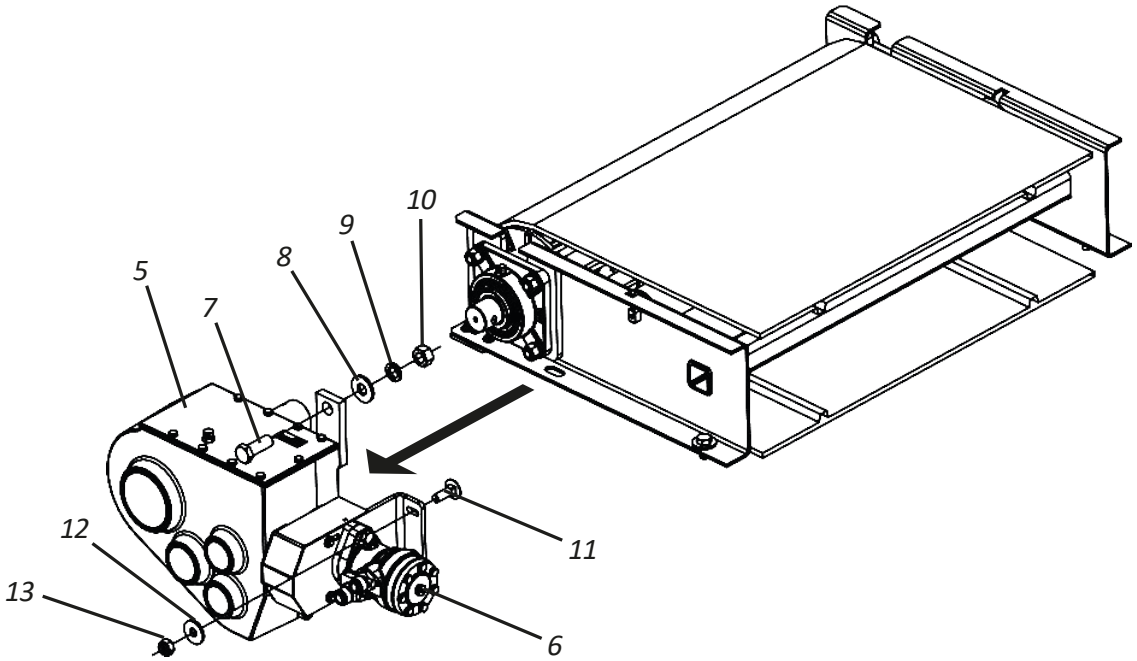
• Belt removal - Part I

To facilitate maintenance, **FERTILIZA** has a belt removal system from the front of the belt, which does not require any component to be dismantled. To service the treadmill, proceed as follows:

01 - First, loosen the bushing (1) of the rear axle of the track through the bolt (2), lock washer (3) and nut (4).

02 - Then, loosen the gearbox (5) and the hydraulic motor (6) through the bolt (7), flat washer (8), lock washer (9), nut (10) and the bolt (11), flat washer (12) and nut (13).



