



GS

Pneumatic seed drill



USER'S MANUAL

COMMISSIONING, MAINTENANCE AND METERING UNIT

www.solagrupo.com

*Thank you for placing your trust in **SOLÀ**.*

We have designed this seed drill to offer you the best performance and reliability in the field.

In this manual, you will find all the information you need for use, maintenance, and adjustments.

Our goal is for you to make the most of all its features and achieve the best results with every sowing.



1st Edition - December 2025

Ref.: CN-811177/GB

Created by: M.A. SOLÀ S.L.

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Specifications subject to change without prior notice.

The photographs do not necessarily show the standard version of the machine.

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1. INTRODUCTION

Before starting to work with the **GS** seeder, it is necessary to **READ THE INSTRUCTIONS AND RECOMMENDATIONS** in this manual. This will reduce the risk of accidents, prevent damage to the seed drill due to incorrect use, and increase its performance and service life.

The manual must be read by anyone who performs operational tasks (including preparations, field repairs and general machine care), maintenance (inspection and technical assistance) and transport.

For your own safety and that of the machine, always follow the technical safety instructions. **SOLÀ** accepts no responsibility for damage or breakdowns caused by failure to follow the instructions given in this manual.

In the first chapters, you will find the Technical Specifications and Safety Instructions, as well as some Fundamental Concepts for Sowing. The sections on Commissioning and Maintenance provide the basic knowledge required to work with the machine.



SOLÀ RESERVES THE RIGHT TO MODIFY THE ILLUSTRATIONS AND TECHNICAL DATA CONTAINED IN THIS MANUAL IF IT IS CONSIDERED THAT SUCH MODIFICATIONS WILL IMPROVE THE QUALITY OF THE SEED DRILLS.

In this manual, you will find three types of safety and hazard symbols:



TO FACILITATE WORK WITH THE SEED DRILL.



TO AVOID DAMAGE TO THE SEED DRILL OR OPTIONAL EQUIPMENT.



TO AVOID INJURY TO PERSONS.

2. SAFETY INSTRUCTIONS

2.1 SAFETY SYMBOLS

You will find the following warning labels on the machine:



READ CAREFULLY AND FOLLOW THE INSTRUCTIONS FOR USE AND SAFETY ADVICE GIVEN IN THE INSTRUCTION MANUAL.



DO NOT ACCESS THE LADDER WHILE THE MACHINE IS IN OPERATION.
RISK OF INJURY.



KEEP CLEAR OF THE REAR OF THE TRACTOR DURING THE COUPLING MANOEUVRE.
RISK OF SERIOUS INJURY.



RISK OF CRUSHING IF WORKING UNDERNEATH THE MACHINE. NEVER STAND UNDERNEATH THE SEEDING EQUIPMENT.
RISK OF SERIOUS INJURY.



POSSIBILITY OF HYDRAULIC FLUID PENETRATION UNDER PRESSURE. KEEP PIPES IN GOOD CONDITION.
RISK OF SERIOUS INJURY.



DO NOT STAND UNDER THE ROW MARKERS OR WITHIN THEIR RANGE OF ACTION.
RISK OF SERIOUS INJURY.



SWITCH OFF THE TRACTOR ENGINE AND PREVENT IT FROM STARTING DURING MAINTENANCE OR REPAIR WORK ON THE SEED DRILL.



COUPLING POINT FOR TRANSPORT HANDLING BY CRANE.

2.2 USE IN ACCORDANCE WITH THE DESIGN

- The **GS** seed drill has been specifically designed for sowing cereals and other grain seeds.
- All legal provisions relating to machine safety, traffic safety, and occupational health and safety must be observed.
- If damage or defects occur as a result of other applications of the machine, the manufacturer shall not be held liable for them.
- Modifications made by the user void the manufacturer's warranty for any malfunctions or damage that may arise.

2.3 SAFETY INSTRUCTIONS



BEFORE STARTING WORK, ALWAYS CHECK THE SAFETY OF THE MACHINE AT WORK AND IN RELATION TO TRAFFIC.



ENSURE THAT THERE ARE NO PERSONS IN THE MACHINE'S WORKING AREA OR ITS SURROUNDINGS.



WHEN USING PUBLIC ROADS, OBEY TRAFFIC SIGNS AND REGULATIONS.



IT IS STRICTLY FORBIDDEN TO CLIMB ONTO THE MACHINE DURING OPERATION AND TRANSPORT.



BEFORE STARTING WORK, FAMILIARISE YOURSELF WITH ALL THE DRIVE ROW UNITS, AS WELL AS THEIR FUNCTIONS.



PAY SPECIAL ATTENTION WHEN COUPLING AND DETACHING THE MACHINE TO THE TRACTOR.



THE POWER TAKE OFF TRANSMISSION MUST BE PROTECTED AND IN GOOD CONDITION. PREVENT THE PROTECTIVE TUBE FROM TURNING BY SECURING IT WITH THE CHAIN PROVIDED FOR THIS PURPOSE.



ONLY FIT THE POWER TAKE OFF TRANSMISSION WITH THE TRACTOR ENGINE SWITCHED OFF.



BEFORE CONNECTING THE POWER TAKE OFF, ENSURE THAT NO ONE IS NEAR THE AREA.



NEVER LEAVE THE DRIVER'S SEAT OF THE TRACTOR WHILE IT IS MOVING.



DO NOT PLACE FOREIGN OBJECTS IN THE MACHINE'S HOPPER.



BEFORE WORKING ON THE HYDRAULIC SYSTEM, RELEASE THE PRESSURE FROM THE CIRCUIT AND STOP THE TRACTOR ENGINE.



UNDER NORMAL CONDITIONS, THE TUBES AND HOSES IN HYDRAULIC CIRCUITS UNDERGO NATURAL AGEING. THE SERVICE LIFE OF THESE ROW UNITS SHOULD NOT EXCEED 6 YEARS. CHECK THEIR CONDITION PERIODICALLY AND REPLACE THEM AFTER THIS TIME.



RAISE THE SEED DRILL, UNLOAD THE FRONT AXLE OF THE TRACTOR. ENSURE THAT IT HAS SUFFICIENT CARGO SO THAT THERE IS NO RISK OF TIPPING OVER. IN THIS SITUATION, CHECK THE STEERING AND BRAKING CAPACITY.



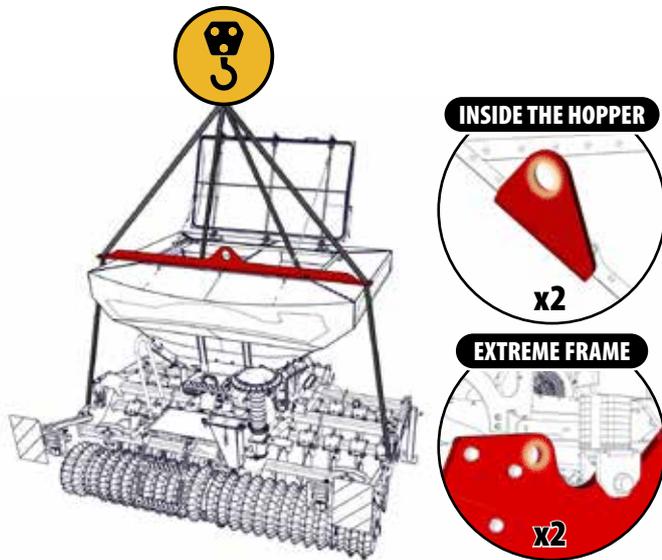
DURING TRANSPORT WITH THE SEED DRILL RAISED, LOCK THE LOWERING CONTROL. BEFORE LEAVING THE TRACTOR, LOWER THE MACHINE TO THE GROUND AND REMOVE THE IGNITION KEY.



WHEN PERFORMING MAINTENANCE WORK WITH THE MACHINE RAISED, ALWAYS USE SUFFICIENT SUPPORT ROW UNITS TO PREVENT THE MACHINE FROM DESCENDING.

2.4 CARGO AND UNLOADING INSTRUCTIONS

The following images show the layout of the lifting holes, where the ropes should be tied:



THESE OPERATIONS MUST BE PERFORMED BY QUALIFIED AND EXPERIENCED PERSONNEL.



UPON RECEIPT OF THE MACHINE, CHECK FOR ANY DAMAGE CAUSED BY TRANSPORT OR IF ANY PARTS ARE MISSING. ONLY BY MAKING AN IMMEDIATE CLAIM TO THE TRANSPORT COMPANY CAN YOU OBTAIN REPLACEMENT FOR DAMAGES.



CARGO AND UNLOADING OF THE TRUCK MUST BE CARRIED OUT WITH THE ASSISTANCE OF A CRANE, IF POSSIBLE.

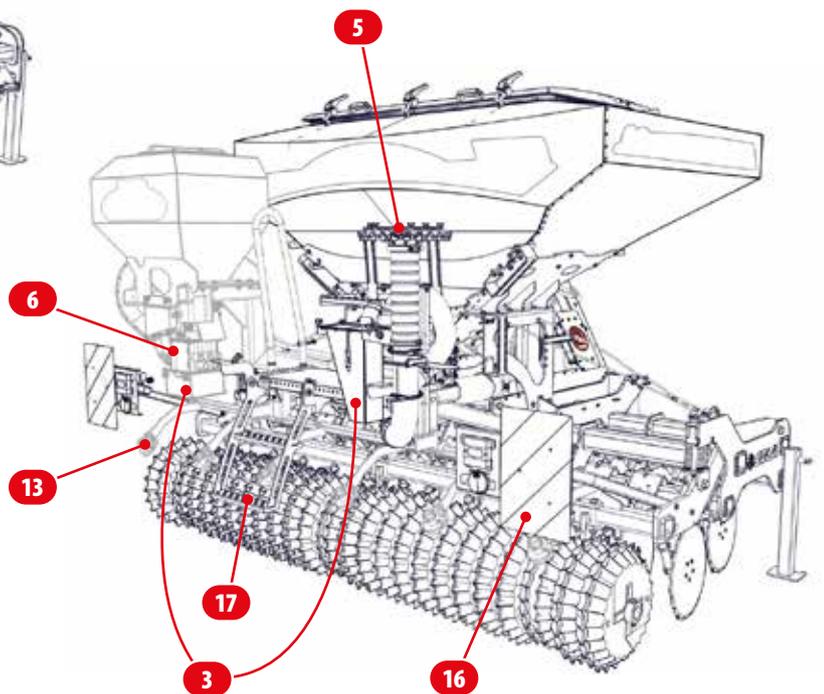
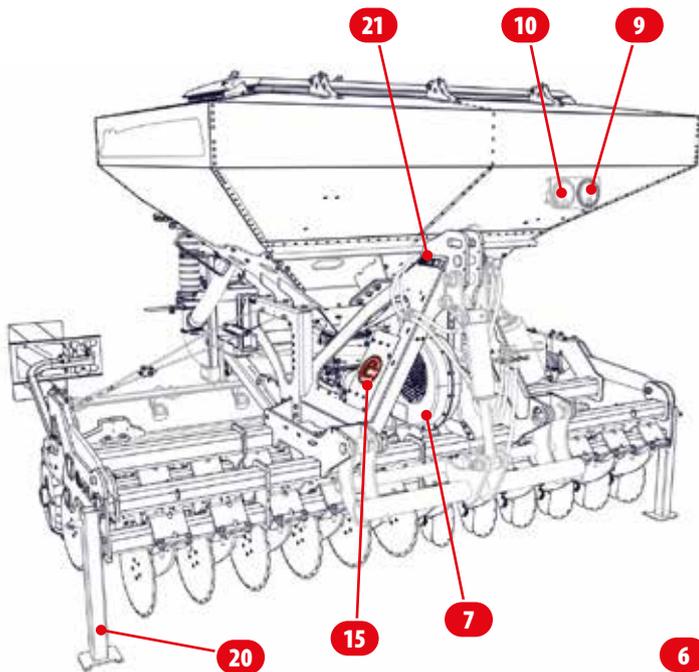
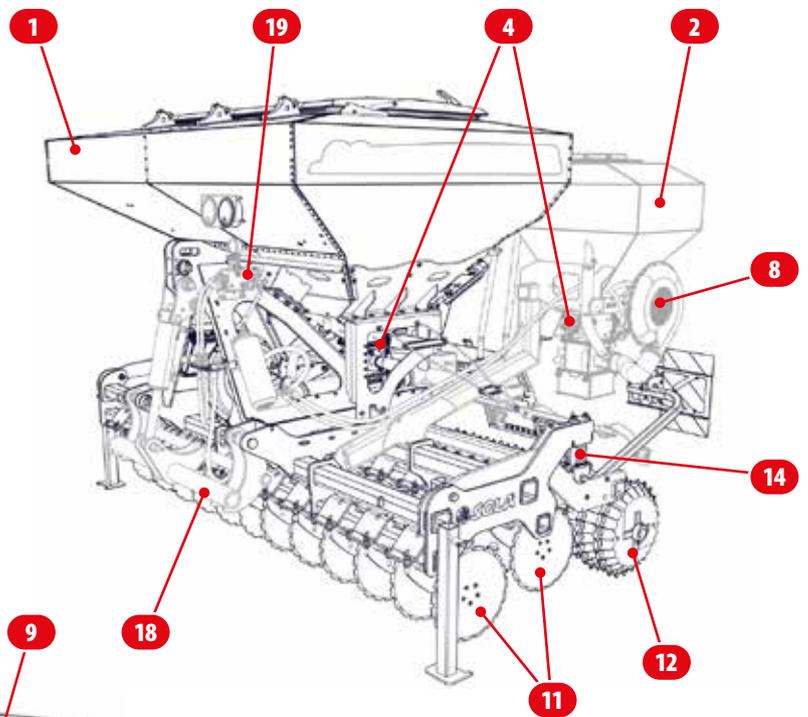


ATTENTION: TO AVOID DAMAGE TO THE HOPPER DURING CARGO OR UNLOADING OF THE MACHINE, USE TOOL **PT-001283**.

3. GENERAL DESCRIPTION OF THE MACHINE

3.1 OVERVIEW

- 1- Hopper of 300 or 2000 litres.
- 2- Hopper of 185 litres (optional).
- 3- Calibration box.
- 4- Metering unit.
- 5- Distribution head.
- 6- Collecting box.
- 7- Turbine (for 300 or 2000 litre hopper).
- 8- Turbine (for 185 litre hopper).
- 9- Pressure gauge for 300 or 2000 litre hopper.
- 10- Pressure gauge for 185-litre hopper.
- 11- Sowing disc coulters.
- 12- Toothed roller.
- 13- Surface applicator.
- 14- Seeding depth adjustment.
- 15- ECU (only for models with isobus)
- 16- Signage for public roads.
- 17- Ladder and access platform.
- 18- Weight transfer (optional).
- 19- Hydraulic block for weight transfer.
- 20- Footrests.
- 21- Identificationplate from the machine.



3.2 MACHINE IDENTIFICATION

All machines have an IDENTIFICATION PLATE on the frame, which specifies:



- a.** Name and address of the manufacturer.
- b.** Machine model.
- c.** Machine type.
- d.** Serial number.
- e.** Year of manufacture (last two digits).

3.3 TECHNICAL SPECIFICATIONS

MODEL	300/24	300/32
Type of furrow opener	16" simple disc	
Working width (m)	3	
Transport width (m)	3	
Height (m)	2.25 (with 2000L hopper) 2.1 (with 300L hopper)	
Depth (m)	2.2	
Number of rows	2	
Number of rows	24	32
Distance between rows (cm)	12.5	9.4
Empty weight of the machine with 2000L hopper (kg)	2435	2635
Empty weight of the machine with 300L hopper (kg)	2195	2395
Hopper capacity	1 product: 2000L or 2 products: 1000L/1000L 1 product: 300L or 2 products: 300L/185L 2 products: 2000L + 185L or 3 products: 1000L/1000L + 185L	
Filling height (cm)	215 (2000L and 300L hopper)	
Filling opening (cm)	147x82 (2000L hopper) Ø41 (300L hopper)	
Coupling category	Cat. III	
Minimum required power (hp)	140	
Metering unit drive	Electric	
Speed source	7 pins - Other options available	
Fan drive	Hydraulic	
Required hydraulic flow (L)	36	
Removable sieve	As standard	
Dose calibration kit	As standard	
Controller / Monitor	isobus or PERFORMER 530	
Signal lights and work lamps	As standard	

3.4 TRACTOR REQUIREMENTS



WARNING: RISK OF ACCIDENT DUE TO TRACTOR OVERLOADING. MAINTAIN THE PERMITTED VALUES FOR THE TRACTOR REGARDING AXLE CARGO, TOTAL WEIGHT, TYRE CARGO CAPACITY AND AIR PRESSURE.

Check the suitability of the tractor before starting it up.

Electrical system/Control unit

Power supply	12 V
Lighting	7-pin power socket.
Control unit	AEF-certified isobus or PERFORMER 530
Electrical power	50 A at isobus socket (ISO 11783-2) 15 A in PERFORMER 530

Hydraulics

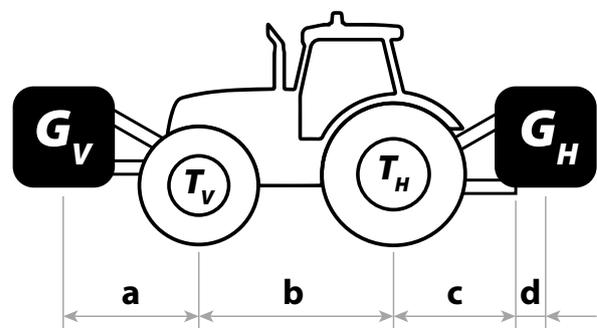
TRACTOR	GS
Double-acting controllers	• Weight transfer.
Double-acting controller units with adjustable flow rate	• Hydraulic motor for blower fan. Flow rate: 36 l/min.
Non-pressurised return (max. 1.5 bar)	• 1 general return
Type of oil	Mineral hydraulic oil
Maximum system pressure	210 bar

3.4.1 CALCULATING THE BALLAST CARGO

The attachment or coupling of implements must not exceed the maximum permissible total weight, the maximum axle cargo and the load-bearing capacity of the tractor's tyres. The front axle of the tractor must always be loaded with at least 20% of the tractor's unladen weight.

- Before travelling by road, check that the tractor used is suitable for this implement and does not overload it.
- Weigh the implement separately. As there may be different equipment, the weight of the implement must be determined by weighing it.

Required information



T_L	Empty weight of the tractor.
T_V	Front axle cargo of the tractor when empty.
T_H	Cargo on the rear axle of the tractor when empty.
G_H	• Total weight of rear implement (see technical specifications tables).
G_V	Total weight of front implement/front weight.
a	Distance from the centre of gravity of the front implement/front weight to the centre of the front axle.
b	Wheelbase of the tractor.
c	• Distance from the centre of the rear axle to the centre of the lower coulter sphere.
d	• Distance from the centre of the lower coulter sphere to the rear implement's centre of gravity (see technical specifications tables).
x	Tractor manufacturer's specifications for minimum rear cargo load. If no specifications are available, enter 0.45.

- * All weights are expressed in kilograms (kg).
- * All dimensions are expressed in metres (m).

Calculations

1. Calculation of minimum cargo with ballast at the front for rear implement:

$$G_{Vmin} = \frac{[G_H \cdot (c + d)] - (T_V \cdot b) + (0,2 \cdot T_L \cdot b)}{a + b}$$

Record the result in the table.

2. Calculation of the minimum rear cargo load for front implements:

$$G_{Hmin} = \frac{(G_V \cdot a) - (T_H \cdot b) + (x \cdot T_L \cdot b)}{b + c + d}$$

Record the result in the table.

3. Calculation of the actual front axle cargo:

$$T_{Vtat} = \frac{[G_V \cdot (a + b)] + (T_V \cdot b) - [G_H \cdot (c + d)]}{b}$$

Record in the table the calculation results obtained from the actual front axle cargo and the permissible front axle cargo of the tractor as indicated in the tractor's instruction manual.

4. Calculation of actual total weight:

$$G_{tat} = G_V + T_L + G_H$$

Record in the table the calculation results obtained for the total weight and the permissible total weight of the tractor as indicated in the tractor's instruction manual.

5. Calculation of the actual rear axle cargo:

$$T_{Htat} = G_{tat} - T_{Vtat}$$

Record in the table the results of the calculation obtained from the actual rear axle cargo and the permissible cargo for this indicated in the tractor instruction manual.

Monitor calculations

Additionally check the calculated values by weighing them: Weigh the combination of the tractor and the coupled or incorporated machine to calculate the weight of the front and rear axles.

Compare the calculated values with the permitted values. These include:

- Total permissible weight.
- Maximum front and rear axle cargo.

The calculated values must not exceed the values permitted by the tractor:

	CALCULATIONS		TRACTOR MANUAL DATA	
	Actual value according to calculation	Permissible value according to the instruction manual	tyre cargo capacity x2	
Minimum ballast at the front (with rear implement)	$G_{Vmin} = \text{---} \text{ kg}$			
Minimum ballast at the rear (with front implement)	$G_{Hmin} = \text{---} \text{ kg}$			
Total weight	$G_{tat} = \text{---} \text{ kg}$	\leq	$\text{---} \text{ kg}$	
Front axle cargo	$T_{Vtat} = \text{---} \text{ kg}$	\leq	$\text{---} \text{ kg}$	\leq $\text{---} \text{ kg}$
Rear axle cargo	$T_{Htat} = \text{---} \text{ kg}$	\leq	$\text{---} \text{ kg}$	\leq $\text{---} \text{ kg}$



WARNING: LOSS OF STEERING CONTROL ON THE FRONT AXLE. A MINIMUM WEIGHT IS REQUIRED ON THE FRONT AXLE. THIS VALUE MUST EXCEED 20% OF THE TRACTOR'S UNLOADED WEIGHT ($0,2 \times T_L$).

4. FUNDAMENTAL CONCEPTS FOR SOWING

4.1 LAND



THE BETTER THE SOIL IS PREPARED, THE HIGHER THE QUALITY OF THE SOWING. IT IS NOT POSSIBLE TO DO A GOOD JOB ON LARGE CLODS OR VERY UNEVEN FURROWS. ALTHOUGH **SOLÀ** MACHINES CAN WITHSTAND HARD WORK IN ADVERSE CONDITIONS, THE SOWING WILL NOT BE OF HIGH QUALITY IF THE SEEDBED DOES NOT MEET THE NECESSARY CONDITIONS.

4.2 SEED



IT IS ESSENTIAL TO USE HIGH-QUALITY, CLEAN SEED AND, IN THE CASE OF BARLEY, WELL-DEHUSKED SEED.

4.2.1 ADJUSTING THE SEED DOSE

When using high-quality certified seeds, it is not enough to simply set the weight in kilograms to be distributed by the machine, as the final harvest yield will depend on the number of plants that reach full maturity.

Each plant requires a certain amount of space from which to obtain nutrients. Thus, sparse plant density can be just as bad as excessive density. To decide how many kilograms per hectare to sow, we need to know the number of plants per square metre that we are going to sow.

As a guideline, the recommended number of plants for wheat and barley, in rainfed conditions, is as follows:

AUTUMN	SPRING
Early sowing, 200 plants per m ²	Early sowing, 310 plants per m ²
Late sowing, 265 plants per m ²	Late sowing, 445 plants per m ²

Please note that in spring, the number of seedlings is always lower, so the amount to be sown should be increased.



MAQUINARIA AGRÍCOLA SOLÀ, S.L., RECOMMENDS THAT FARMERS SEEK ADVICE FROM QUALIFIED SPECIALISTS IN THIS FIELD.

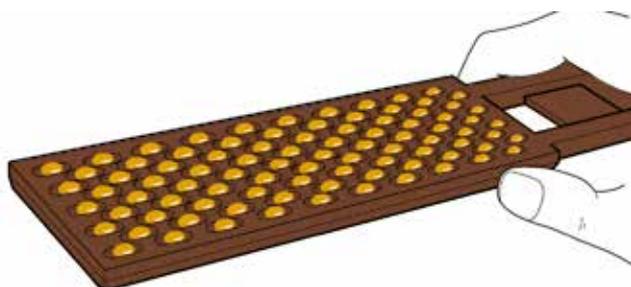


SEED DOSES MUST BE ADJUSTED TO EACH FIELD ACCORDING TO ITS TEXTURE, FERTILISATION LEVEL, RAINFALL, SOWING SEASON, GRAIN QUALITY, GERMINATION AND SUCCHENTION POWER, ETC.

Furthermore, it should be noted that seed germination capacity varies and depends on many factors. Experimentally, it can be estimated at between 70 and 80, which in practice is equivalent to multiplying the number of seeds to be sown by 1.43 or 1.25 respectively.

Below is a practical method for determining the kilograms per hectare that we should distribute, based on the plants per square metre that we want to obtain.

- 1- Insert the "grain counter" into the seed bag to fill it.
- 2- When removing it, run your hand over it so that there is only one grain left in each cavity (100 grains in total).



- 3- Repeat the operation 10 times to obtain 1,000 grains.
- 4- Weigh 1,000 grains on a precision scale.

The weight obtained in GRAMS will be referred to as OPERATING WEIGHT. Knowing the number of grains per square metre that we are going to sow, the kilograms per hectare that we must adjust in the metering unit are:

$$\text{kg/ha} = \frac{\text{grains per m}^2 \times \text{OPERATING WEIGHT}}{100}$$

4.3 DEPTH



DIGGING TOO DEEP IS A COSTLY MISTAKE, AS THE RHIZOME CANNOT REACH THE SURFACE AND THE PLANT DIES.

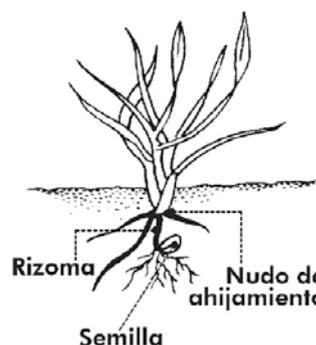
Seeding depth influences tillering, plant vigour, and resistance to frost and drought: the tillering node always remains between 1 and 2 cm below the surface, regardless of the depth at which the seed is buried.

Sowing deeper does not mean we will have deeper roots. Only a few roots grow from the bottom of the seed. The main mass grows from the tillering node, almost at ground level.



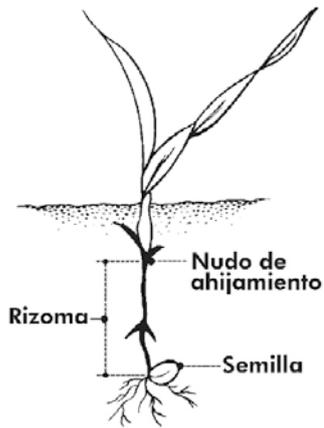
Sow at normal depth: 2 to 4 cm

- Thick stem, short rhizome and good resistance to frost.
- Multiple tillering of 3 to 6 shoots and many leaves, between 6 and 10.
- Large root system, 5 cm wide and 10–12 cm deep.
- With fewer seeds per square metre of sowing, more ears of corn are obtained.



Sowing something deeper: between 5 and 6 cm.

- Thin stem, rhizome exposed to frost.
- Delayed and poor tillering, 1 or no tillers and few leaves, about 3 or 4.
- Regular rooting, 3 cm wide and 5 cm deep.
- We need more grains per square metre to obtain the same number of ears as in the first case.



Sow very deep: 8 to 10 cm

- Very thin stem. No suckering and only one leaf.
- The grain reserves are depleted in a long rhizome that can be easily cut by ice.
- Poor rooting, 1 cm wide and 3 cm deep.
- We need twice as many grains per square metre to obtain the same number of ears as in the first case.

WARNING



IN VERY COLD AREAS, SUCCESSIVE FROST CAN CAUSE THE UPPER SOIL LAYER TO BECOME LOOSE, WITH THE RISK OF DISLODGING THE PLANT'S INITIAL ROOTS AND CAUSING ITS DEATH. IN THESE CASES, IT MAY BE ADVISABLE TO USE A SLIGHTLY GREATER SEEDING DEPTH OR, IF POSSIBLE, TO GIVE A PASS WITH A ROLLER TO COMPACT THE SOIL AND BETTER PROTECT THE SEED.



WHEN STARTING TO DRIVE, NO SEEDS ARE DEPOSITED IN THE FURROWS DURING THE FIRST METRE. HOWEVER, WHEN THE MACHINE IS STOPPED, THE SEEDS THAT ARE STILL COMING DOWN THE TUBES WILL ACCUMULATE IN THE LAST METRE TRAVELLED. KEEP THIS IN MIND TO ACHIEVE A UNIFORM FINISH.



ALWAYS WORK AT A CONSTANT SPEED. SUDDEN ACCELERATIONS AND DECELERATIONS DISTRIBUTE THE SEED IRREGULARLY.

5. COMMISSIONING

5.1 COUPLING THE TRACTOR TO THE GS

THE GS SEED DRILL IS EQUIPPED WITH CATEGORY 3 COUPLINGS.



DURING THE COUPLING AND UNCOUPLING MANOEUVRE, ENSURE THAT THERE ARE NO PERSONS OR OBJECTS BETWEEN THE TRACTOR AND THE SEED DRILL.

To perform the coupling manoeuvre, follow these steps:

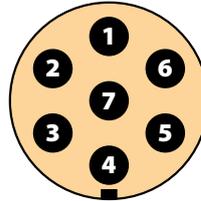
- 1- If weight transfer is not available, quick-release balls must be placed on the two lower bolts of the tripuntal.
- 2- Connect the hydraulic hoses and electrical connector to the tractor. Run the monitor cable to the tractor cab and connect the monitor.
- 3- Reduce weight transfer if optional equipment is available.
- 4- Coupling the machine to the tractor.



IMPORTANT: CONNECT THE TURBINE RETURN PIPE. IF THIS CONNECTION IS NOT MADE AND PRESSURE IS APPLIED TO THE TURBINE HYDRAULIC CIRCUIT, THE ENGINE MAY BE DAMAGED.

5.2 ELECTRICAL CONNECTIONS

Table and diagram of the 7-pin connector:

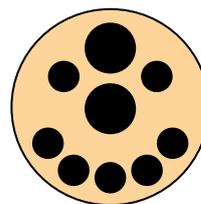


Pin number	FUNCTION
1	Left indicator
2	NOT USED
3	Mass
4	Right indicator
5	Right position light
6	Brake
7	Left position light



WARNING: TRAFFIC ACCIDENTS DUE TO DEFECTIVE LIGHTING.

- Pay attention to the cleanliness and correct seating of the connections.
- Check the lights before setting off.
- Check that the indicators and lights are clean.



In order for the machine to be connected to the tractor's isobus, it must have a 9-pin connector (in accordance with ISO 11783).



For machine models without isobus, and equipped with PERFORMER 530, the 3-pin connector must be connected to the 12V cab output.



WHEN TRANSPORTING THE MACHINE ON PUBLIC ROADS, ENSURE THAT THE WORK LAMPS ARE SWITCHED OFF.

5.3 HYDRAULIC CONNECTIONS

For the hydraulic connection of the machine, you will need:

Weight transfer: *Green colour.*

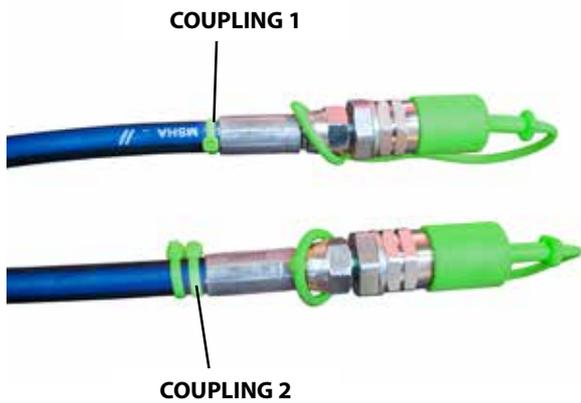
- Pressure on coupling 1: Transfer activated.
- Pressure on coupling 2: Transfer deactivated (for transport and decoupling of machine from tractor).

Blower turbine: *Colour:red.*

- Pressure at coupling 1 (free return must be connected).

The hydraulic connections are identified by the colour of the hydraulic plug:

COLOUR	DESCRIPTION
GREEN	Hydraulic weight transfer circuit.
RED	Hydraulic circuit for the turbine.



THE ADAPTER PLUG SUPPLIED MUST BE USED FOR THE CONNECTION OF THE OIL RETURN FROM THE TURBINE ENGINE.



THE FREE RETURN PRESSURE TO THE TRACTOR MUST NOT EXCEED 1.5 BAR; OTHERWISE, DAMAGE TO THE MACHINE MAY OCCUR.



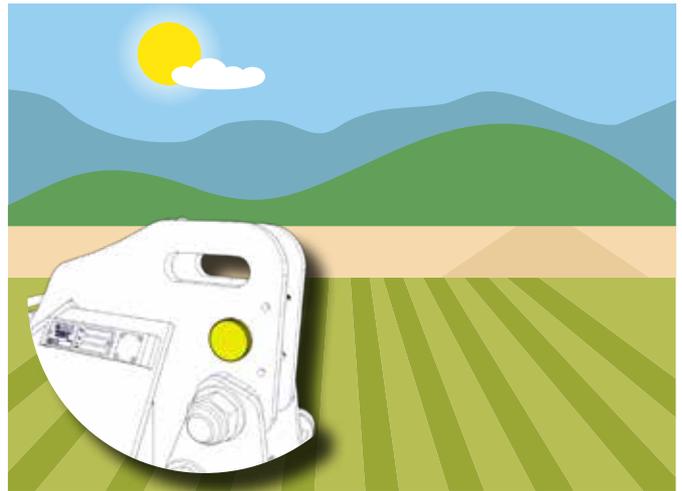
TO AVOID DAMAGE TO THE MACHINE, IT IS ADVISABLE TO PERFORM THE MOVEMENTS GENTLY.

5.4 ADAPTATION ACCORDING TO THE TOPOGRAPHY OF THE TERRAIN

The machine is designed to work on both steeply sloping terrain and flat terrain.

Depending on the topography of the terrain, the bolt for the third point must be placed in the corresponding hole.

Field without steep slopes



Field with steep longitudinal slope changes.



WHEN WORKING WITH THE THIRD POINT INSTALLED IN THE MACHINE GROOVE SHAPE, IF WEIGHT TRANSFER IS AVAILABLE, IT MUST BE CANCELLED.

5.5 TRANSPORT ON PUBLIC ROADS

To transport the machine, you must:

- 1- Check that the access ladder to the hopper is folded.
- 2- Lift the machine hydraulically.
- 3- Release pressure from the weight transfer hydraulic circuit (if optional equipment is fitted).



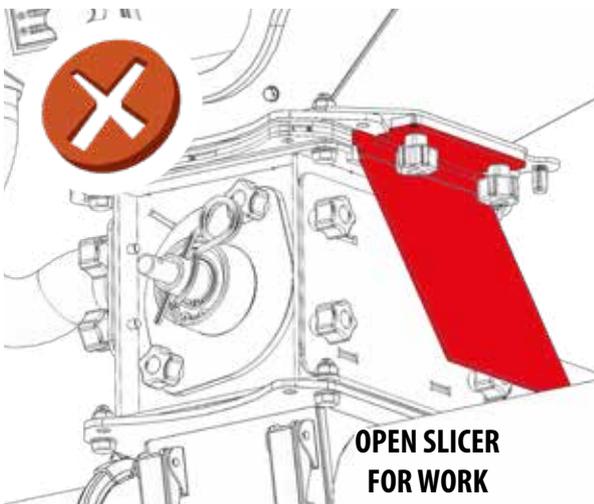
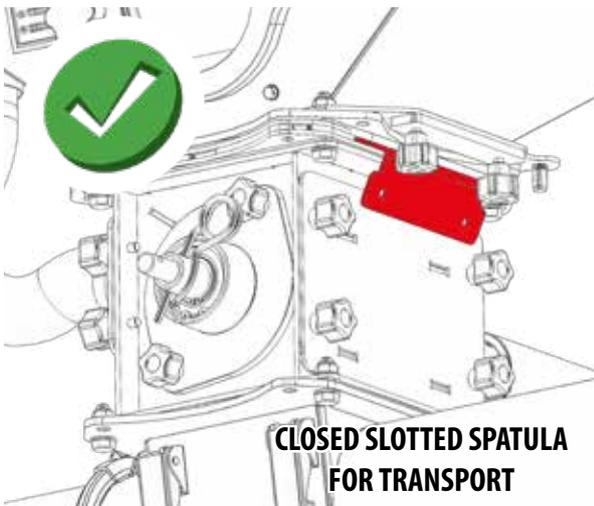
CHECK THE CORRECT FUNCTIONING OF THE SIGNALLING LIGHTS.



ENSURE THAT ROW UNITS ARE CORRECTLY FIXED, PREVENTING THEM FROM MOVING.



TO PREVENT THE PRODUCT FROM COMPACTING IN THE METERING UNIT, IT IS ADVISABLE TO PLACE THE CUTTER IN THE TRANSPORT POSITION.



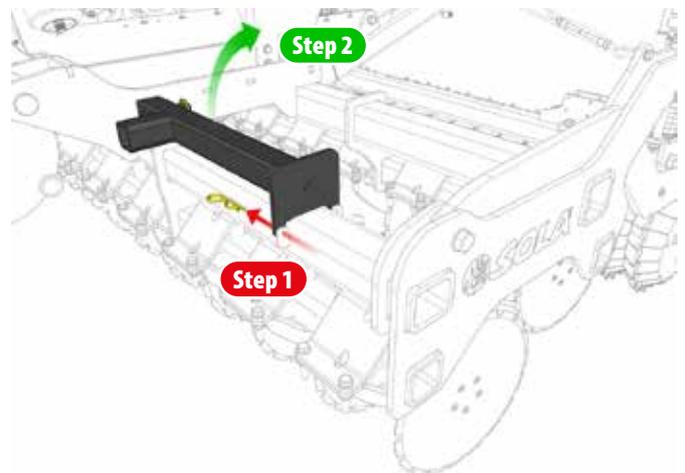
5.6 PARKING

To park the machine, two support feet must be positioned. To do this, you must:

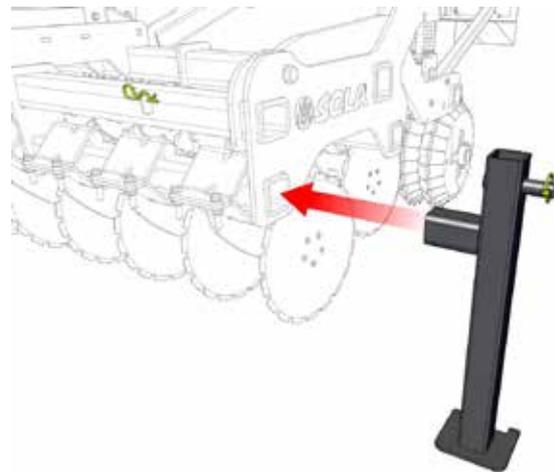


IMPORTANT: PARK THE MACHINE WITH EMPTY HOPPERS ON FLAT, PAVED GROUND WITHOUT ANY SLOPE.

- 1- With the machine raised, remove the pin and take the support foot out of its storage position, located on the sides of the frame.



- 2- Insert the support leg into its parking position.



- 3- Lower the weight transfer to unhook the machine from the tractor coulters (if optional equipment is available).
- 4- Disconnect the tractor from the seed drill.

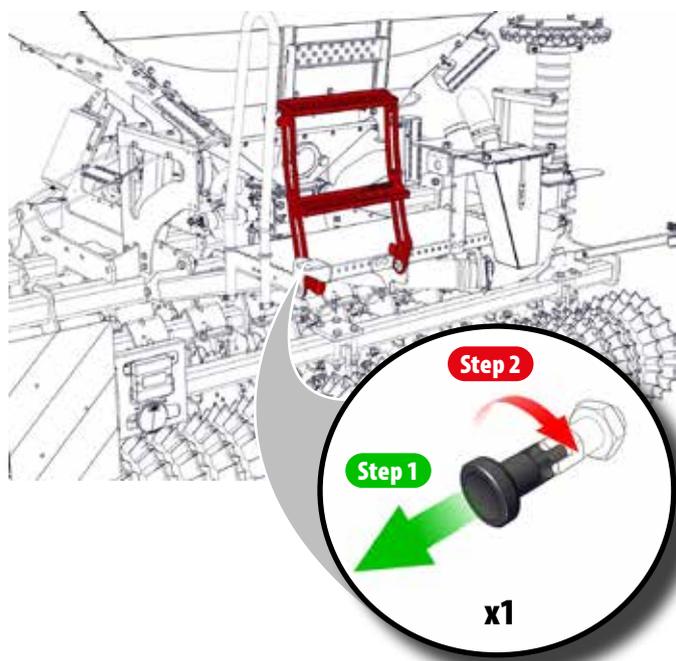


IMPORTANT: BEFORE STARTING TO SOW, STORE THE SUPPORT FEET IN THEIR STORAGE POSITION. OTHERWISE, THE MACHINE COULD BE DAMAGED.