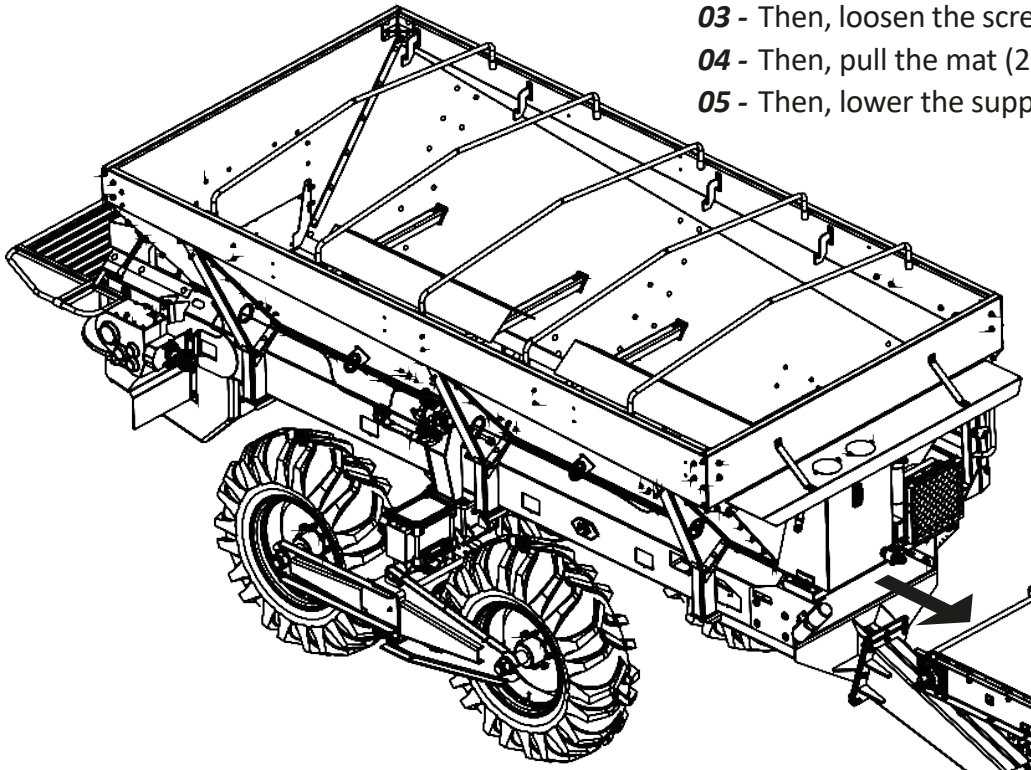


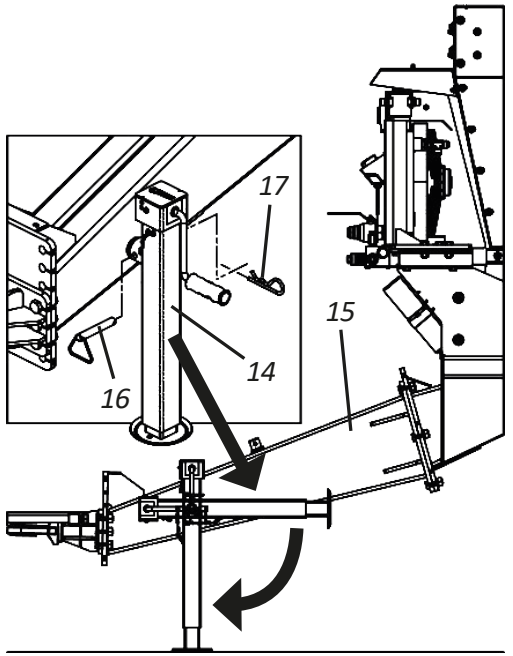
IMPORTANT **Before any procedure, make sure that the tractor is turned off and the FERTILIZA is engaged. Do not carry out any maintenance with the tractor on or with the FERTILIZA disengaged.**

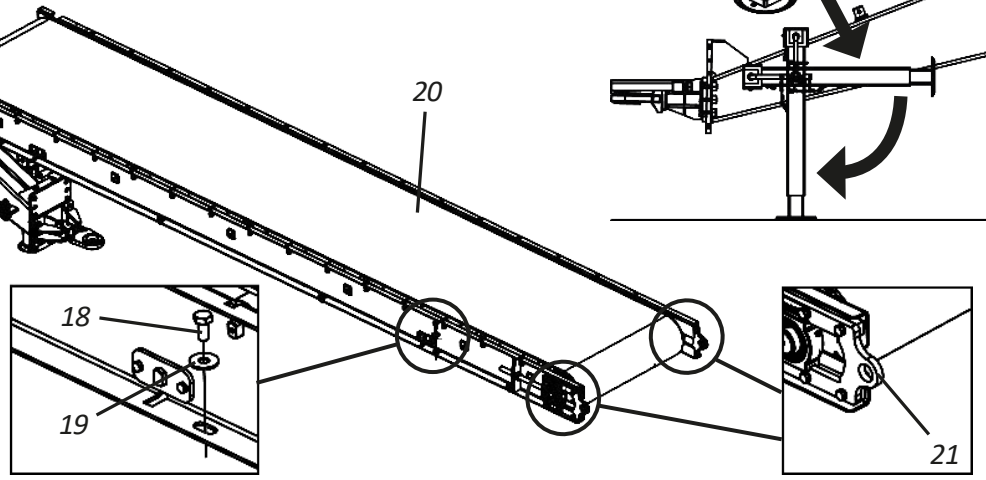
▪ Maintenance

• Belt Removal - Part II

03 - Then, loosen the screws (18) and flat washers (19) on the sides of the **FERTILIZA** to release the belt (20).
04 - Then, pull the mat (20) through the handles (21) located on the front of it.
05 - Then, lower the support foot (14) of the hitch header (15) locking it with the pin (16) and lock (17).







NOTE

In FERTILIZA 8m³ there will be 8 screws in total (4 on each side).
In FERTILIZA 16m³ there will be 10 screws in total (5 on each side).

ATTENTION

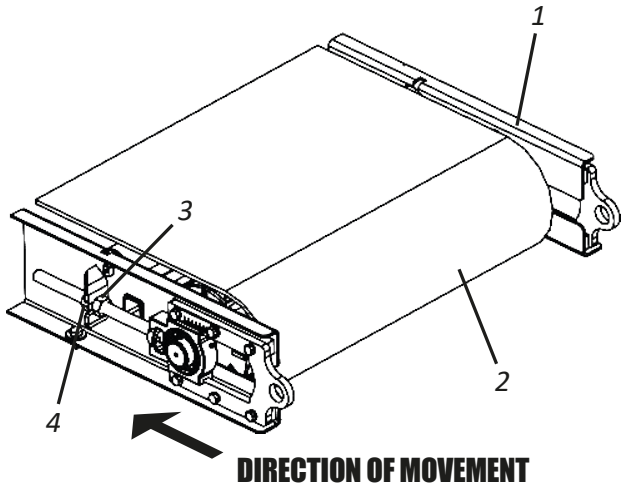
When servicing the suspended treadmill, support it securely. Do not support the treadmill on cement blocks, hollow bricks or pegs that could collapse under load. Do not remove the treadmill without first lowering the support leg (14). Ignoring this warning could result in serious accidents and even death.