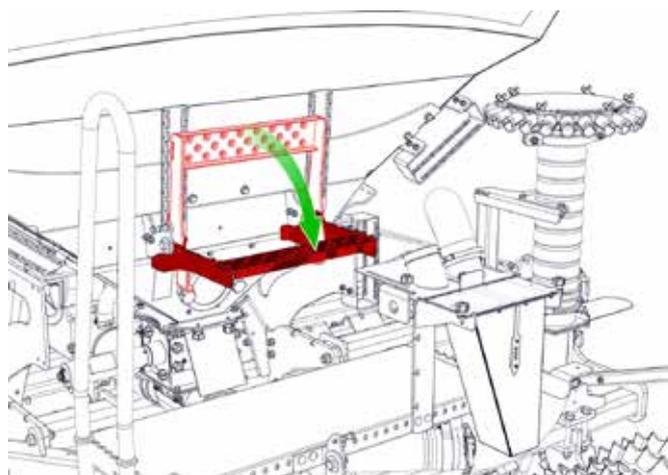
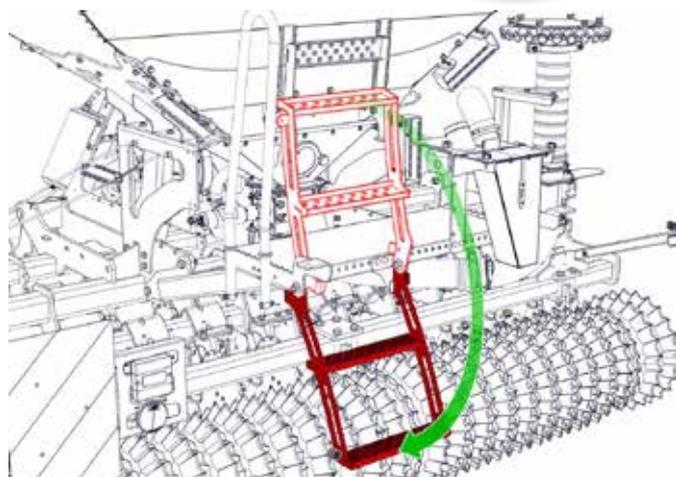
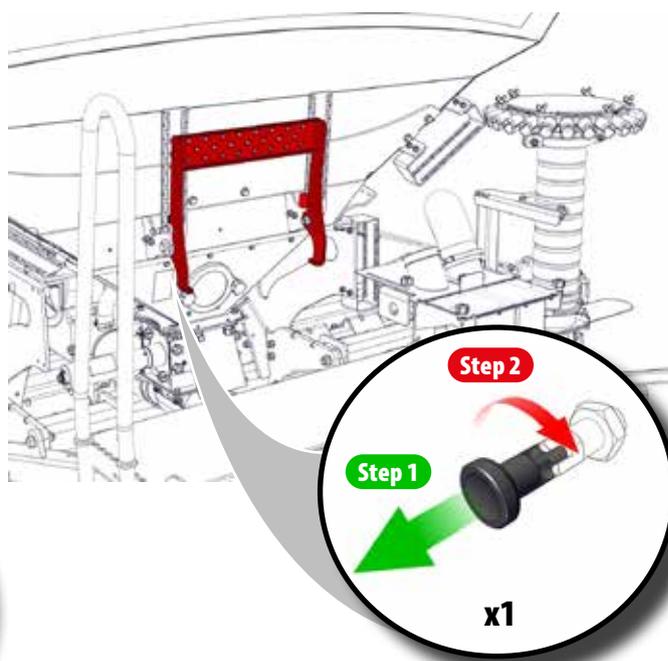
5.7 HOPPER LOADING

To load the hopper, follow these steps:

1- Unlock and unfold the access ladder to the platform.

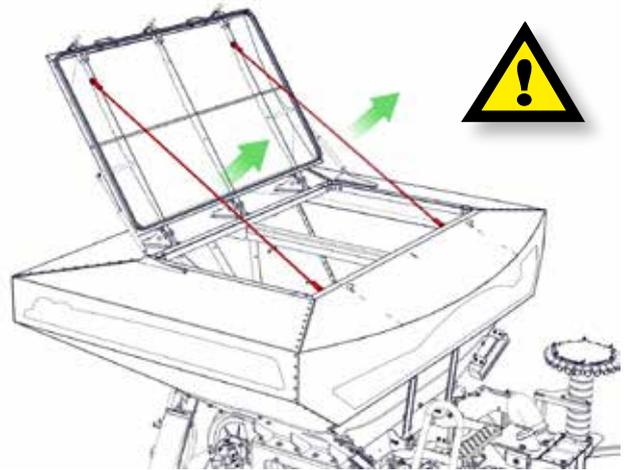
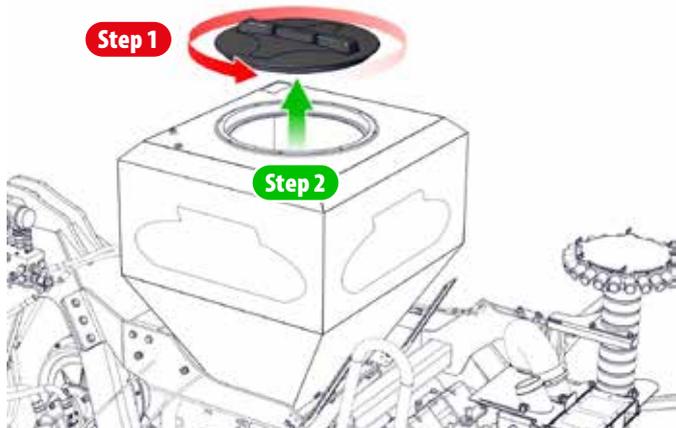


2- For machine versions with a 2000-litre hopper, unlock the step and unfold it to access the hopper cover.



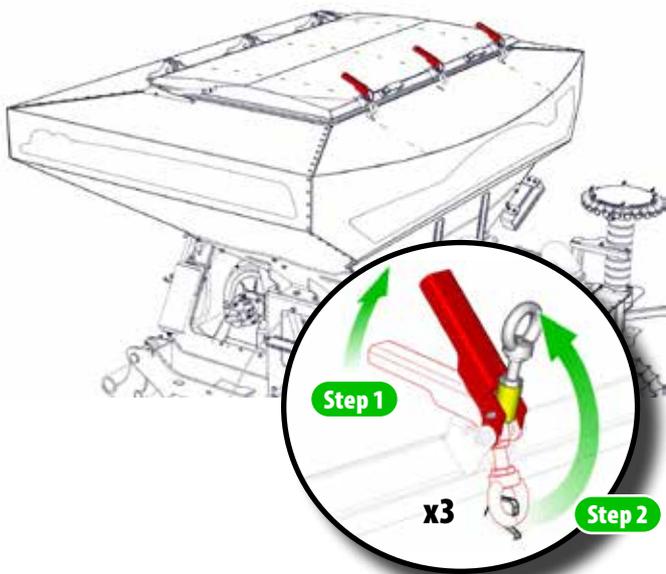
3- Open the lid.

Version with 185 or 300 litre hopper:

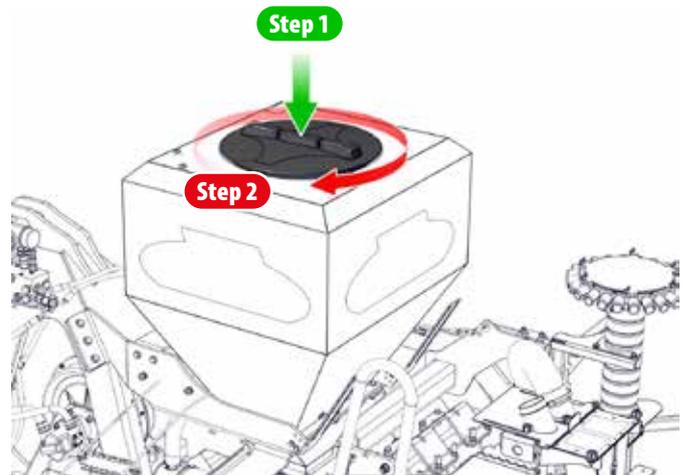


4- Load the product hopper, wearing gloves and a protective mask. Once cargo is complete, close the lid.

Version with 2000-litre hopper:



Version with 185 or 300 litre hopper:



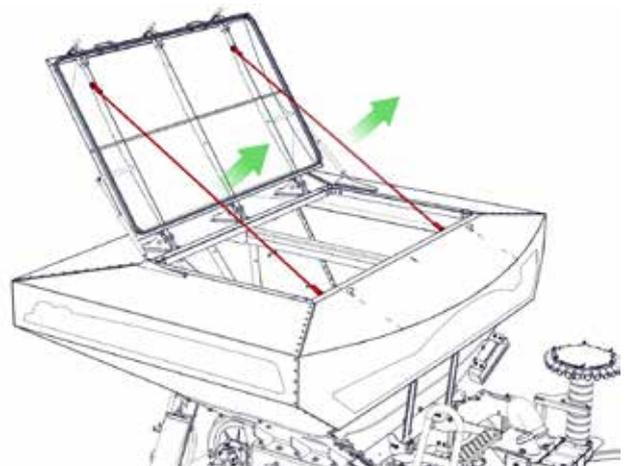
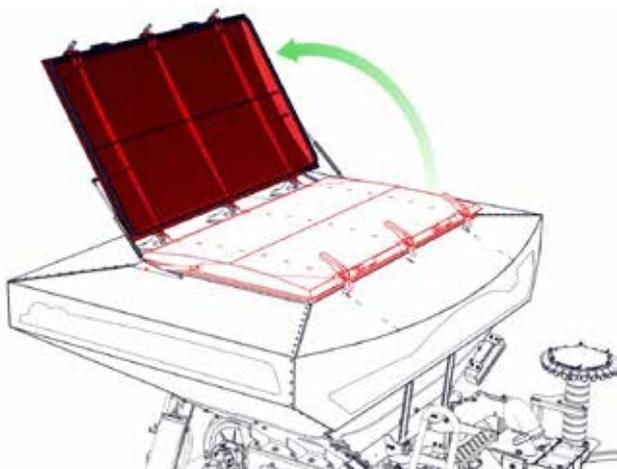
Version with 2000-litre hopper:



IMPORTANT: WHEN OPENING THE LID, HOLD THE CORD GENTLY.



PULL THE STRINGS CAREFULLY TO CLOSE THE LID.

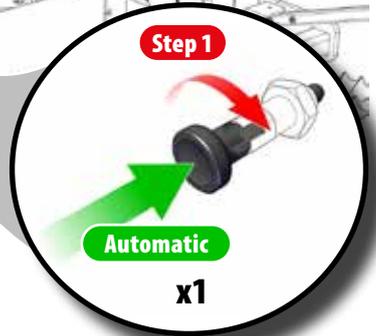
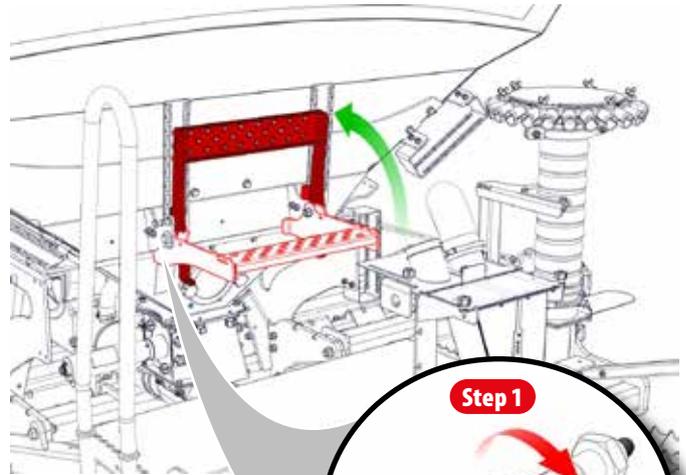
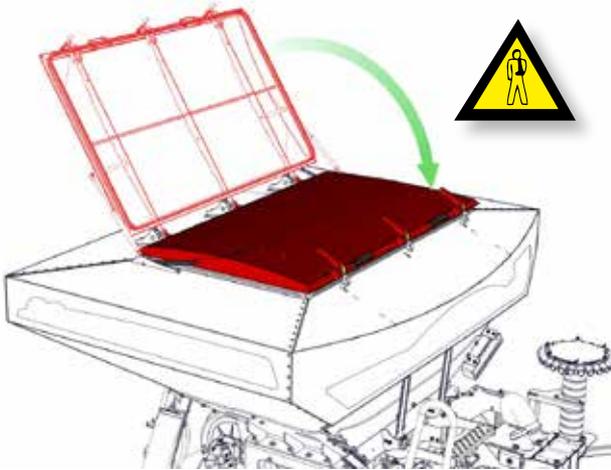




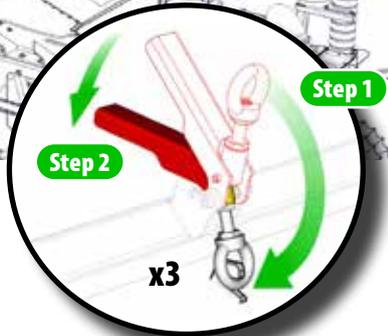
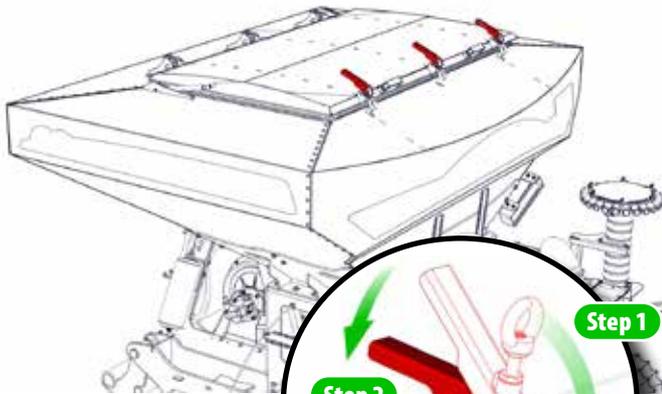
IMPORTANT: RISK OF SERIOUS INJURY FROM TRAPPING WHEN CLOSING THE LID.

5- Turn the lock and fold the steps.

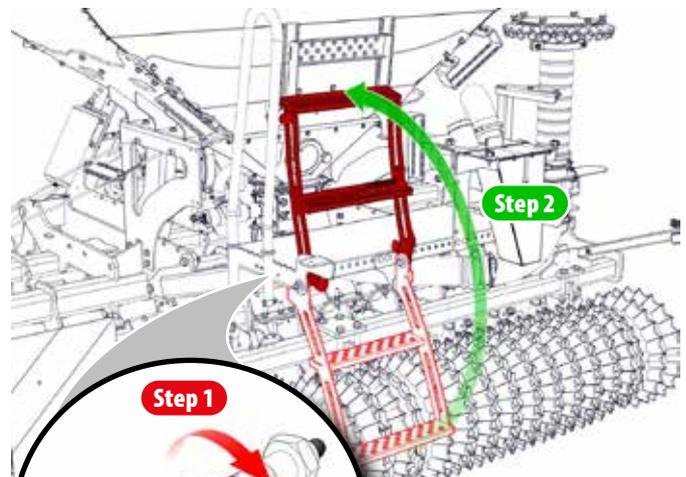
If you have the 2000-litre hopper:



FIT THE RINGS OF THE CLOSINGS INTO THE HOOKS OF THE HOPPER. THEN PRESS THE HANDLE TO LOCK THE LID CLOSINGS.



In all cases:



IMPORTANT: MAKE SURE THE LID IS PROPERLY CLOSED; OTHERWISE, THE HOPPER WILL NOT BE PRESSURISED AND THE MACHINE MAY NOT DOSING CORRECTLY. TO CHECK THAT THE HOPPER IS PRESSURISED PROPERLY, TURN ON THE TURBINE AND CHECK THE READING ON THE PRESSURE GAUGE.

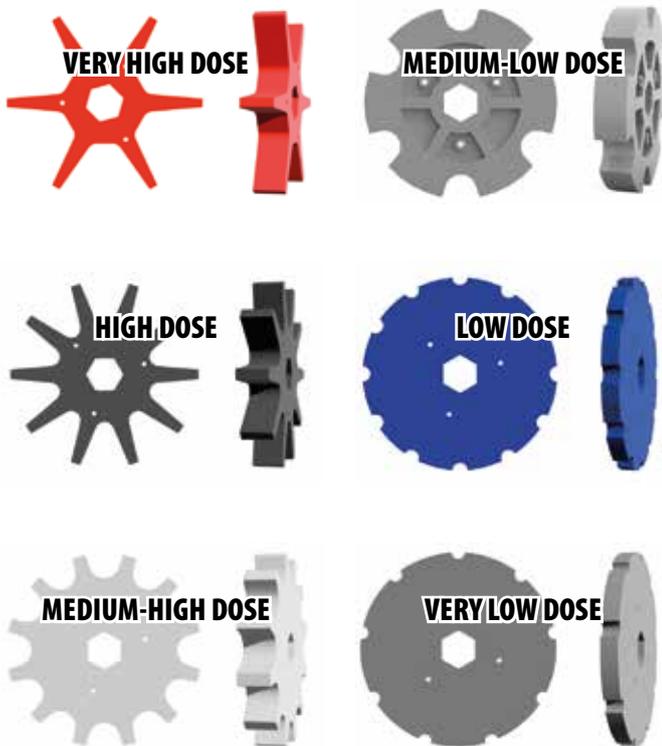
5.8 END OF WORK WITH THE MACHINE

- Completely empty the seed and fertiliser hopper:
- Clean the machine with compressed air, particularly the tanks where chemicals have been used.
- Check that all machine components are in good condition. Replace any row units that need replacing due to wear and tear.
- Remove any particles that could cause corrosion. If necessary, protect these areas with paint or enamel.
- Lubricate the parts indicated in the maintenance section of this manual.

6. DOSAGE

6.1 METERING UNIT

This metering unit has a roller that can be configured into sectors. There are several types of sectors:



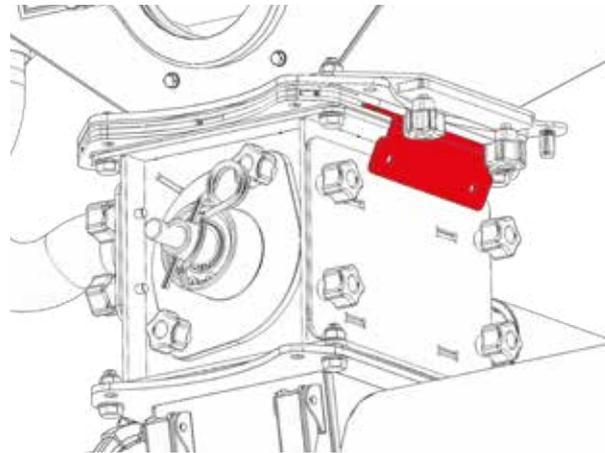
There are several types of scrapers:



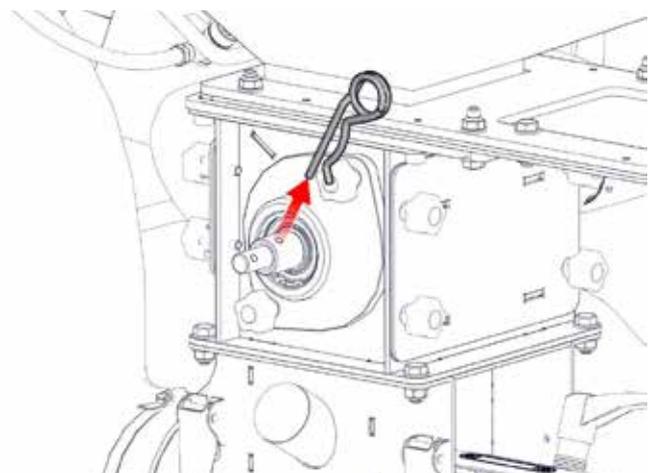
ATTENTION: THE RED SCRAPER IS INSTALLED AS STANDARD INSIDE THE DOSING UNIT. IN THE EVENT OF CONTINUOUS BREAKAGE OF THE DOSING UNIT MOTOR FUSES, REPLACE THE RED SCRAPER WITH THE YELLOW ONE.