▪ Maintenance

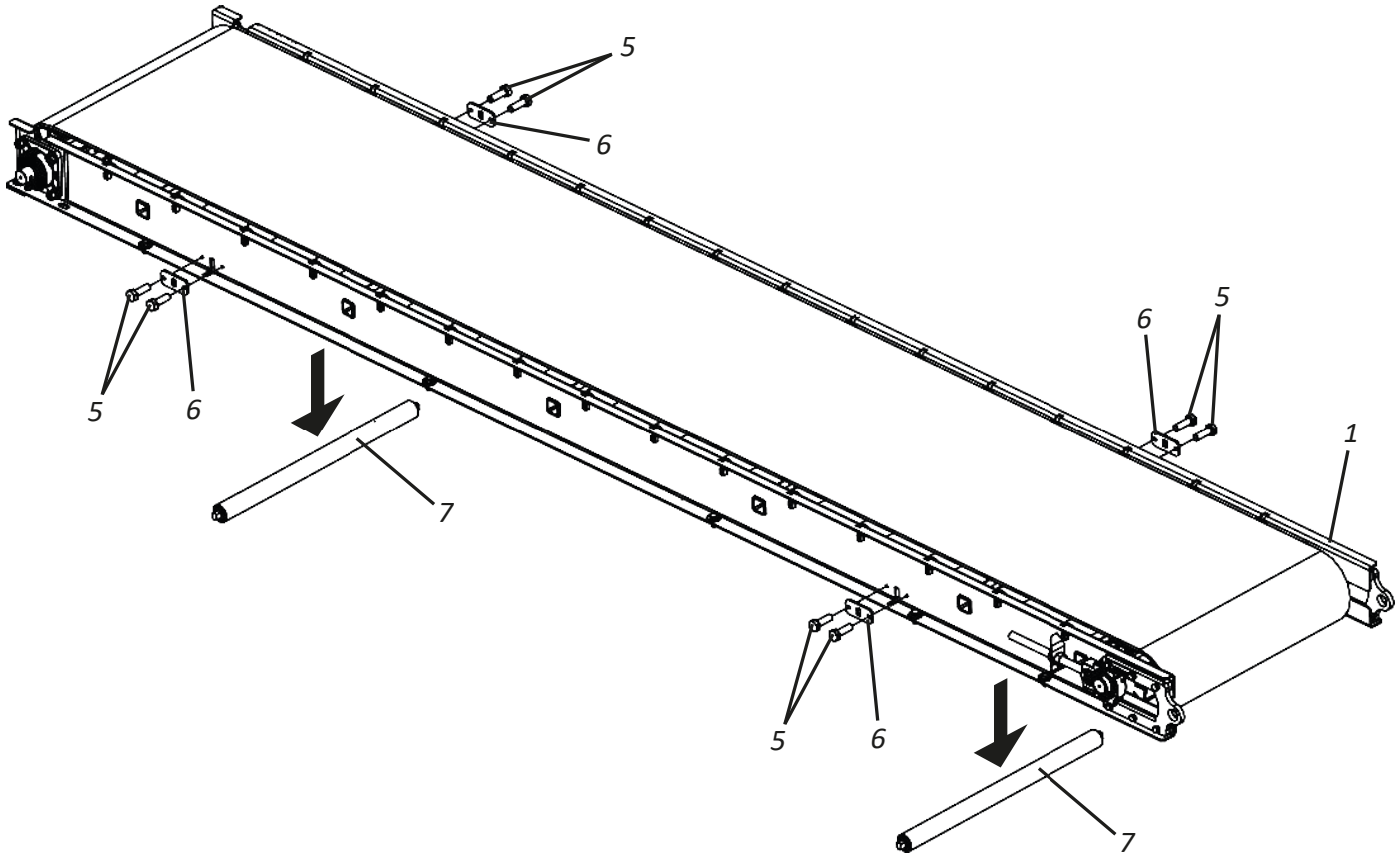
• Belt replacement - Part I

The treadmill (1) has a belt (2) that must be changed when it presents excessive surface wear and when the belt tensioner reaches its limit. To change the belt (2), proceed as follows:

01 - Remove tension from belt (2) by loosening nuts (3 and 4).



02 - Then loosen the screws (5) and plates (6) on both sides of the belt (1) and remove the slide rollers (7) from the bottom of the treadmill (1).

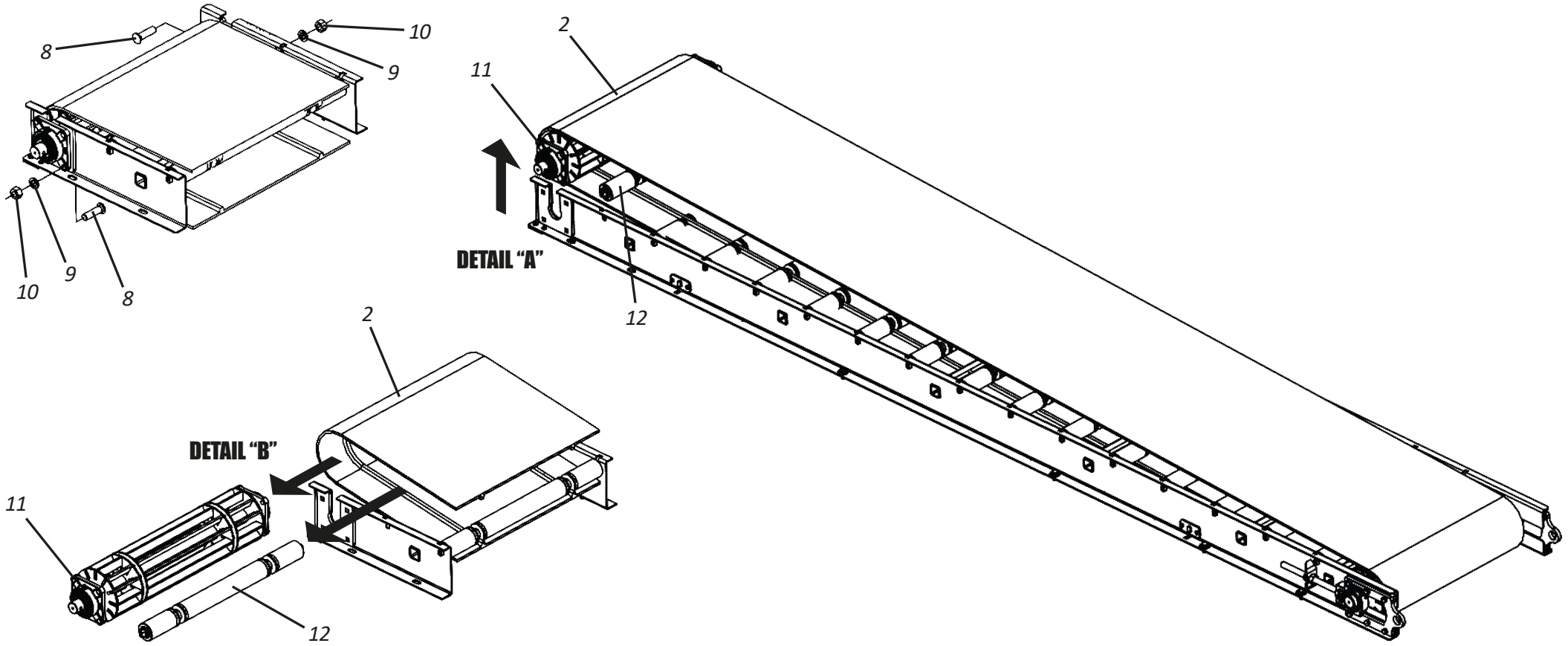


▪ Maintenance

• Belt replacement - Part II

03 - Then, loosen the screws (8), lock washers (9), nuts (10), pull up and then to the side the set of bearings and roller (11) removing them from the belt (2), according to **details "A** and **B".**