To configure the number of sectors to adapt the metering unit to the desired dose, follow these steps:

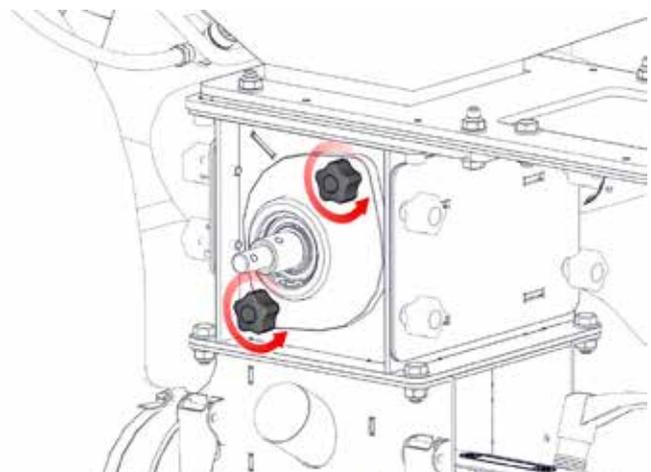
1- Close the blade.



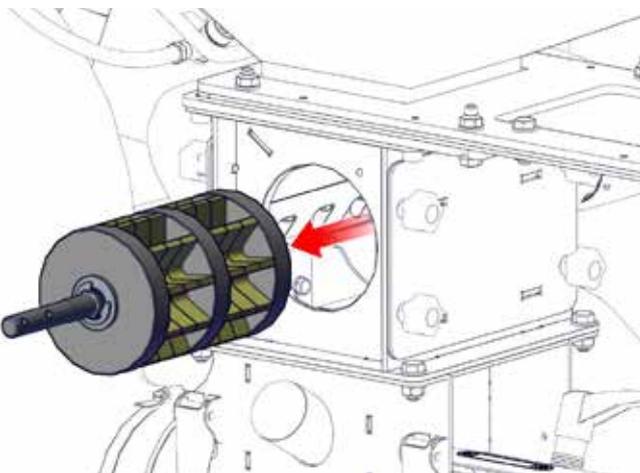
2- Remove the "R" pin.



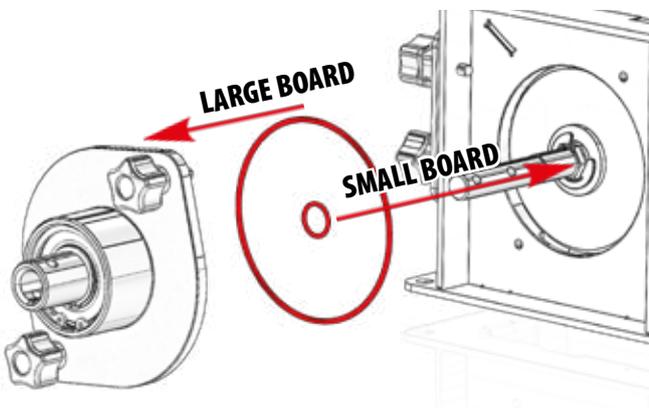
3- Remove the two knobs.



4- Remove the side support and extract the roller.



WHEN REMOVING THE ROLLER, TAKE CARE NOT TO LOSE THE O-RINGS ON THE SHAFT (SMALL) AND THE SIDE SUPPORT (LARGE). REINSTALL THE O-RINGS CORRECTLY WHEN ASSEMBLING THE ROLLER.



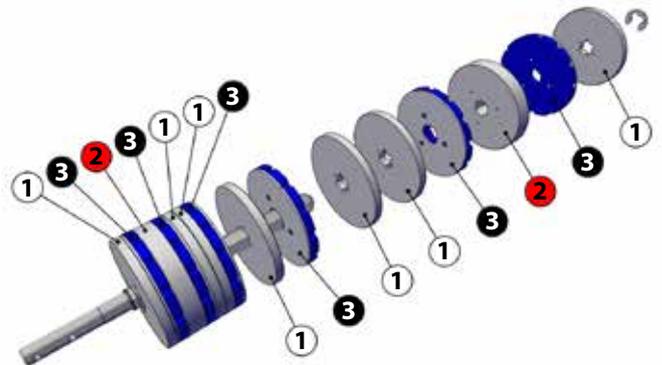
5- Assemble the number of sectors required according to the desired dose. To modify the sector configuration, remove a safety ring, install the desired sectors and replace the safety ring.



TO DETERMINE THE NUMBER OF SECTORS TO BE INSTALLED, SEE SECTION 6.2. PRELIMINARY FLOW RATE TEST PRODUCTS 1 AND 2.



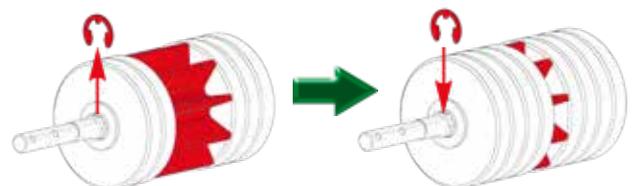
IMPORTANT: FOR MODELS EQUIPPED WITH A SECOND HOPPER WITH DOSING APPLIED BEHIND THE TOOTHED ROLLER, THE METERING UNIT ROLLER MUST BE INSTALLED AS SHOWN IN THE IMAGE.



Ensure that the safety rings are securely installed in their housing.

4 SECTORS

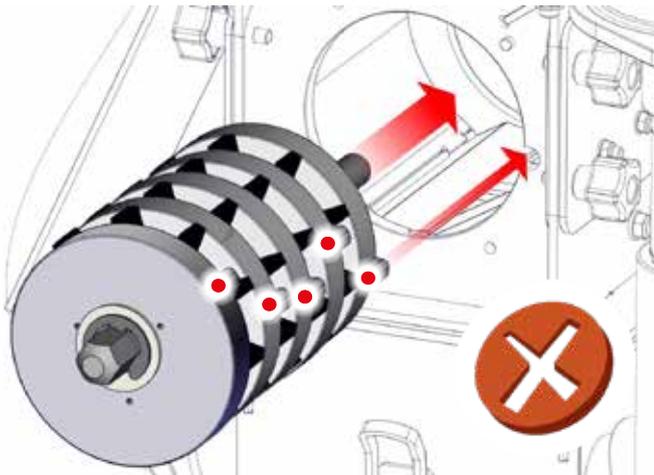
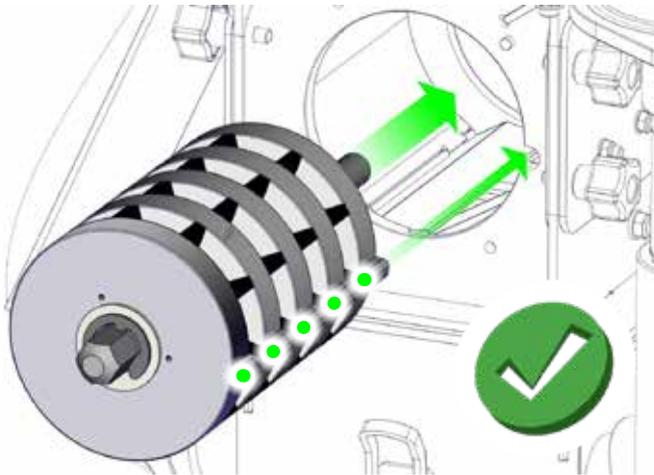
1 SECTOR



6- Reassemble the roller.



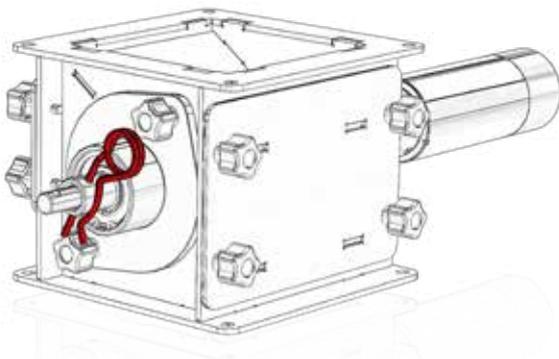
IMPORTANT: TO ASSEMBLE THE ROLLER ON THE METERING UNIT, IT IS NECESSARY TO ALIGN THE SLOTS ON THE WHITE ROLLERS WITH THE NOTCH ON THE METERING UNIT.



7- Install the side support and the "R" pin.



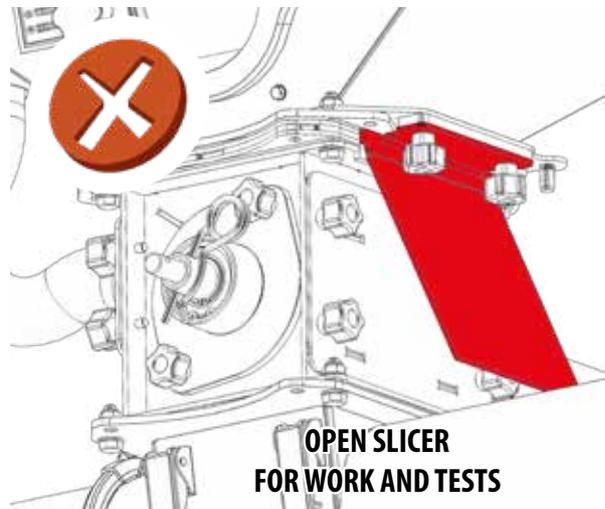
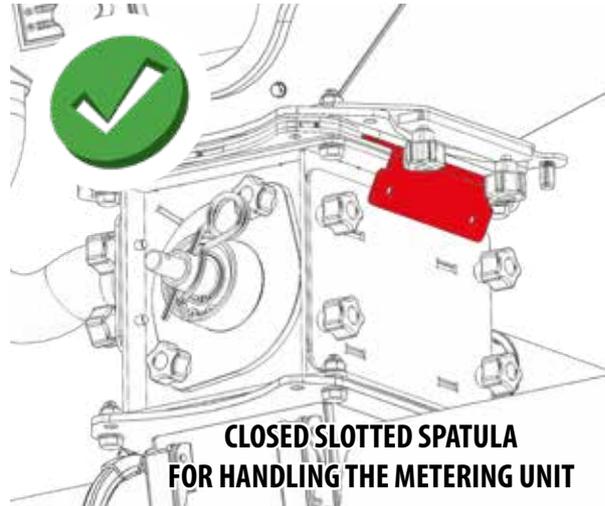
DO NOT FORGET THE "R" PIN , **WITHOUT IT** THE METERING UNIT WILL NOT WORK.



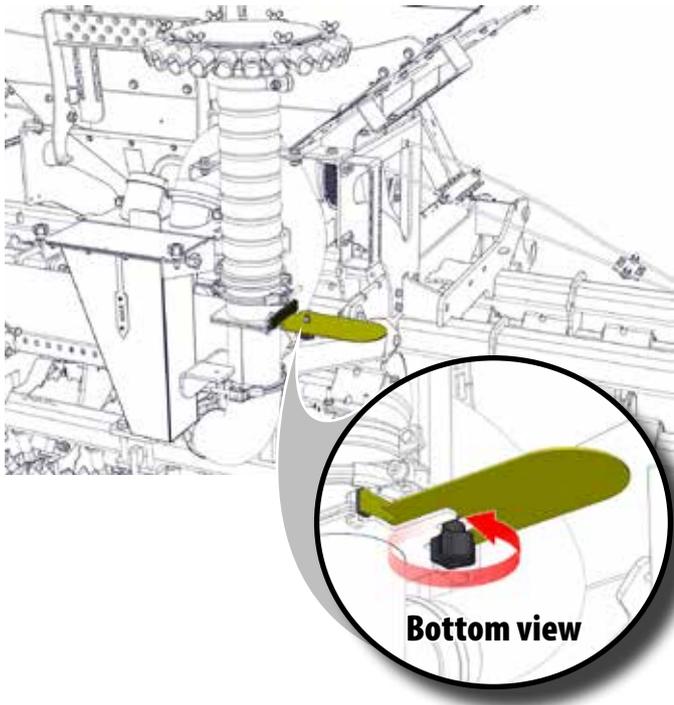
6.2 PRELIMINARY FLOW RATE TEST MAIN HOPPER (2000 or 300 L)

To perform the test, you must first carry out a series of preliminary steps:

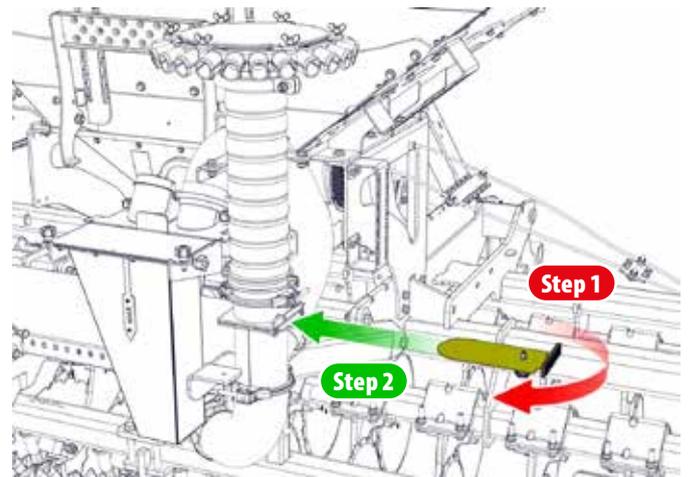
- 1- Couple the machine to the tractor.
- 2- Close the blade to operate the metering unit.



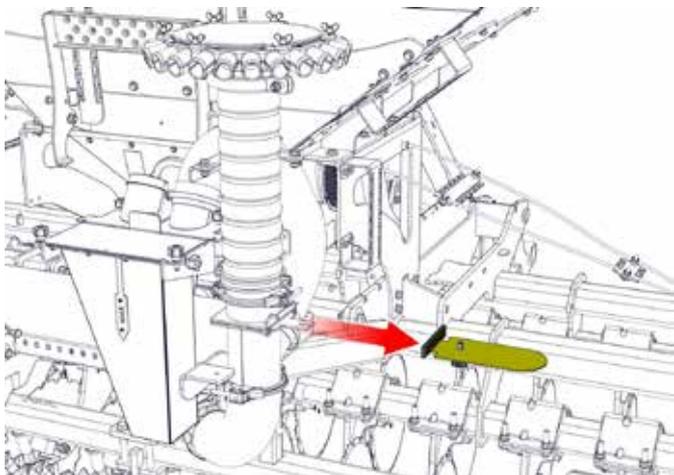
- 3- Fill the hopper with product (see section 5.7 CARGO OF THE HOPPER).
- 4- Loosen the knob.



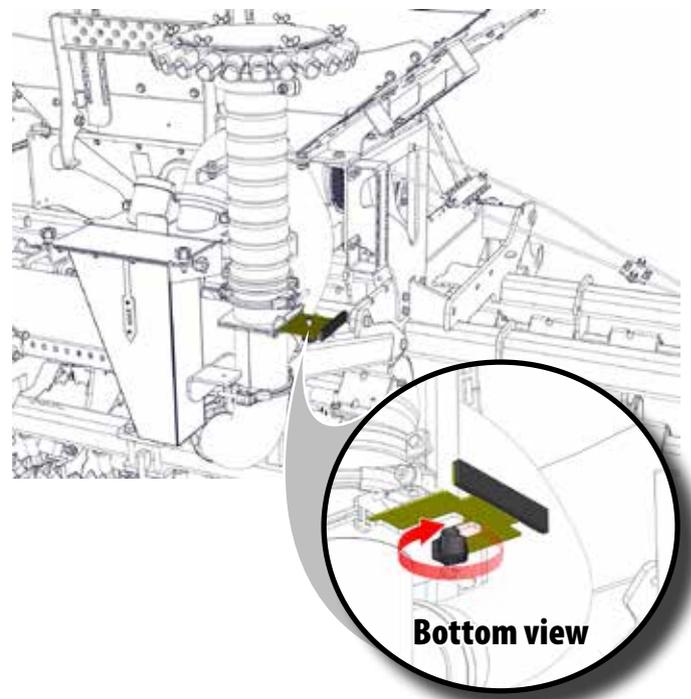
- 6- Turn the cutting board and insert it completely into the specific slot.



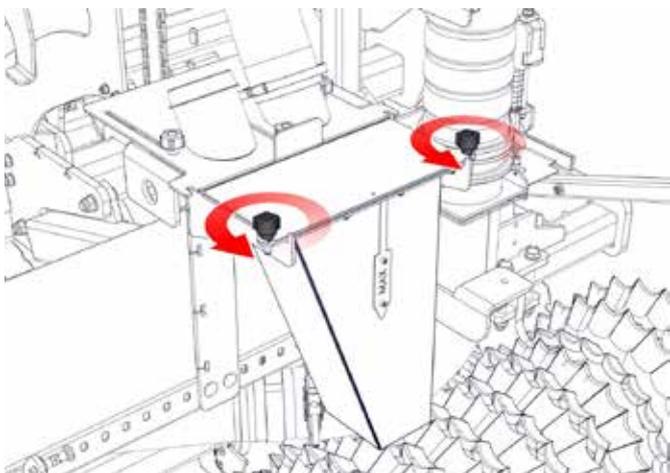
- 5- Remove the cutting board.



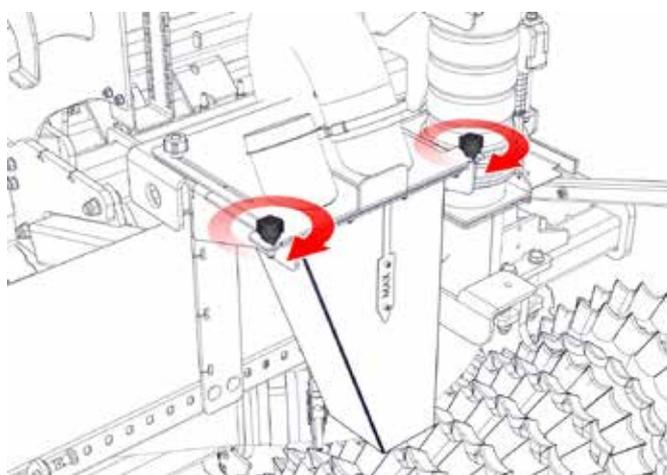
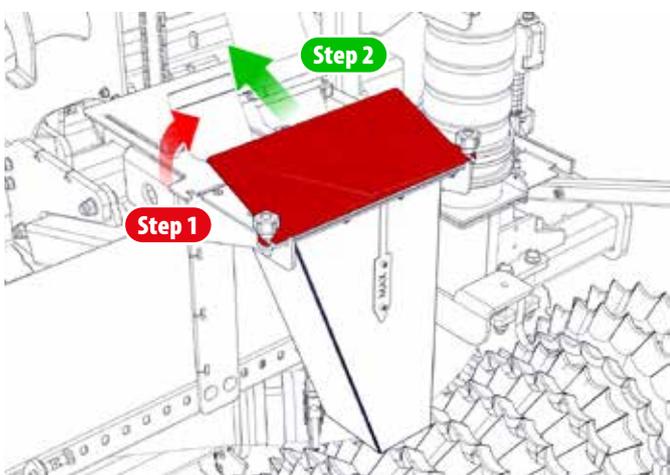
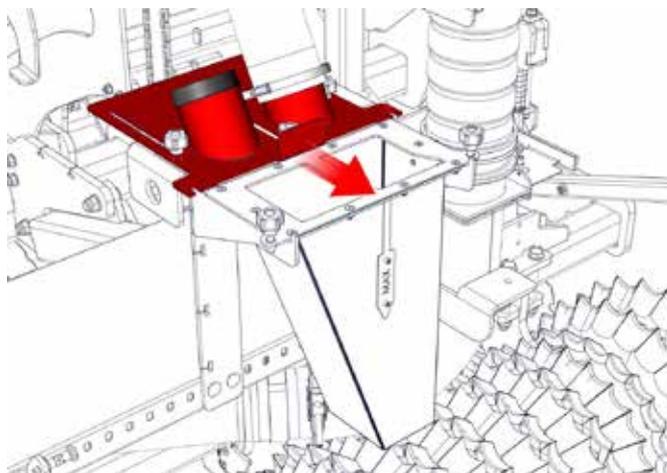
- 7- Tighten the knob on the cutter.



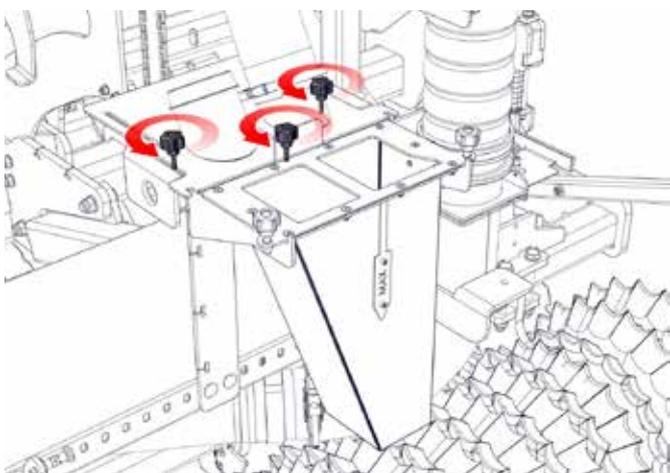
8- Move the by moving the bypass towards the calibration box. To do this, loosen the knobs to remove the calibration box cover.