04 - Then, remove the roller (12) pulling it up and then to the side, as per **details "A** and **B".**



▪ Maintenance

• Belt replacement - Part III

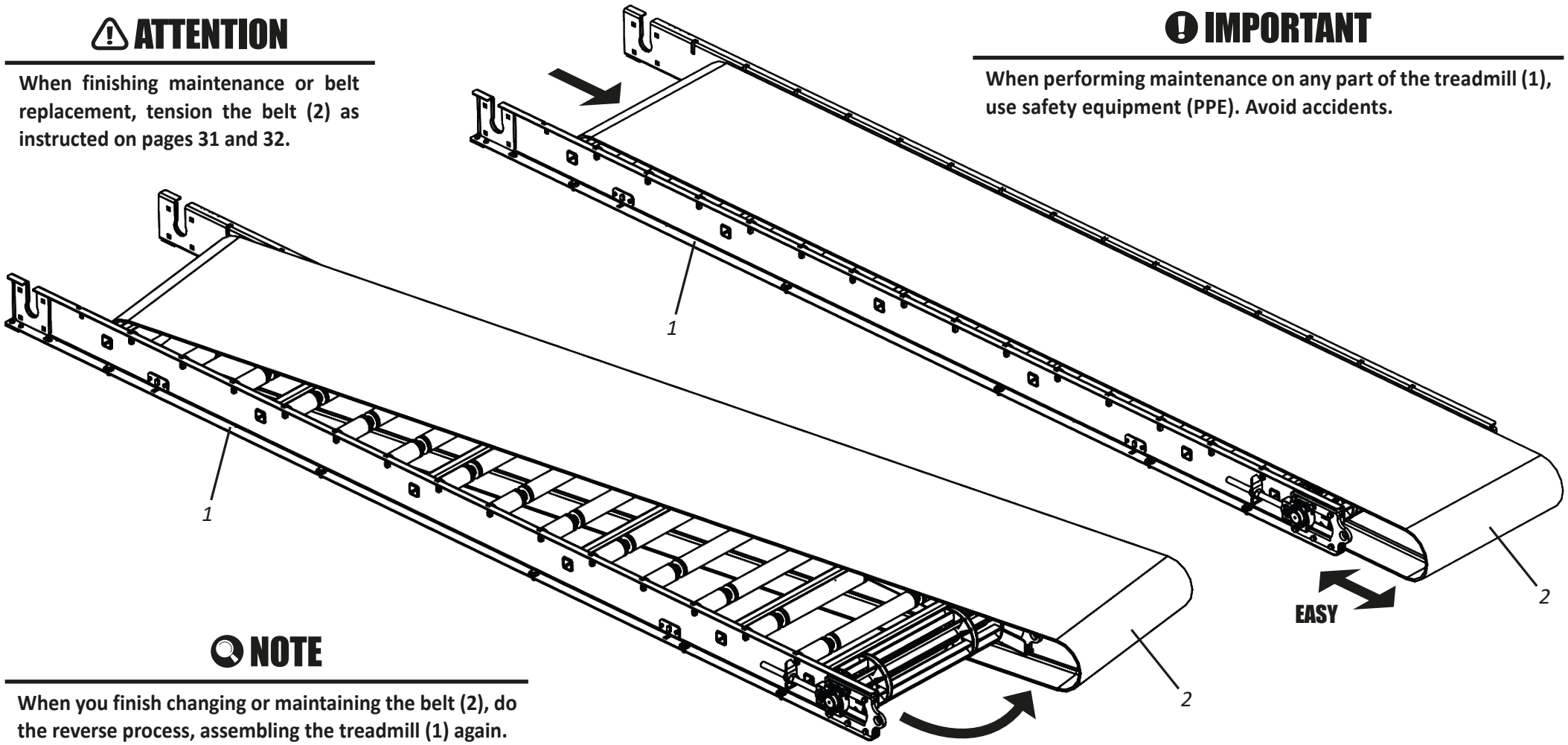
05 - Then, pull the belt (2) forward until there is enough slack to pull the belt (2) sideways out of the treadmill (1).

⚠ ATTENTION

When finishing maintenance or belt replacement, tension the belt (2) as instructed on pages 31 and 32.

❗ IMPORTANT

When performing maintenance on any part of the treadmill (1), use safety equipment (PPE). Avoid accidents.



🔍 NOTE

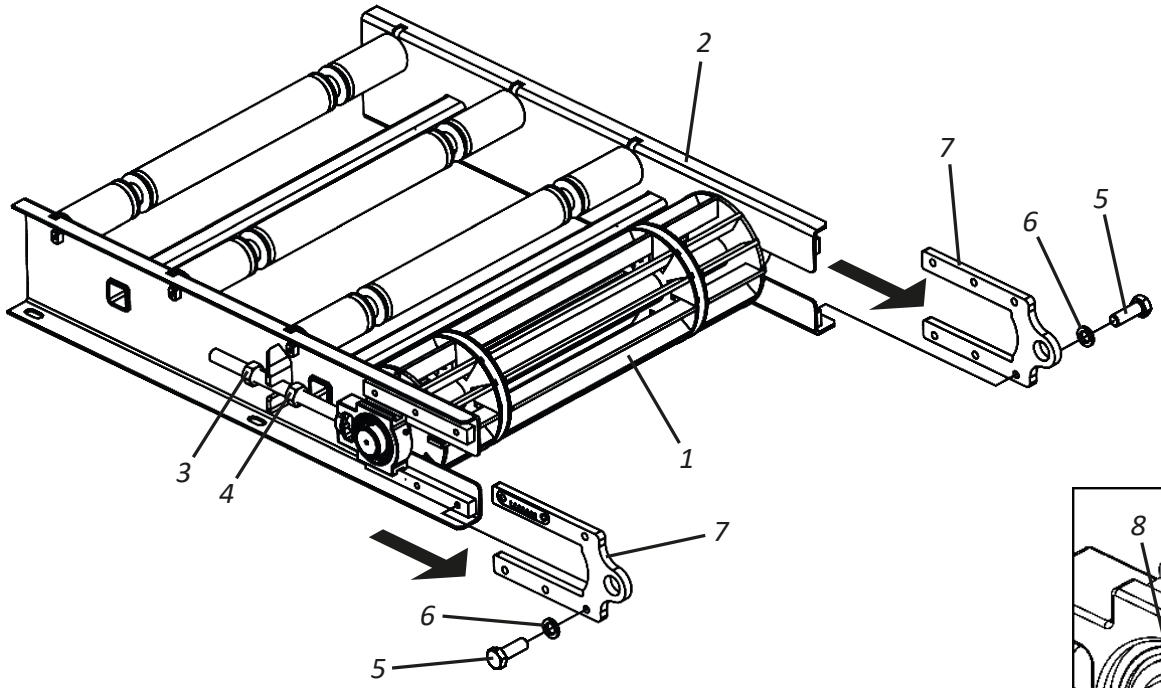
When you finish changing or maintaining the belt (2), do the reverse process, assembling the treadmill (1) again.

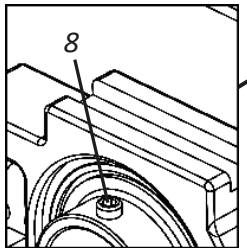
▪ Maintenance

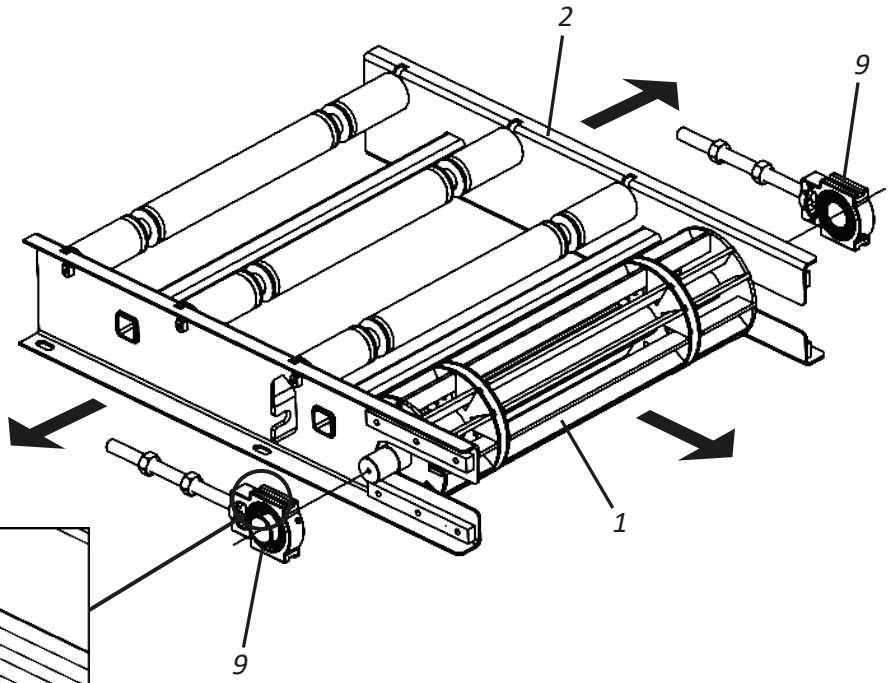
• Front roller maintenance

To service the front roller (1) of the belt (2), proceed as follows:

01 - Remove the belt as instructed on pages 126 to 128.
02 - Then loosen the nuts (3 and 4) on both sides of the belt (2) and the screws (5), lock washers (6) and remove the plates (7).
03 - Then loosen the Allen screw (8) on both sides of the track (2) and remove the bearings (9) to release the front roller (1).
04 - When replacement or maintenance is complete, reassemble all components.







IMPORTANT

When performing maintenance on any part of the treadmill (2), use safety equipment (PPE). Avoid accidents.