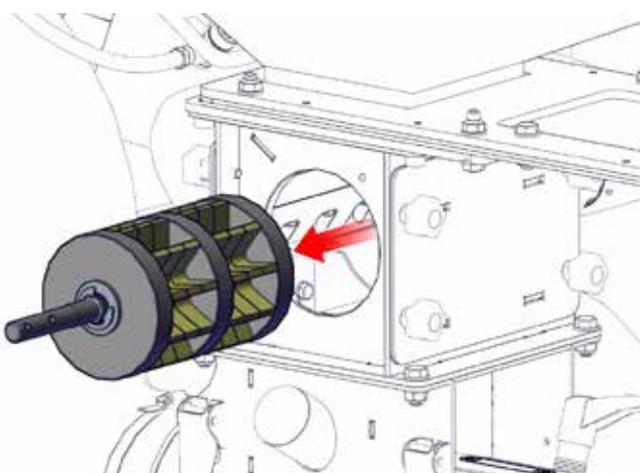
10- Move the lead over the calibration box and tighten the knobs to fix it.



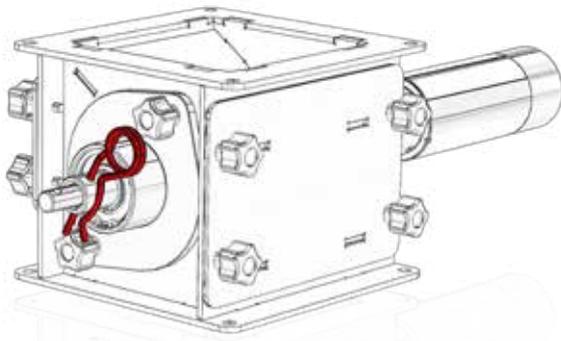
9- Loosen the knobs on the bypass cap.



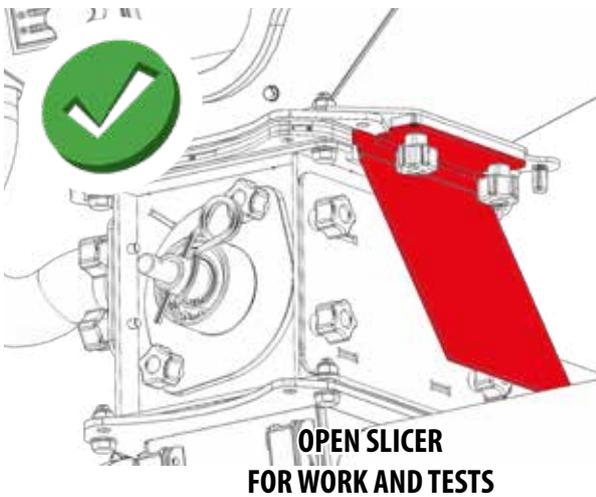
11- Remove the roller to observe the type of sectors and the quantity installed (see section 6.1 METERING UNIT).



12- Install the roller on the metering unit and place the pin in the "R" position.



13- Only for machine versions with PERFORMER 530, place the cutter in the open position.



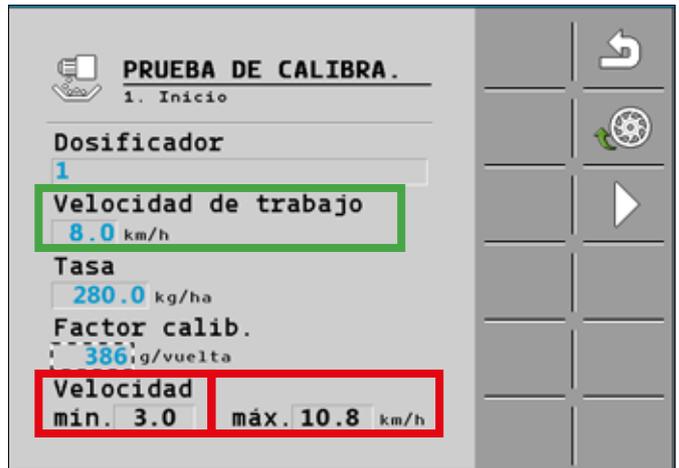
14- To continue with calibration, see the PERFORMER 530 or isobus manual (see section PERFORM CALIBRATION TEST). The following explains how to perform the isobus calibration test, where you must enter the following values:

- **WORKING SPEED** desired (km/h).
- Desired **rate (dose)** (kg/ha).
- **CALIBRATION FACTOR:** this value can be found in section 6.3 CALIBRATION FACTOR TABLE, depending on the specific weight of the product to be used, the type and number of sectors installed on the roller.



A VALUE MUST BE ENTERED FOR THE CALIBRATION FACTOR. IF THE FACTOR IS INCORRECT, CALIBRATION CANNOT BE PERFORMED.

15- Verify that the selected operating speed (in green) is above the middle of the range shown on the minimum and maximum speed monitor (in red). If necessary, change the number of sectors or the type of sector.



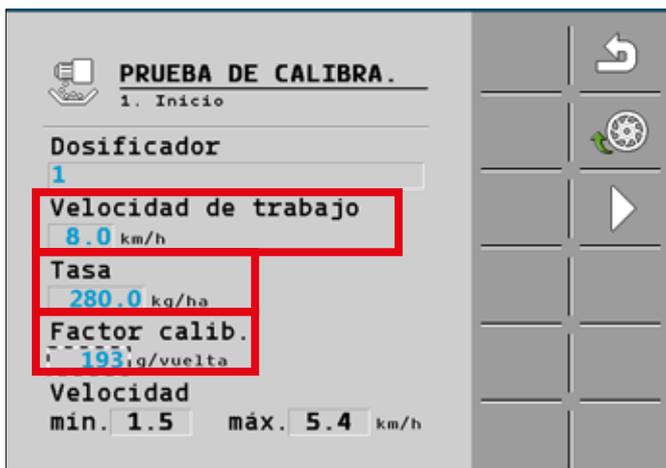
IF THE DESIRED WORKING SPEED EXCEEDS THE MAXIMUM SPEED INDICATED BY THE CONTROLLER, MORE SECTORS OF THE SAME TYPE MUST BE INSTALLED ON THE ROLLER OR THE TYPE OF SECTORS MUST BE CHANGED. THEN THE CALIBRATION FACTOR MUST BE CHANGED TO THE NEW CONFIGURATION (SEE SECTION 6.3 CALIBRATION FACTOR TABLE).



IF THE DESIRED WORKING SPEED IS BELOW THE MINIMUM SPEED INDICATED BY THE CONTROLLER, WE MUST REMOVE SECTORS FROM THE ROLLER OR CHANGE THE TYPE OF SECTORS. THEN THE CALIBRATION FACTOR MUST BE CHANGED TO THE NEW CONFIGURATION (SEE 6.3 CALIBRATION FACTOR TABLE).



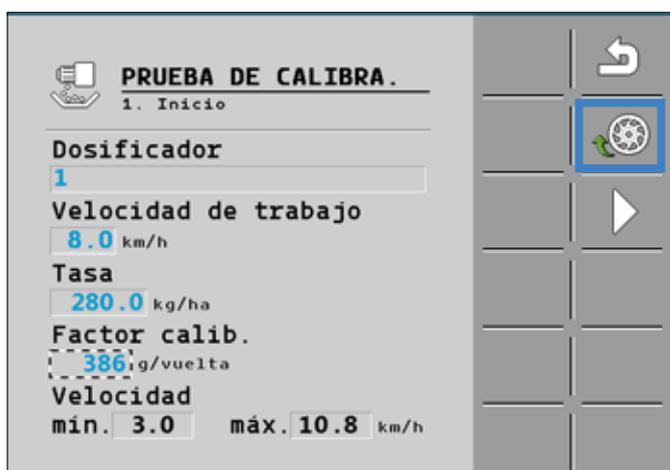
THE SELECTED WORKING SPEED SHOULD BE APPROXIMATELY 75% OF THE SPEED RANGE SHOWN ON THE MONITOR, THAT IS, CLOSER TO THE MAXIMUM VALUE THAN TO THE MINIMUM.



16-Open the blade and fix it using the knobs.

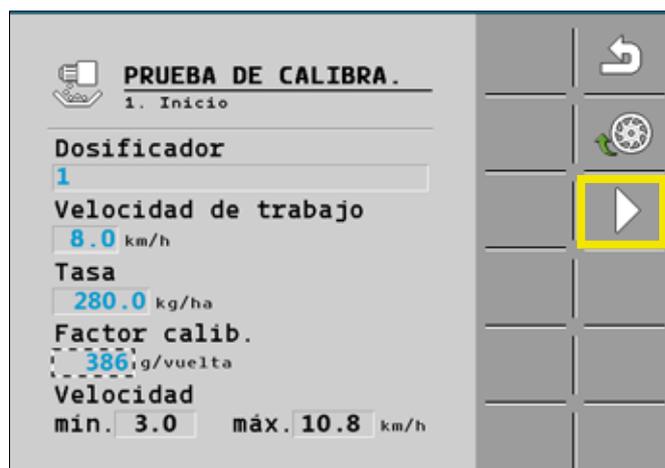
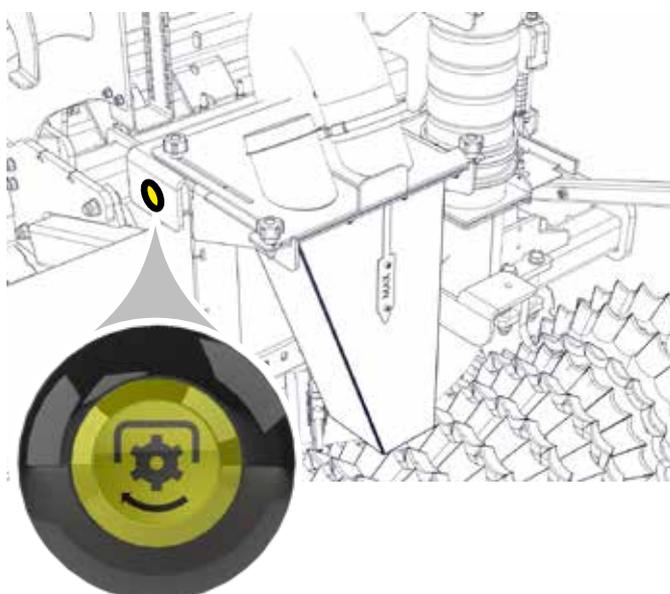


17-Fill the metering unit roller by pressing the "PRE-FILL" icon (in blue).

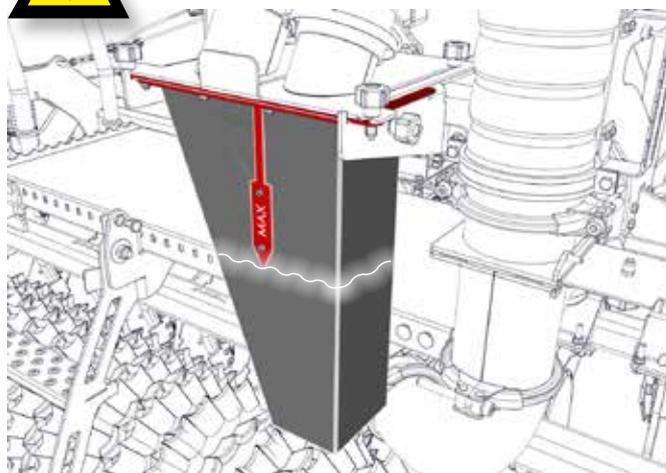


18- Activate the turbine and return the material from the calibration box to the hopper to start calibration.

19- Press and hold the calibration button to start the calibration test or, alternatively, use the icon on the ISOBUS controller (in yellow).

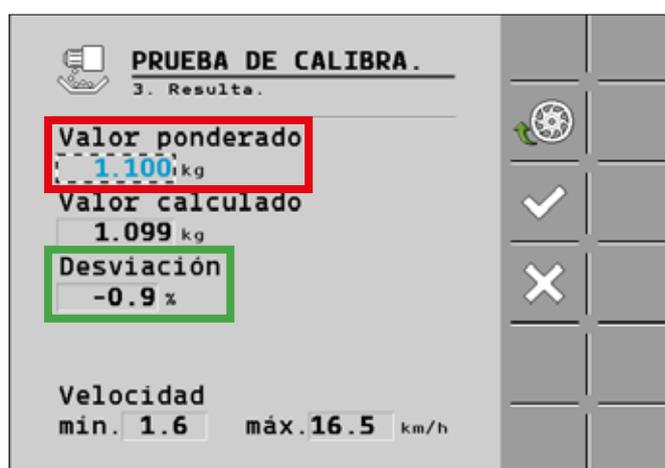


IMPORTANT: DO NOT EXCEED THE MAXIMUM LEVEL INDICATED ON THE COLLECTION BOX.



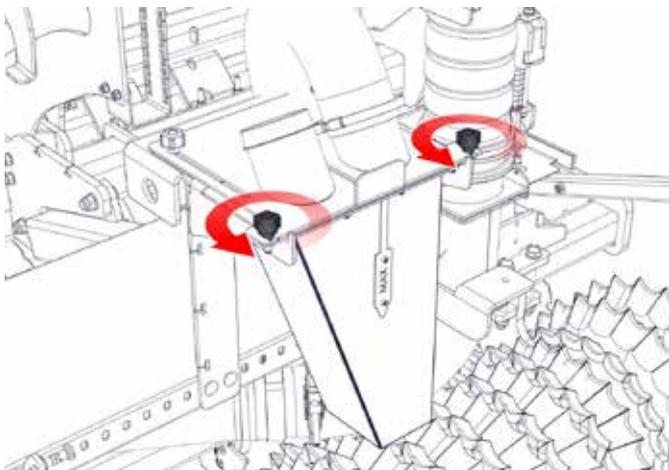
IMPORTANT: ENSURE THAT THE CONTAINER USED FOR WEIGHING IS CALIBRATED TO GUARANTEE THAT THE WEIGHT RECORDED CORRESPONDS ONLY TO THE PRODUCT.

20- Enter the value obtained from the weighing into the controller (in red). Verify that the deviation is within the permitted range; less than 2% (in green). If the deviation exceeds this limit, repeat the test from step 18 to confirm that the value entered is correct.

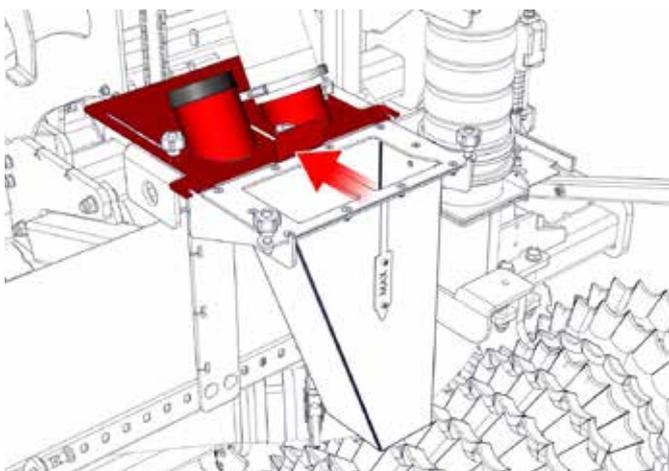


Once the flow rate tests have been completed, return the pneumatic circuit to the working position. To do this, you must:

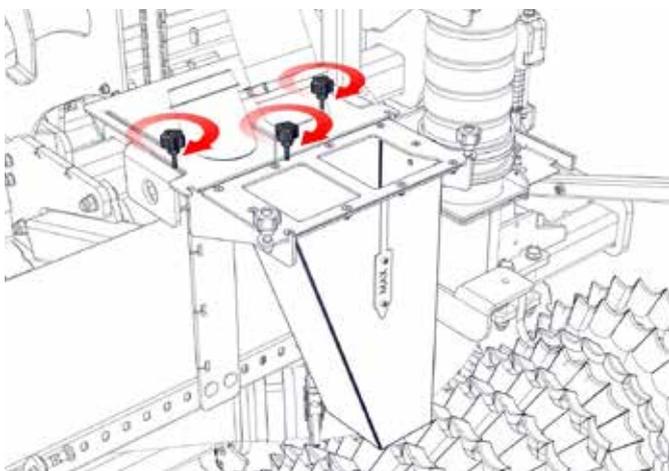
21- Loosen the knobs.



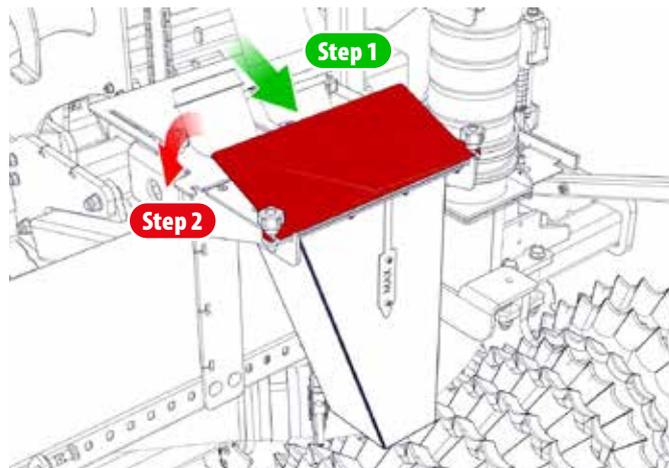
22- Move the bypass to the working position.



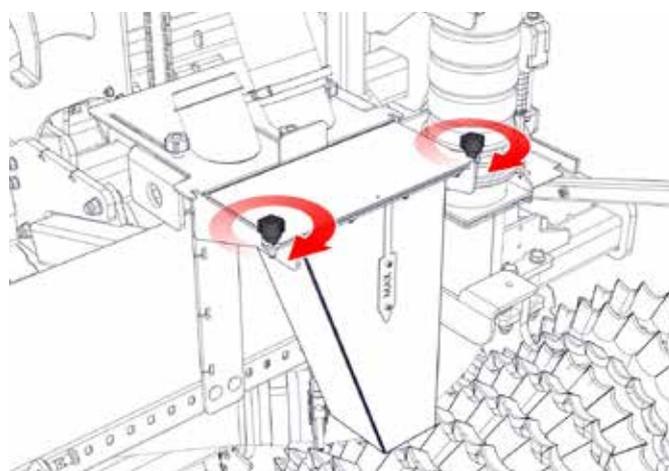
23- Press the knobs to fix the bypass.



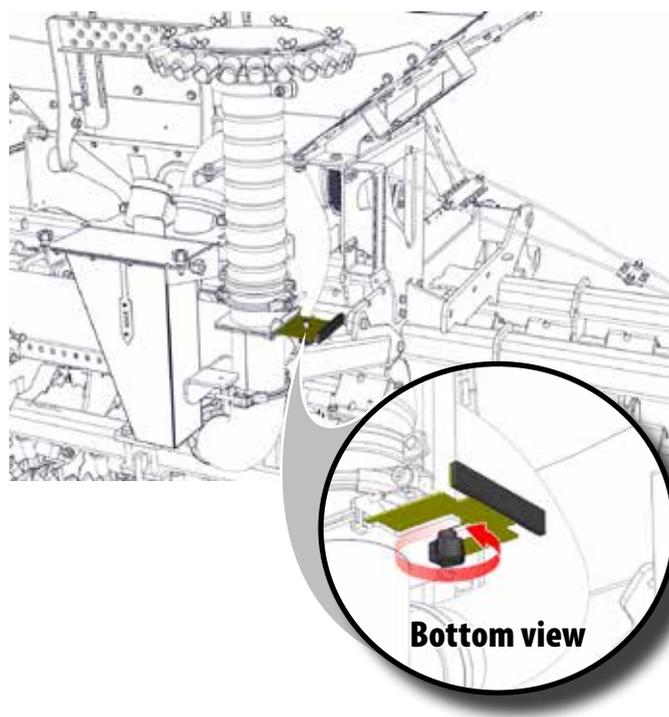
24- Replace the calibration box lid.



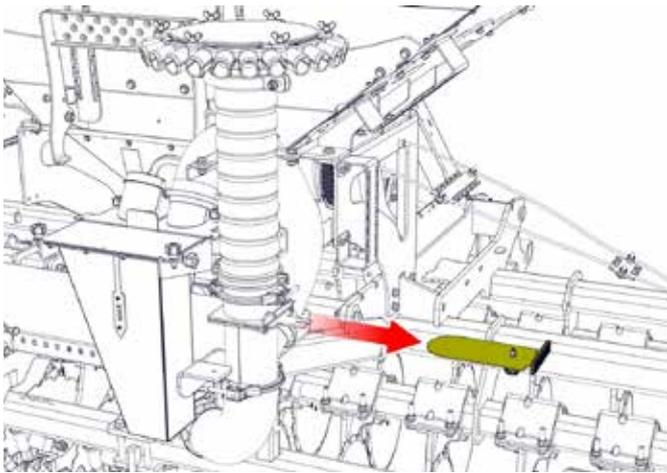
25- Fix the lid using the knobs.