NOTE

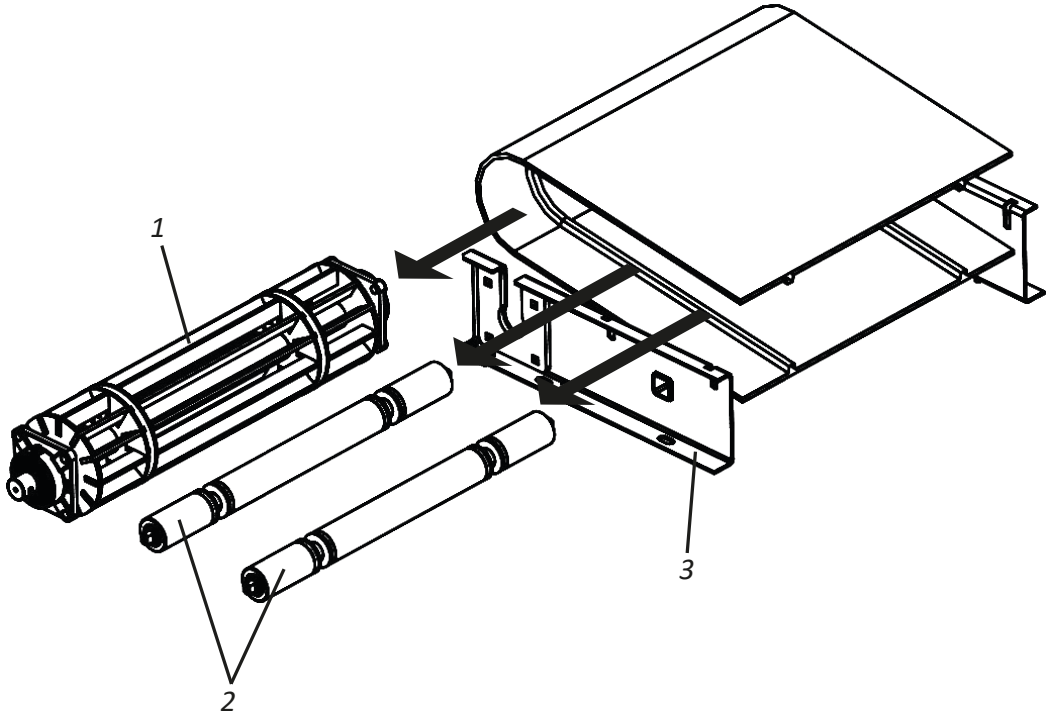
When finishing the replacement or maintenance of the front roller (1), do the reverse process, assembling the conveyor belt (2) again.

▪ Maintenance

• Rear roller and center roller maintenance

To service the rear roller (1) and center rollers (2), proceed as follows:

01 - Remove the rear roller (1) and the center rollers (2).



⚠ ATTENTION

Respect the carrying capacity of the FERTILIZA when charging it. Avoid overload. The life of the center rollers is quickly reduced by overloading.

❗ IMPORTANT

When performing maintenance on any part of the treadmill (3), use safety equipment (PPE). Avoid accidents.

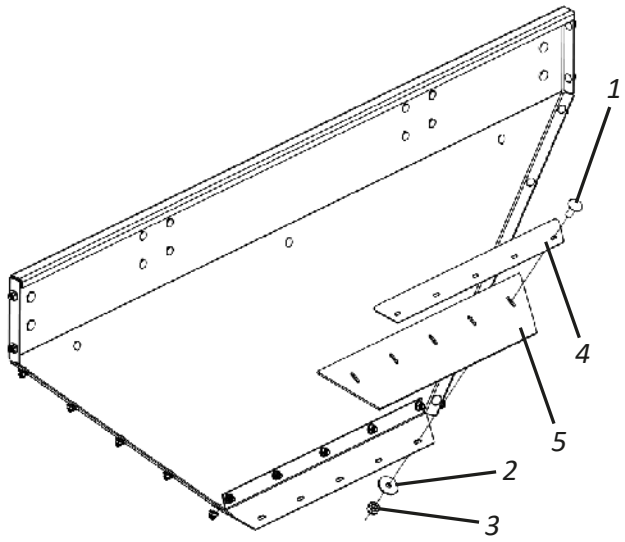
▪ Maintenance

• Tarpaulins

Periodically check frontal and side tarpaulin. If they are not in good condition, ip their side or replace them for new ones, to do that proceed as follows:

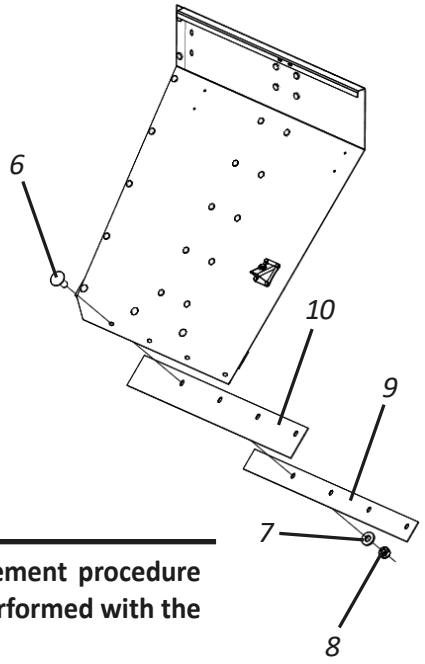
FRONTAL TARPAULIN

01 - Loosen the screws (1), plain washers (2), and nuts (3).
02 - Next, remove the plate (4) and the protection rubber (5).
03 - Then, flip or replace the protection rubber (5).
04 - Finish it by securing the protection rubber again (5) and the plate (4) with the screws (1), plain washers (2) and nuts (3).



SIDE TARPAULIN

01 - First, loosen the screws (6), plain washers (7), and nuts (8).
02 - Next, remove the plate (9) and the side protection rubber (10).
03 - Then, flip or replace the side protection rubber (10).
04 - Finish it by securing the side protection rubberagain (10) and the plate (9) with the screws (6), plain washers (7) and nuts (8).

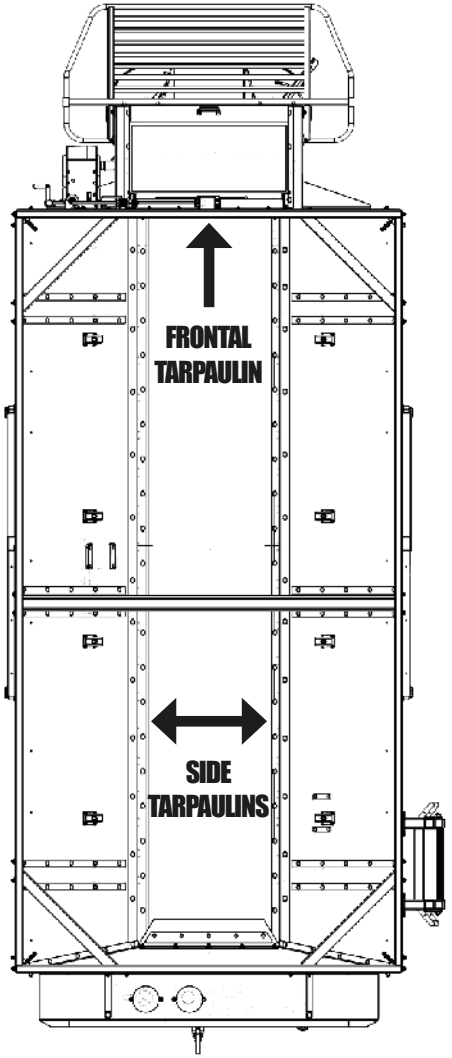


⚠ ATTENTION

Assemble the protection rubber (5) over the two side tarpaulins.