26- Loosen the knob on the wrench.



27- Extract the wedge



IMPORTANT: ONCE CALIBRATION IS COMPLETE, START THE TURBINE AND CHECK THAT THERE IS AIR FLOW IN THE SOWING COULTERS.

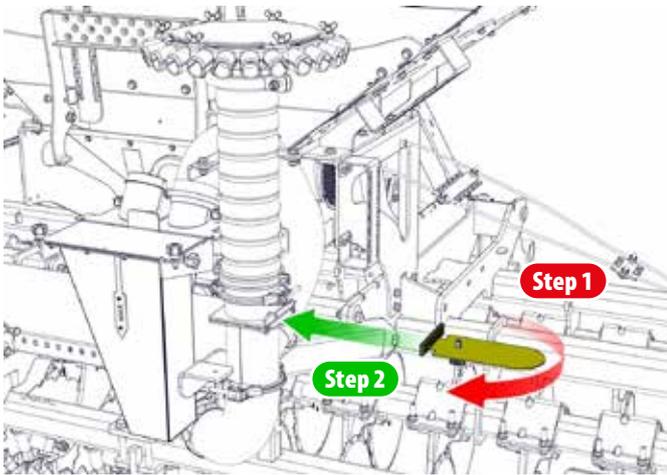


CHECK THE WATERPROOFING OF THE SLIDING DOOR. IT MUST BE REPLACED WHEN SIGNS OF WEAR ARE DETECTED, IN ORDER TO ENSURE A PROPER SEAL.

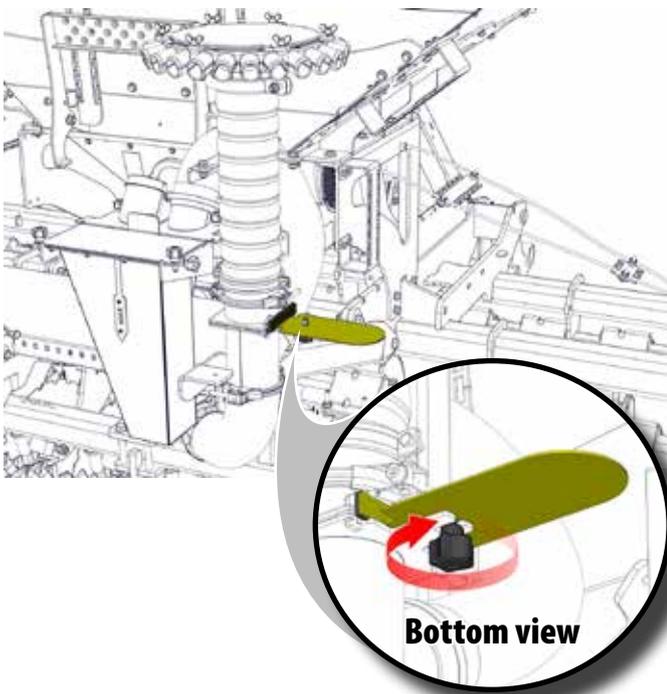


IMPORTANT: AFTER THE FIRST HECTARE OF WORK, CHECK THAT THE PRODUCT CONSUMPTION IS AS DESIRED.

28- Turn the chopping block over and mount it covering the hole with the foam, ensuring that the foam covers the slot well and does not leak air.



29- Apretar the knob to fix the wedge in that position.



6.3 CALIBRATION FACTOR TABLE

SECTOR TYPE	TYPE OF CROP	SPECIFIC WEIGHT (g/L)	CALIBRATION FACTOR ACCORDING TO NUMBER OF SECTORS PER ENGINE (g/revolution)								SCRAPER TYPE AND MOUNTING TYPE			TURBINE RPM
			1	2	3	4	5	6	7	8	RED	YELLOW	BLUE	
	WHEAT	770	13	27	40	54	67	81	94	108	✓ Q1	✗	✗	3.500
	BARLEY	680	12	24	36	48	59	71	83	95	✓ Q1	✗	✗	3.500
	LENTILS	880	15	31	46	62	77	92	108	123	✓ Q1	✗	✗	3.500
	PEAS	840	15	29	44	59	73	88	103	117	✗	✓ T2	✗	3.500
	WHEAT	770	27	54	81	108	135	162	189	216	✓ Q1	✗	✗	3.500
	BARLEY	680	24	48	72	96	120	144	168	192	✓ Q1	✗	✗	3.500
	LENTILS	880	31	62	93	124	155	186	217	248	✓ Q1	✗	✗	3.500
	PEAS	840	29	58	87	116	145	174	203	232	✗	✓ T2	✗	3.500
	FERTILISER	1000	64	128	192	256	320	384	448	512	✗	✓ T2	✗	3.500
	WHEAT	770	49	98	147	196	245	294	343	392	✓ Q1	✗	✗	3.500
	BARLEY	680	44	88	132	176	220	264	308	352	✓ Q1	✗	✗	3.500
	OATS	500	32	64	96	128	160	192	224	256	✓ Q1	✗	✗	3.500
	PEAS	840	54	108	162	216	270	324	378	432	✗	✓ T2	✗	3.500
	FERTILISER	1000	83	166	249	332	415	498	581	664	✗	✓ T2	✗	3.500
	WHEAT	770	64	128	192	256	320	384	448	512	✓ T2	✗	✗	3.500
	BARLEY	680	56	112	168	224	280	336	392	448	✓ T2	✗	✗	3.500
	OATS	500	42	84	126	168	210	252	294	336	✓ T2	✗	✗	3.500
	PEAS	840	70	140	210	280	350	420	490	664	✗	✓ T2	✗	3.500
	BEANS	750	62	124	186	248	310	372	434	496	✗	✗	✓ T2	3.500
	RAPESEED	650	1	2	-	-	-	-	-	-	✗	✓ Q3	✗	3.000
	CLOVER	770	1	2	-	-	-	-	-	-	✗	✓ Q3	✗	3.000
	TURNIPS	700	1	2	-	-	-	-	-	-	✗	✓ Q3	✗	3.000
	RAPESEED	650	2	4	-	-	-	-	-	-	✗	✓ Q3	✗	3.000
	CLOVER	770	2	4	-	-	-	-	-	-	✗	✓ Q3	✗	3.000
	TURNIPS	700	2	4	-	-	-	-	-	-	✗	✓ Q3	✗	3.000

Position of the scrapers according to the type of assembly.



THE AMOUNTS INDICATED IN THE TABLES SHOULD BE CONSIDERED APPROXIMATE ESTIMATES.



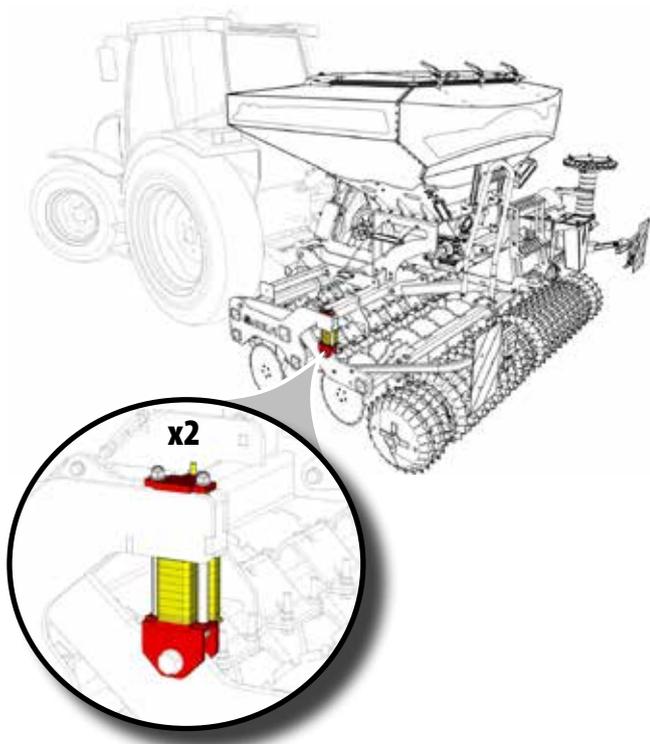
NEXT TO THE CALIBRATION BUTTON, YOU WILL FIND A QR CODE INSTALLED ON THE MACHINE. WHEN YOU SCAN IT, YOU WILL ACCESS A QUICK GUIDE TO PERFORM THE CALIBRATION.



<https://solagrupo.com/es/c/flag-index-tablas-dosificacion-elektra-101>

7. REGULATING SEEDING DEPTH

On the seeding equipment, there are two stops for controlling the depth of the machine, located at either end of the machine.



ALWAYS WORK WITH ALL CAPS INSTALLED, OTHERWISE THE MACHINE MAY BE DAMAGED.

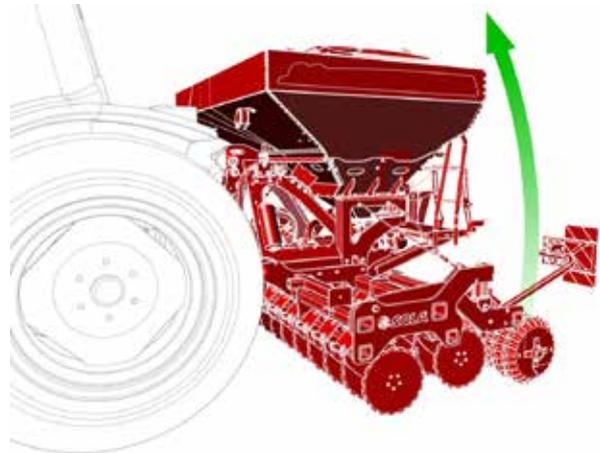


THE SEED DRILL MUST ALWAYS WORK HORIZONTALLY, WITH ALL THE SOWING COULTERS PENETRATING THE GROUND EQUALLY. IF NECESSARY, ADJUST THE THIRD POINT OF THE TRACTOR.

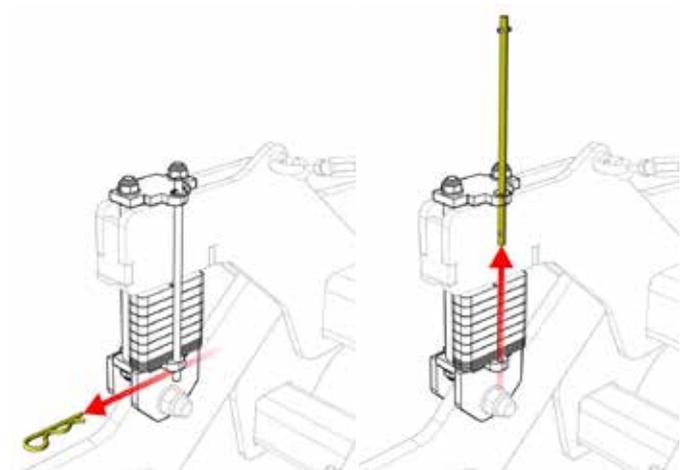
7.1 ADJUSTING THE STOPS

Example for increasing seeding depth:

1- Lift the machine.



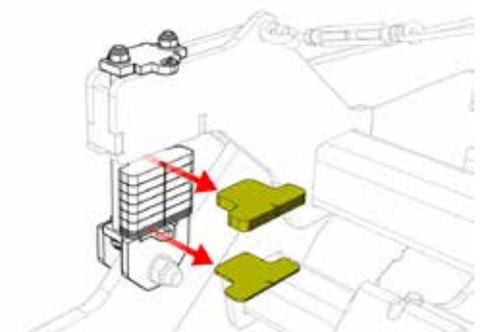
2- Remove the pin and safety rod.



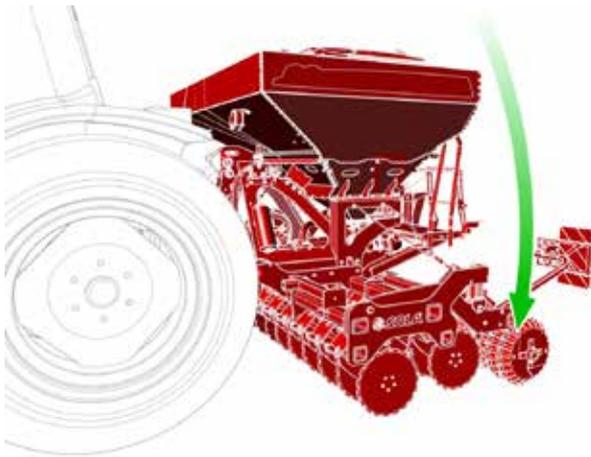
3- Remove the desired stops, removing the same amount and type on both sides.



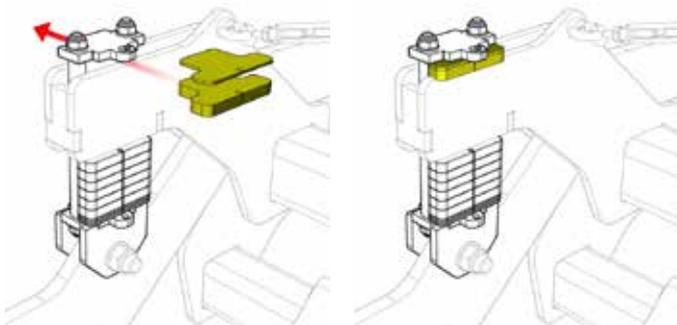
FOR INFORMATION ON THEORETICAL SEEDING DEPTH, SEE SECTION 7.2 TABLE OF SEEDING DEPTHS.



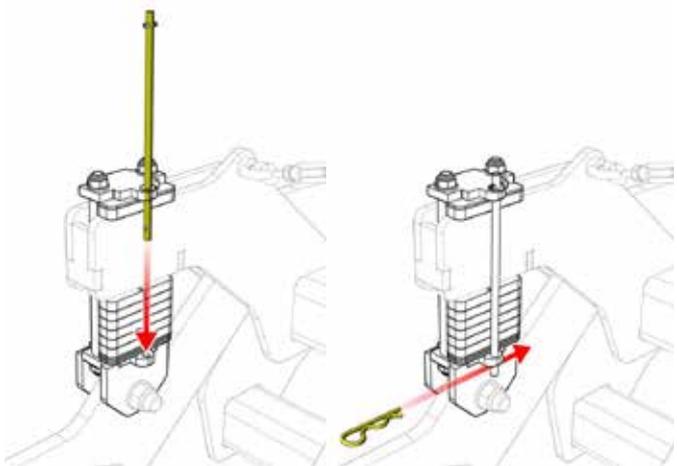
4- Lower the machine to the floor.



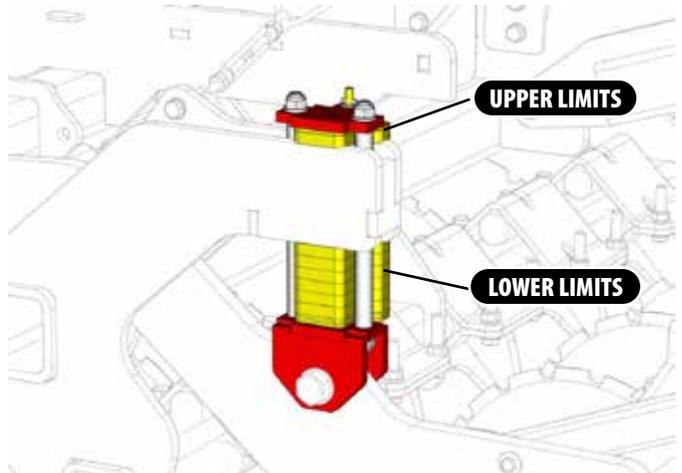
5- Install the stops that were removed in the previous step on the top.



6- Fit the rod and safety pin.



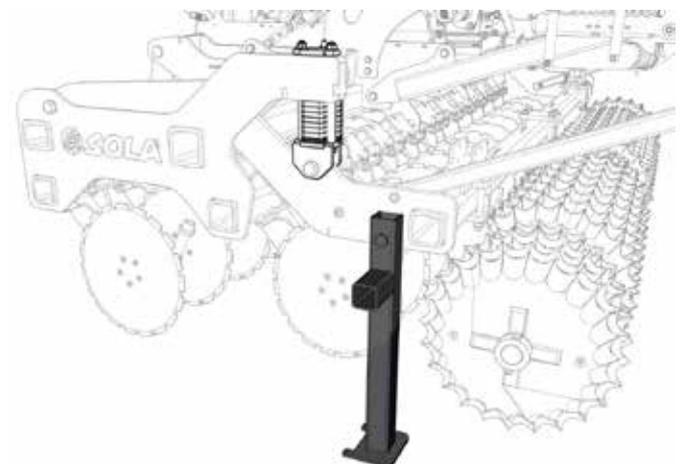
TO REMOVE THE LOWER STOPS AND INCREASE THE SEEDING DEPTH, THE MACHINE MUST BE LIFTED OFF THE GROUND. TO REMOVE THE UPPER STOPS AND DECREASE THE SEEDING DEPTH, THE MACHINE MUST BE RESTING ON THE GROUND.



ONCE THE ADJUSTMENT HAS BEEN MADE, IT IS RECOMMENDED TO PERFORM A FIELD TEST BY TRAVELLING 20 METRES IN THE WORKING POSITION. CHECK THAT THE SEEDING DEPTH IS AS DESIRED.



IMPORTANT: IF YOU ARE UNABLE TO INSTALL ALL OF THE LOWER STOPS, YOU MUST MAKE THE ADJUSTMENT USING THE SUPPORT FEET AS SHOWN IN THE FOLLOWING IMAGE. STORE THE FEET IN THEIR STORAGE LOCATION ONCE THE SEEDING EQUIPMENT HAS BEEN ADJUSTED.



IMPORTANT: ADJUST BOTH SIDES EQUALLY, OTHERWISE THE MACHINE MAY BE DAMAGED.

7.2 TABLE OF SEEDING DEPTHS

DEPTH FROM THE GROUND (CM)	TOP COMBINATION		ALTERNATIVE COMBINATION OF TOPES	
	AT THE TOP	AT THE BOTTOM	AT THE TOP	AT THE BOTTOM
	-3	None	7 THICK + 4 THIN (all)	-
	-2.5	1 FINE	7 THICK + 3 THIN	-
	-2	2 FINE	7 THICK + 2 THIN	-
	-1.5	3 FINE	7 THICK + 1 THIN	-
	-1	4 FINE	7 THICK	-
	-0.5	1 THICK + 1 THIN	6 THICK + 3 THIN	-
	0	1 THICK + 2 THIN	6 THICK + 2 THIN	-
	0.5	1 THICK + 3 THIN	6 THICK + 1 THIN	-
	1	2 THICK	6 THICK	1 THICK + 4 THIN
	1.5	2 THICK + 1 THIN	5 THICK + 3 THIN	-
	2	2 THICK + 2 THIN	5 THICK + 2 THIN	-
	2.5	2 THICK + 3 THIN	5 THICK + 1 THIN	-
	3	3 THICK	5 THICK	2 THICK + 4 THIN
	3.5	3 THICK + 1 THIN	4 THICK + 3 THIN	-
	4	3 THICK + 2 THIN	4 THICK + 2 THIN	-
	4.5	3 THICK + 3 THIN	4 THICK + 1 THIN	-
	5	4 THICK	4 THICK	3 THICK + 4 THIN
	5.5	4 THICK + 1 THIN	3 THICK + 3 THIN	-
	6	4 THICK + 2 THIN	3 THICK + 2 THIN	-
	6.5	4 THICK + 3 THIN	3 THICK + 1 THIN	-
	7	5 THICK	3 THICK	4 THICK + 4 THIN
	7.5	5 THICK + 1 THIN	2 THICK + 3 THIN	-
	8	5 THICK + 2 THIN	2 THICK + 2 THIN	-
	8.5	5 THICK + 3 THIN	2 THICK + 1 THIN	-
	9	6 THICK	2 THICK	5 THICK + 4 THIN
	9.5	6 THICK + 1 THIN	1 THICK + 3 THIN	-
	10	6 THICK + 2 THIN	1 THICK + 2 THIN	-
	10.5	6 THICK + 3 THIN	1 THICK + 1 THIN	-
11	7 THICK	4 FINE	6 THICK + 4 THIN	
11.5	7 THICK + 1 THIN	3 FINE	-	
12	7 THICK + 2 THIN	2 FINE	-	
12.5	7 THICK + 3 THIN	1 FINE	-	
13	7 THICK + 4 THIN (all)	None	-	

8. PNEUMATIC SYSTEM

The pneumatic system, driven by a hydraulic turbine, generates the air flow needed to transport the seeds through the ducts, from the metering unit to their deposition in the sowing furrow. This section details the requirements that must be met to ensure good sowing quality and prevent both blockages and possible damage to components.