NOTE

The protection rubber(5) flipping or replacement procedure and side protection rubber (10) should be performed with the conveyor placed outside FERTILIZA.



▪ Maintenance

• Operational Maintenance - Part I

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
There is no product flow over the discs or the amount is insufficient.	The gate may be closed.	Adjust the opening of the gate according to the table.
	Foreign objects blocking the treadmill.	Check and clean the belt.
	Broken belt, transmission chain or fuse.	Check and splice the belt, chain or change the fuse.
Product distribution in the soil is not uniform.	Distance too far between one pass and another.	Decrease the distance between passes and operate within the recommended distance.
	Wrong position of the fins on the discs, distributors.	Check the position of the fins that they are not inverted according to the direction of rotation of the distributor discs. If they are inverted, proceed with the correct assembly of them.
	Proportional valve opening is not adequate.	Adjust the valve to the correct flow.
	Very strong wind.	Wait for the wind to subside.
Very narrow distribution range.	Position of the fins on the distributor discs.	Set the fins on the discs to the most open position.
Excessive vibration or noise during operation.	Foreign objects inside **FERTILIZA**.	Check and remove them if any.
	Loose or damaged bearings.	Retighten bearings or replace if damaged.
	Belt adjustment.	Tension the conveyor belt.
	Rotation in the PTO (with independent system).	Keep the rotation at 540 Rpm.
Recommended dosage is not obtained.	Dosing system. Working speed above recommended.	Increase the flow of the gate. Decrease working speed.
Dosage greater than recommended.	Dosing system. Working speed above recommended.	Increase the flow of the gate. Decrease the recommended working speed.
Fuse blown frequently.	Treadmill running at excessive speed. Foreign objects blocking the treadmill.	Decrease conveyor speed and increase gate flow. Check and clean the belt.

▪ Maintenance

• Operational Maintenance - Part II

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
Leaks in hoses with fixed terminals.	Insufficient tightening.	Retighten carefully.
	Lack of sealing material on the thread.	Use thread sealing tape and retighten carefully.
Hydraulic motor does not work.	Pressure less than 180 kgf/cm².	Adjust the pressure on the hydraulic control relief valve to 180 kgf/cm².
	Hydraulic oil level too low.	Top up the hydraulic oil level.
	Oil with impurities.	Clean or replace the oil filter; change the oil if it is contaminated.
	Unequal plug pressure.	Adjust and change if necessary.
	Inverted driving direction.	Invert the hose coupling on the tractor control body.
Tires are damaged.	Work area with stones, stumps or crop residues with stems that cause the tire to perforate.	Eliminate the elements that cause damage to the tires before the period of use of **FERTILIZA**.
	Tires are not properly inflated, causing deformation.	Maintain proper tire pressure.
Quick coupler does not fit.	Different types of couplings.	Exchange them for males and females of the same type.
Oil leaks in the hydraulic motor.	Insufficient tightening.	Retighten carefully.
	Falta de material vedante na rosca.	Use thread sealing tape and retighten carefully.
	Damaged repairs.	Replace repairs.
	Defective sealing rings.	Swap rings.
	Oil temperature above 80°C.	Interrupt work until the temperature drops.
The hydraulic system does not drive the hydraulic motors.	Error in coupling the inlet and return hydraulic hoses.	Connect the hydraulic hoses correctly to the inlet and return.
	The connections are damaged (quick coupler, leakage, etc).	Replace quick coupler or damaged hydraulic hoses.

▪ Maintenance

• Operational Maintenance - Part III

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
Leaking quick coupler.	Insufficient tightening.	Retighten carefully.
	Lack of sealing material on the thread.	Use thread sealing tape and retighten carefully.
	Damaged repairs.	Replace repairs.
Hydraulic system operating slowly.	Low oil level in the reservoir.	Top up with recommended oil to level.
	Oil viscosity too high.	Replace hydraulic oil.
	Leaks.	Replace repairs of hydraulic motors, valves. Replace damaged hydraulic hoses and connections.
Leaks in hoses with fixed terminals.	Insufficient tightening.	Retighten carefully.
	Lack of sealing material on the thread.	Use thread sealing tape and retighten carefully.
Strange noise in the wheels.	Loose wheels or wheel hub with play.	Retighten wheel nuts and adjust wheel hub bearings.
The product is not being applied in the desired volume.	Hydraulic system is faulty.	Review the hydraulic system, detect faults and correct.
Strange noise.	Bearings or transmission system breakage.	Identify the occurrence and replace the damaged parts.

▪ Maintenance

• Cares

01 - Before each job, check the condition of all hoses, pins and screws. When necessary, retighten or replace them.
02 - Travel speed must be carefully controlled depending on terrain conditions.
03 - **FERTILIZA** is used in several applications, demanding knowledge and attention during its handling.
04 - Only local conditions can determine the best way to operate **FERTILIZA**.
05 - When assembling or disassembling any part of **FERTILIZA**, use suitable methods and tools.
06 - Carefully observe the lubrication intervals at the various **FERTILIZA** lubrication points. Respect the lubrication intervals.
07 - Always check parts for wear. If replacement is required, always demand original Baldan parts.
08 - Always keep **FERTILIZA** tires calibrated.

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

▪ Maintenance

• General cleaning

01 - When storing the **FERTILIZA**, do a general cleaning and wash it completely with water only. Check that the paint has not worn out, if this has happened, give a general coat, apply the protective oil and fully lubricate the **FERTILIZA**. Do not use burnt oil or any other type of abrasive.

02 - At the end of the work, remove the transmission chains and keep them bathed in oil until the next work.

03 - Fully lubricate the **FERTILIZA**. Check all its moving parts, if they show wear or play, make the necessary adjustment or replace the parts, leaving **FERTILIZA** ready for the next job.

04 - When storing the **FERTILIZA**, do a general cleaning and wash it completely with water only. Check that the paint has not worn out, if this has happened, give a general coat, apply the protective oil and fully lubricate the **FERTILIZA**. Do not use burnt oil or any other type of abrasive.

05 - Fully lubricate the **FERTILIZA**. Check all **FERTILIZA** moving parts, if they show wear or play, make the necessary adjustment or replace the parts, leaving the distributor ready for the next job.

06 - In the period that you do not use the **FERTILIZA**, clean the residues of products that remain in it, leaving the **FERTILIZA** ready for the next job.

07 - When connecting or disconnecting hydraulic hoses, do not let the terminals touch the ground. Before connecting the hydraulic hoses, wipe the connections with a clean, lint-free cloth. **Do not use tow!**

08 - Replace all adhesives, especially those about warnings, that are damaged or missing. Make everyone aware of the importance and risks of accidents when instructions are not followed.

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

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

⚠ ATTENTION | **Do not use chemicals or abrasives to wash FERTILIZA, as this may damage the paint and adhesives on it.**

▪ Maintenance

• Distributor Conservation - Part I

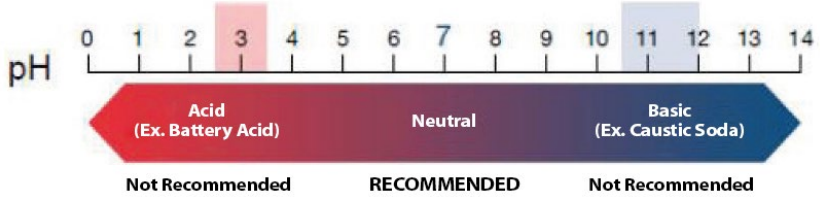
To extend the life and appearance of **FERTILIZA** for longer, please follow the instructions below:

01 - Fertilizers and their additives are highly corrosive and their formulation is increasingly aggressive to seeder components.
02 - Wash and clean all distributor components during and at the end of the working season.
03 - Use neutral products to clean the distributor, following the safety and handling guideRows provided by the manufacturer.
04 - Always perform maintenance within the periods indicated in this manual.

• Distributor Conservation - Part II

The practices and precautions below if adopted by the owner or operator make a difference to the conservation of **FERTILIZA**.

01 - Be careful when washing with high PRESSURE; do not direct the water jet directly on connectors and electrical components. Isolate all electrical components;
02 - Use only water and NEUTRAL detergent (pH equal to 7);
03 - Apply the product, strictly following the manufacturer's instructions, on the wet surface and in the correct sequence, respecting the time of application and washing;
04 - Stains and dirt not removed with the products must be removed with the aid of a sponge.
05 - Rinse the machine with clean water to remove all chemical residue.
06 - Do not use: - Detergents with basic active principle (pH greater than 7) can damage/stain the distributor paint.
- Detergents with acid active principle (pH less than 7), act as a stripper/zinc remover (the protection of parts against oxidation).



07 - Allow the machine to dry in the shade so that water does not accumulate in its components. Drying too quickly can cause stains on your paint.

▪ Maintenance

• Distributor Conservation - Part III

08 - After drying lubricate all chains and grease fittings according to operator manual recommendations.

09 - Spray the entire machine, especially the zinc-coated parts, with protective oil, following the manufacturer's application guideRows. The protector also prevents dirt from sticking to the machine, facilitating subsequent washing.

10 - Observe the cure time (absorption) and application intervals as recommended by the manufacturer.

⚠ ATTENTION

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

IMPORTANT

We recommend the following protective oils:
- Bardahl: Protective Agro 200 or 300
- ITWChemical: Zoxol DW - Series 4000

NOTE

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

Optional

• Optional accessories

The **FERTILIZA** has options that can be purchased according to the need for work.

MANAGEMENT SYSTEMS

RAVEN CR7

AGROSYSTEM MC-TF

TRIMBLE GFX-750™

▪ Identification

• Identification plate

To see the parts catalog or to request technical assistance from Baldan, always inform model (01), serial number (02) and date of manufacture (03), which is on your **FERTILIZA** nameplate.

⚠ ATTENTION

The drawings in this Instruction Manual are merely illustrative.
In order to provide a better view and detailed instruction, some drawings in this manual have been removed from parts and safety devices (covers, protections, etc.). Never operate FERTILIZA without these devices.

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

Código: 60550106496 | CPT: FERTILIZA10424A

• 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: _____

PEÇAS ORIGINAIS BALDAN
ORIGINAL PARTS · PIEZAS ORIGINALES

- **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 deadRow 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.

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 _____

2nd copy - Dealer

▪ Inspection and Delivery Certificate

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

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

I confirm that the 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

BALDAN IMPLEMENTOS AGRÍCOLAS S/A.

Av. Baldan, 1500 | Nova Matão | CEP: 15993-900 | Matão-SP | Brasil

Phone: (016) 3221-6500 | Fax: (0**16) 3382-6500**

Home Page: www.baldan.com.br | e-mail: sac@baldan.com.br

Export: Phone: 55 16 3321-6500 | Fax: 55 16 3382-4212 | 3382-2480

e-mail: export@baldan.com.br

BALDAN

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