The following table shows the range of values within which you should work.

WORKING WIDTH (cm)		300	350	400
OIL SUPPLY	Minimum output pressure (bars)	130		
	Maximum return pressure (bars)	1,5		
	Oil flow rate (litres per minute)	36		
HYDRAULIC MOTOR	Cubic capacity (cm ³)	8		
	Speed (rpm)	3.000 - 4.000		



THE MAXIMUM RETURN PRESSURE IS 1.5 BAR. IF THIS PRESSURE IS EXCEEDED, THE ENGINE MAY SUFFER DAMAGE.

Check the pressurisation before starting to sow:

- 1- Ensure that the hopper cover is closed.
- 2- Check that the turbine is turning.
- 3- Check that the pressure indicated on the pressure gauge is greater than 40 cm of water column.

If the pressure is lower:

Check that the pneumatic circuit does not have any leaks (e.g. cut or disconnected tubes, damaged seals, etc.).

CONNECTION

Connect the quick-connect coupling on the small turbine hose to a pressure output on the tractor. Connect the 1/2" hose with the large quick-connect coupling to a pressure-free return line (maximum 1.5 bar).

REGULATION

The turbine's rotation speed is controlled by adjusting the tractor's hydraulic output.

Adjust the turbine speed according to the table above.



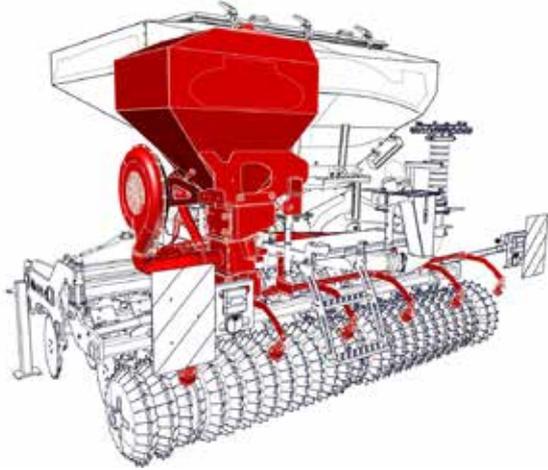
IF THE OIL OVERHEATS BECAUSE THE FLOW RATE PUMPED BY THE TRACTOR IS TOO HIGH OR THE OIL RESERVOIR IS TOO SMALL, IT WILL BE NECESSARY TO INSTALL AN INDEPENDENT HYDRAULICS.



IF THE FLOW RATE OF THE TRACTOR'S HYDRAULIC PUMP IS NOT SUFFICIENT TO POWER THE TURBINE MOTOR OR CANNOT ALSO DRIVE ANOTHER NECESSARY ROW UNIT, IT WILL BE ESSENTIAL TO INSTALL AUXILIARY EQUIPMENT WITH A PUMP DRIVEN BY THE POWER TAKE-OFF AND AN OIL RESERVOIR WITH A COOLER.

9. SECOND HOPPER (OPTIONAL)

The machine can be configured with a second hopper to incorporate seed, solid fertiliser or microgranulated fertiliser superficially after the toothed roller.



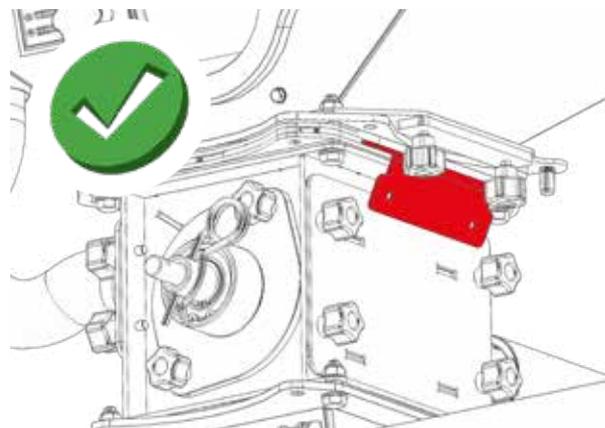
9.1 PRELIMINARY FLOW RATE TEST SECONDARY HOPPER (185 L)



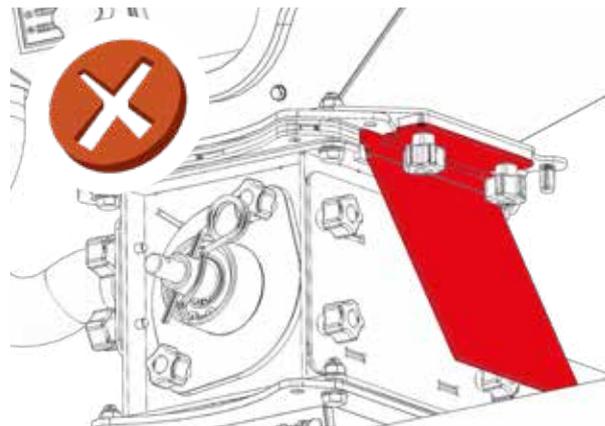
IMPORTANT: BEFORE PROCEEDING WITH THE FLOW RATE TEST, SEE SECTION 6.1 METEERING UNIT.

To perform the test, you must first carry out a series of preliminary steps:

- 1- Couple the machine to the tractor.
- 2- Close the blade to operate the metering unit.



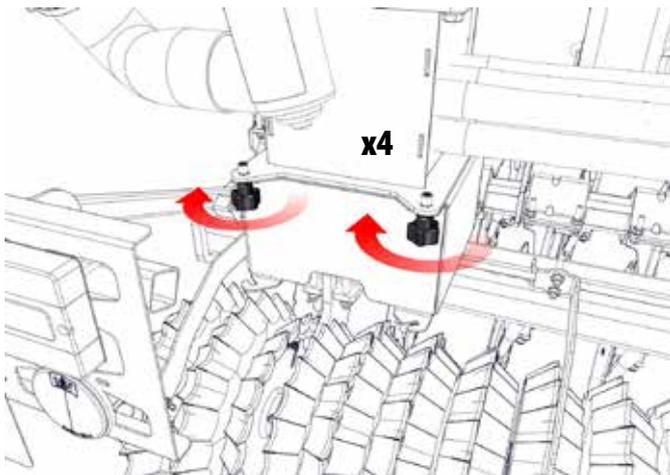
**CLOSED SLOTTED SPATULA
FOR HANDLING THE METEERING UNIT**



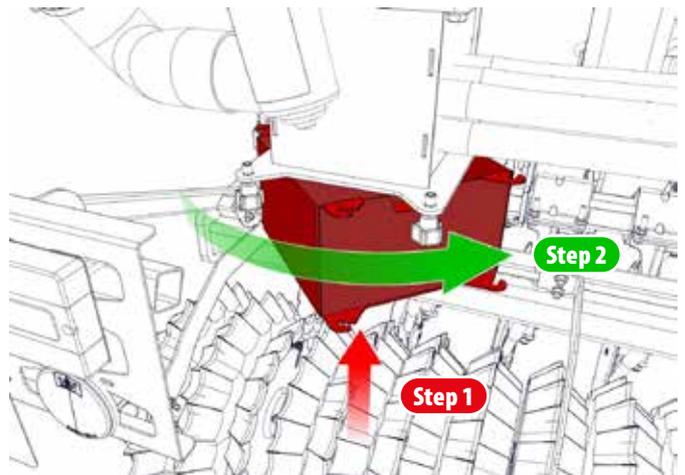
**OPEN SLICER
FOR WORK AND TESTS**

- 3- Fill the hopper with product (see section 5.7 CARGO OF THE HOPPER).

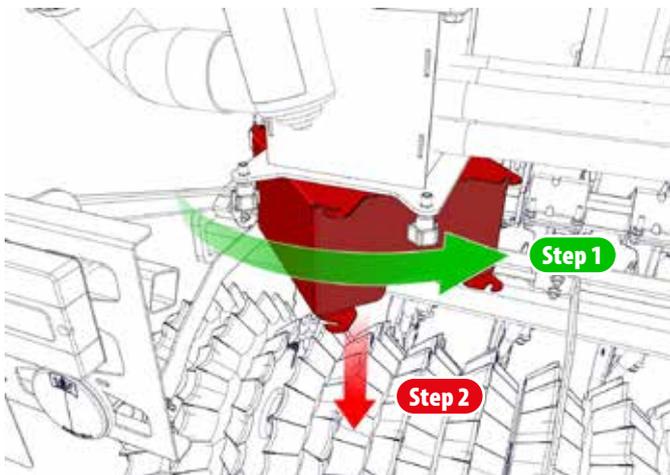
4- Loosen the four knobs.



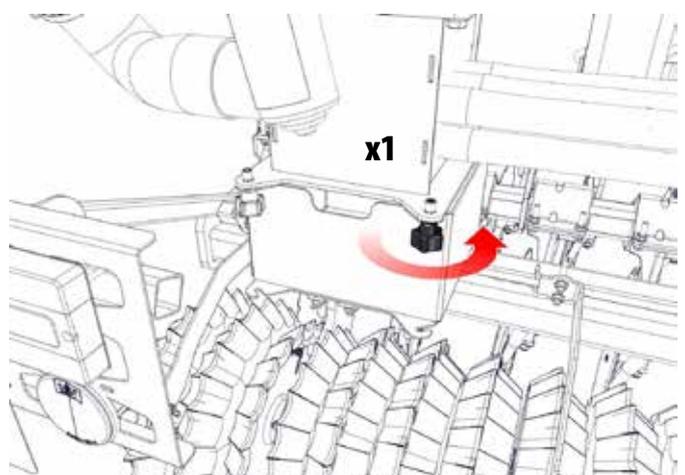
7- Mount the box in the calibration position.



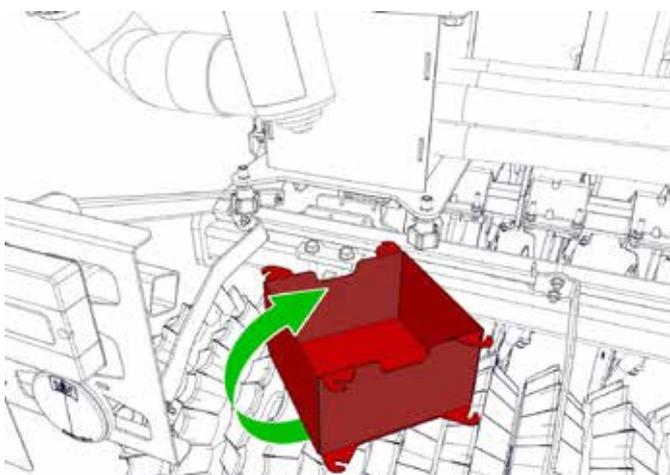
5- Turn the calibration box to release it and remove it.



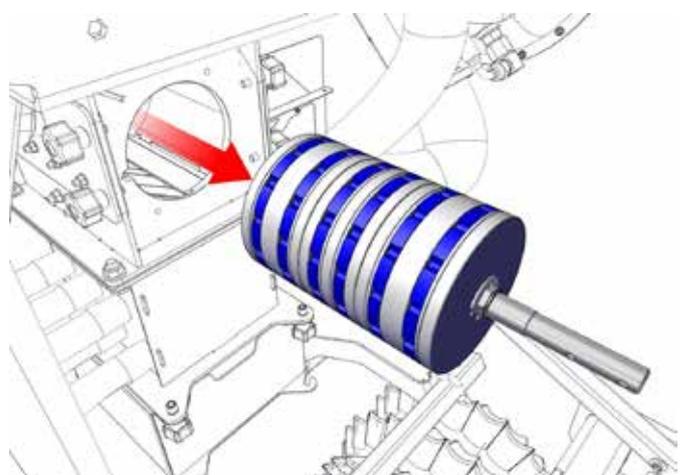
8- Squeeze a knob.



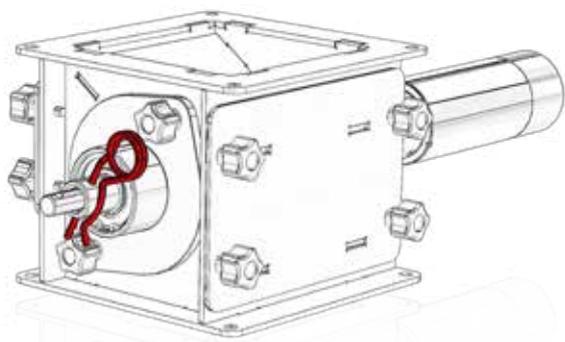
6- Rotate the calibration box.



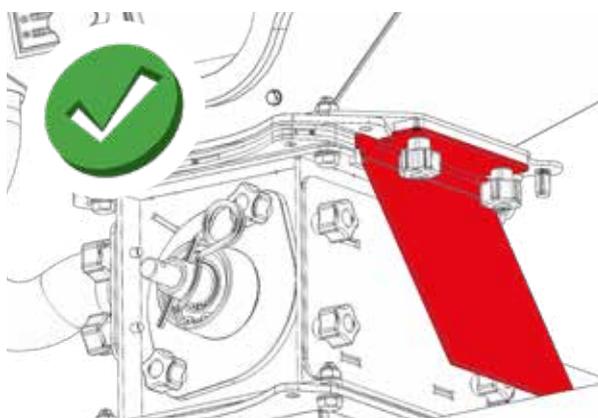
9- Remove the roller to check the type of sectors and the number installed (see section 6.1 METERING UNIT).



10- Install the roller on the metering unit and place the pin in the "R" position.



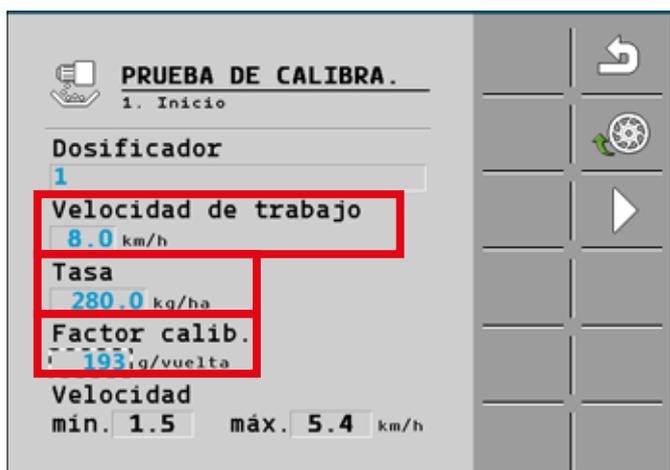
11- Only for machine versions with PERFORMER 530, place the cutting edge in the open position.



**OPEN SLICER
FOR WORK AND TESTS**

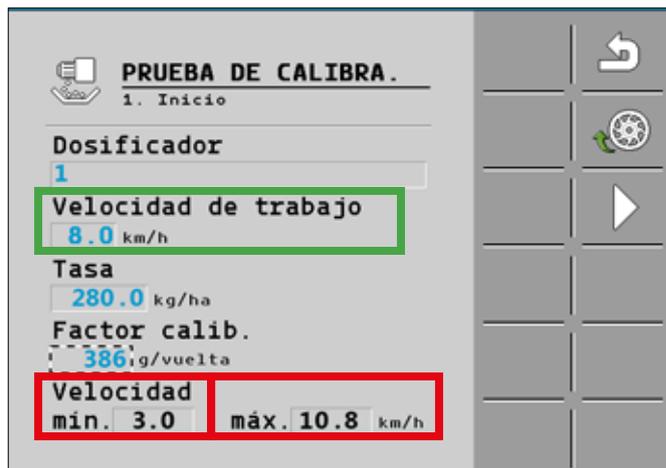
12- To continue with calibration, see the PERFORMER 530 or isobus manual (see section PERFORM CALIBRATION TEST). The following explains how to perform the isobus calibration test, where you must enter the following values:

- **WORKING SPEED** desired (km/h).
- Desired **rate (dose)** (kg/ha).
- **CALIBRATION FACTOR:** this value can be found in section 6.3 CALIBRATION FACTOR TABLE, depending on the specific weight of the product to be used and the type and number of sectors installed on the roller.



A VALUE MUST BE ENTERED FOR THE CALIBRATION FACTOR. IF THE FACTOR IS INCORRECT, CALIBRATION CANNOT BE PERFORMED.

13- Verify that the selected operating speed (in green) is above the middle of the range shown on the minimum and maximum speed monitor (in red). If necessary, change the number of sectors or the type of sector.



IF THE DESIRED WORKING SPEED EXCEEDS THE MAXIMUM SPEED INDICATED BY THE CONTROLLER, MORE SECTORS OF THE SAME TYPE MUST BE INSTALLED ON THE ROLLER OR THE TYPE OF SECTORS MUST BE CHANGED. THEN THE CALIBRATION FACTOR MUST BE CHANGED TO THE NEW CONFIGURATION (SEE SECTION 6.3 CALIBRATION FACTOR TABLE).

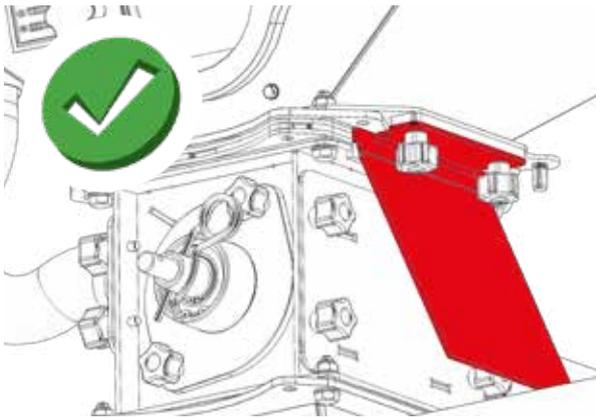


IF THE DESIRED WORKING SPEED IS BELOW THE MINIMUM SPEED INDICATED BY THE CONTROLLER, SECTORS MUST BE REMOVED FROM THE ROLLER OR THE TYPE OF SECTORS MUST BE CHANGED. THEN THE CALIBRATION FACTOR MUST BE CHANGED TO THE NEW CONFIGURATION (SEE 6.3 CALIBRATION FACTOR TABLE).



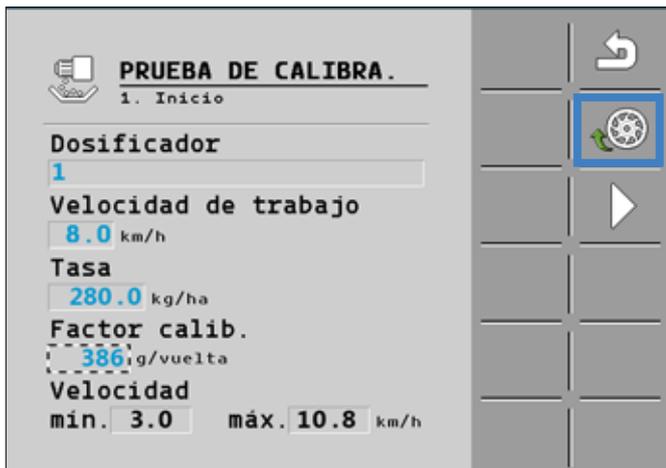
THE SELECTED WORKING SPEED SHOULD BE APPROXIMATELY 75% OF THE SPEED RANGE SHOWN ON THE MONITOR, THAT IS, CLOSER TO THE MAXIMUM VALUE THAN TO THE MINIMUM.

14-Open the blade and fix it using the knobs.

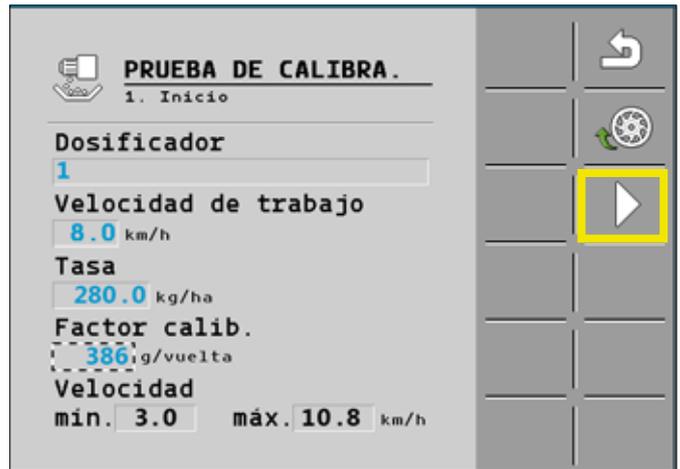
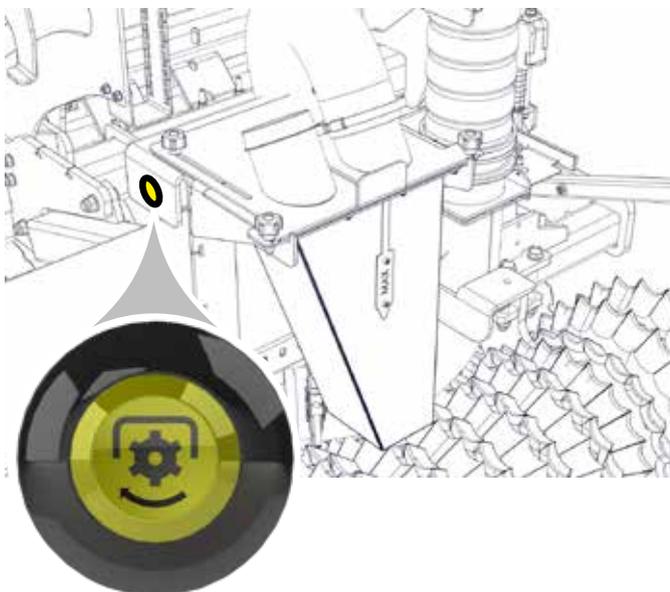


**OPEN SLICER
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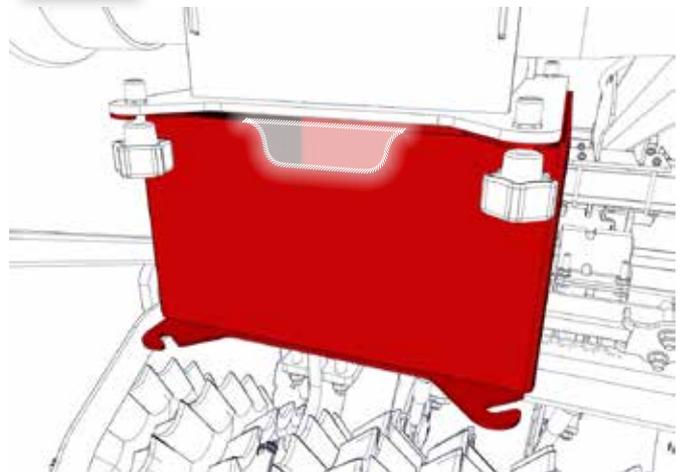
15-Fill the metering unit by pressing the "PRE-FILL" icon (in blue) and return the material from the calibration box to the hopper to start calibration.



16-Press and hold the calibration button to start the calibration test or, alternatively, use the icon on the ISOBUS controller (in yellow).

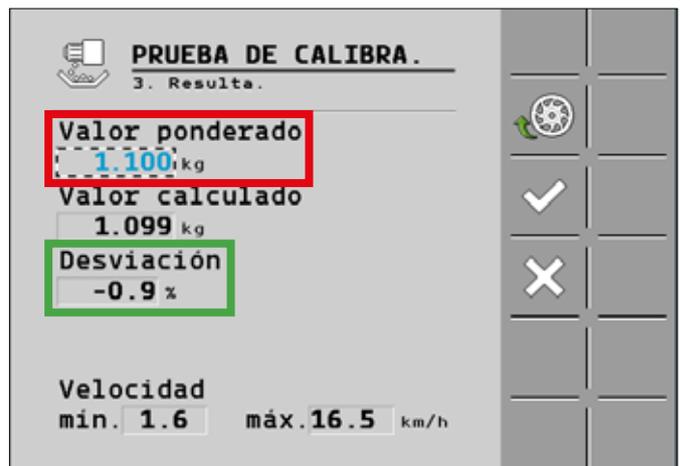


IMPORTANT: USE THE CALIBRATION BOX VIEWER TO FILL IT WITHOUT THE PRODUCT STICKING OUT.



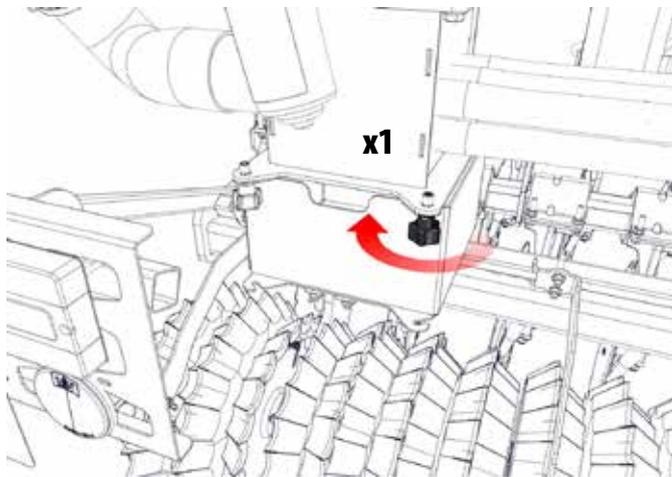
IMPORTANT: ENSURE THAT THE CONTAINER USED FOR WEIGHING IS CALIBRATED TO GUARANTEE THAT THE WEIGHT RECORDED CORRESPONDS ONLY TO THE PRODUCT.

17-Enter the value obtained from the weighing into the controller (in red). Verify that the deviation is within the permitted range; less than 2% (in green). If the deviation exceeds this limit, repeat the test from step 16 to confirm that the value entered is correct.

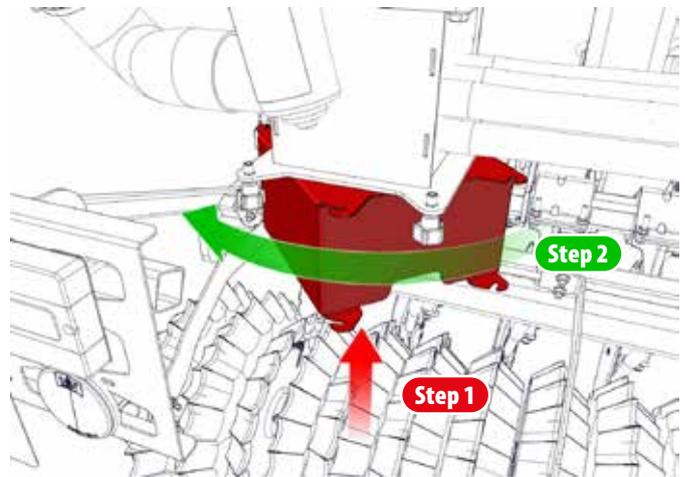


Once the flow rate tests have been completed, return the calibration box to its working position. To do this, you must:

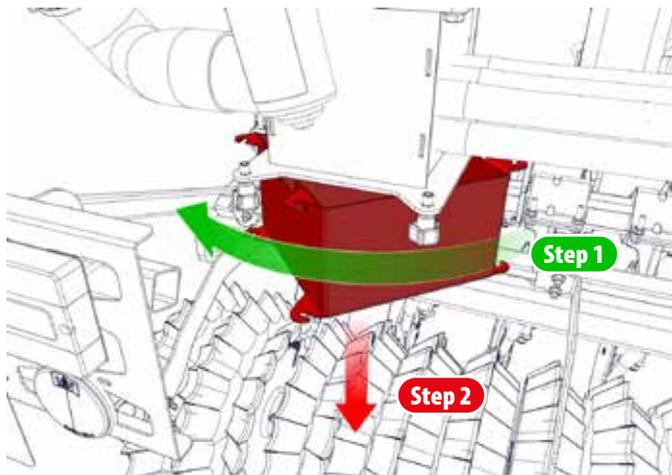
18- Loosen the knob that was locked in step 8.



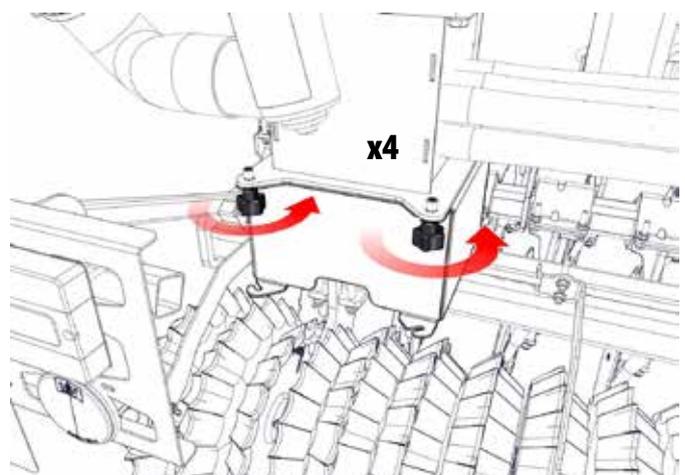
21- Mount the box in the calibration position.



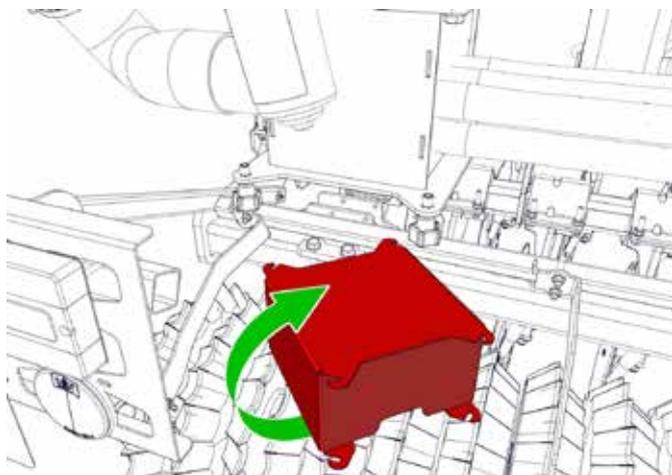
19- Turn the calibration box to release it and remove it.



22- Tighten the four knobs



20- Rotate the calibration box.



IMPORTANT: ONCE CALIBRATION IS COMPLETE, START THE TURBINE AND CHECK THAT THERE IS AIR FLOW IN THE SOWING ARMS.



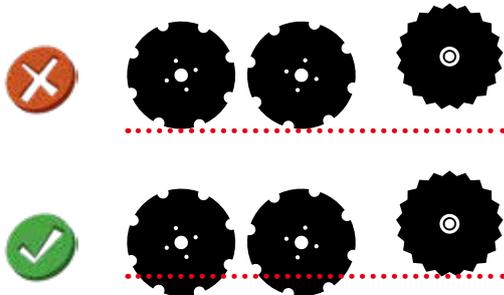
CHECK THE WATERPROOFING OF THE SLIDING DOOR. IT MUST BE REPLACED WHEN SIGNS OF WEAR ARE DETECTED, IN ORDER TO ENSURE A PROPER SEAL.



IMPORTANT: AFTER THE FIRST HECTARE OF WORK, CHECK THAT THE PRODUCT CONSUMPTION IS AS DESIRED.

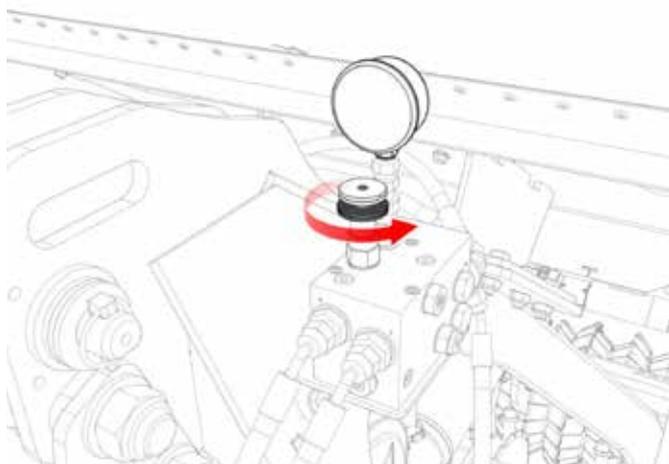
10. WEIGHT TRANSFER (OPTIONAL)

Depending on the terrain to be sown, it is possible that the seeding row units may not penetrate the soil and the roller may float above the ground. In such cases, it is advisable to install the weight transfer kit.

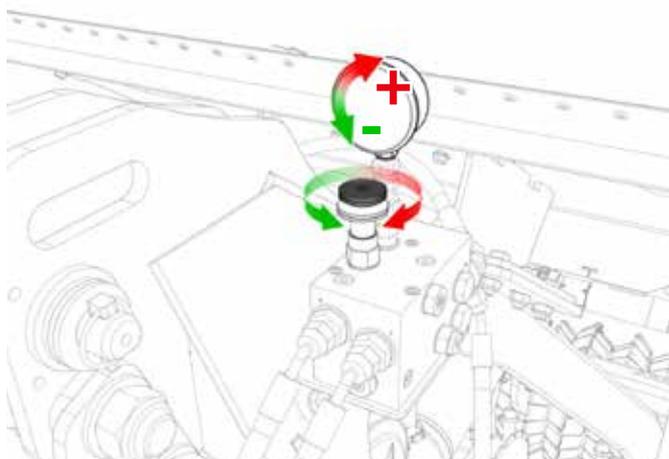


The weight transfer adjustment is performed using the hydraulic block located on the machine frame. To adjust the working pressure, follow these steps:

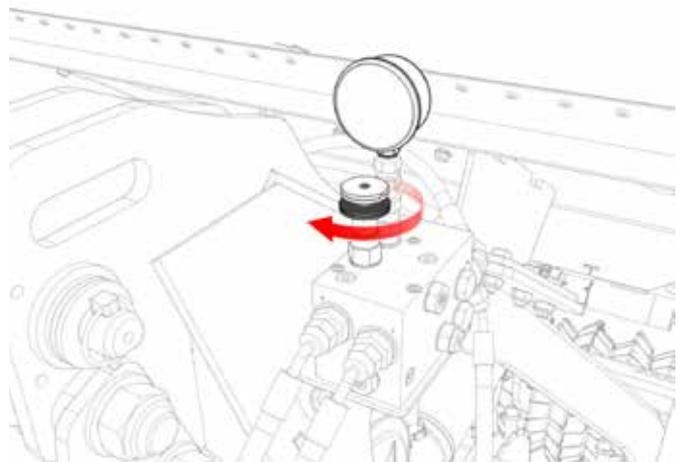
1. Connect the machine to the tractor.
2. Connect the hydraulic hoses.
3. Apply continuous pressure from the tractor, regulated at a low flow rate of ± 5 L/min.
4. Loosen the lock nut located on the hydraulic block.



5. Turn the knob to adjust the working pressure.



6. Tighten the lock nut.



IMPORTANT: NEVER EXCEED A PRESSURE OF 70 BAR UNDER ANY CIRCUMSTANCES.



IMPORTANT: CONDUCT A FIELD TEST BY TRAVELLING 20 METRES IN THE WORKING POSITION TO CHECK THAT THE SOWING COULTERS PENETRATE ADEQUATELY.



NOTICE: DURING MACHINE OPERATION, THE HYDRAULIC DRIVE OF THE HYDRAULIC PRESSURE MUST ALWAYS WORK WITH CONTINUOUS PRESSURE.



WARNING: MOVEMENT OF HYDRAULICALLY DRIVEN ROW UNITS. RISK OF SERIOUS INJURY FROM CRUSHING BY MOVING PARTS. ONLY OPERATE THE LEVERS FOR WEIGHT TRANSMISSION WHEN THERE ARE NO PEOPLE IN THE DANGEROUS AREA OF THE MACHINE.



WARNING: ENSURE THAT NO COLLISIONS OR ACCIDENTAL TRAPPING OF COMPONENTS OCCUR DURING MOVEMENT.



IMPORTANT: TO DISCONNECT THE MACHINE FROM THE TRACTOR, YOU MUST FIRST DISCONNECT THE WEIGHT TRANSFER, OTHERWISE THE MACHINE MAY BE DAMAGED.

11. MAINTENANCE



IN THE EVENT OF A MALFUNCTION, STOP THE MACHINE IMMEDIATELY AND REMOVE THE KEY FROM THE IGNITION. GET OFF THE TRACTOR AND VISUALLY CHECK THE EXTENT OF THE PROBLEM. PERFORM THE NECESSARY OPERATIONS ON THE MACHINE BEFORE RESTARTING IT.



MAINTENANCE OPERATIONS MUST BE PERFORMED IN APPROPRIATELY EQUIPPED WORKSHOPS, WITH THE MACHINE SHUT DOWN AND BY QUALIFIED PERSONNEL.



DO NOT ATTEMPT REPAIRS IF YOU DO NOT HAVE SUFFICIENT KNOWLEDGE. FOLLOW THE INSTRUCTIONS GIVEN IN THIS MANUAL, AND IF THESE ARE NOT AVAILABLE, CONTACT THE SUPPLIER OR EXPERIENCED PERSONNEL.



TO PERFORM MAINTENANCE OR REPAIR WORK ON THE MACHINE, THE OPERATOR MUST USE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (PPE) (SUFFOLK COULTER, GLOVES, EAR MUFFS, DUST MASK AND SAFETY GLASSES).



AVOID WEARING LOOSE-FITTING CLOTHING THAT COULD GET CAUGHT IN THE MOVING ROW UNITS OF THE MACHINE.

Before performing any task on the machine, the following factors must be taken into account:

- Maintenance and repair operations on the machine must be carried out on flat, compact ground, with the tractor engine switched off and the key removed from the ignition.
- The elevator chosen must be suitable for the operations to be carried out. Ensure that safety regulations are complied with.
- Use the necessary protective equipment for each task to be performed.
- If compressed air is used to clean the machine or if any parts need to be painted using airbrushes, a mask and protective goggles must be worn.
- For operations to be carried out at heights of more than 1.5 metres above the ground and which cannot be accessed via the machine's access points (access ladder to the hopper), ladders or, failing that, platforms that comply with current regulations must be used.
- Prolonged and/or repeated contact of fuels and lubricants with the skin is harmful. In the event of accidental contact of these products with the eyes or other sensitive areas, wash the affected area thoroughly with water. If swallowed, contact medical services.

11.1 FREQUENCY OF REVIEWS

The intervals for the interventions indicated below are approximate and may vary depending on the type of service, machine usage, environment, temperature, weather conditions, and other factors.

Proper maintenance of the machine ensures optimal performance and a long service life.



KEEP SEEDING EQUIPMENT AND THE ACCUMULATION OF SOIL, STONES, GRASS, ETC. CLEAN. THE ACCUMULATION OF SOIL, STONES, GRASS, ETC. CAN OBSTRUCT THE SOWING DUCTS.



THESE OPERATIONS MUST BE PERFORMED WITH THE TRACTOR ENGINE COMPLETELY STOPPED AND THE IGNITION KEY DISCONNECTED.



AFTER THE FIRST 10 HOURS OF OPERATION, RETIGHTEN THE SCREWS.

- DAILY

Clean the fertiliser metering units with compressed air at the end of the working day.

In humid weather conditions, before loading the machine with seeds, switch on the turbine for a few minutes to remove moisture from the row units and the pneumatic circuit.

Before starting work, check that there are no obstructions in the metering unit or in the tubes that transport the seeds to the arms. Foreign objects in the head or a blocked tube will result in a lack of seed in the furrow.

Check the pressurisation before and during sowing. If the pressure indicated on the pressure gauge drops below 40 cm of water column, check that the pneumatic circuit has no leaks (e.g. cut or disconnected tubes, damaged joints, etc.).

- START OF THE SEASON

Check the overall operation of the machine. To do this, perform a check with the seed drill empty of seeds.

Check that the plastic parts are in good condition, as they may cause injury to persons or damage to the machine.

Check that the mechanical components are in good condition and free of rust.

Clean parts that come into contact with seeds and fertilisers, such as hoppers and metering units, with compressed air and/or a brush.

Check that the signal lights are functioning correctly.

Check that the fittings and pipes in the hydraulic circuit do not leak oil.

- PERIODICALLY

Before cleaning the seed drill with compressed air, ensure that there are no seeds or fertiliser left in the hoppers or metering units.

Check the condition of all screws and bolts, especially those on components in contact with the ground. Tighten all screws and bolts.

Check that there are no traces of material, dust, etc. in the metering units or in the pneumatic circuit. The accumulation of residues can damage the pneumatic system.

Check the wear and tear of the parts in general and replace those that are worn out.

Check the condition of the cables and hydraulic hoses.

- END OF SEASON

Thoroughly clean the machine with compressed air, ensuring that no seeds remain in the hopper, metering unit, or ducts. Pay special attention to parts that come into contact with chemicals.

Paint any metal components that have lost their paint due to wear and tear from use.

To store the machine correctly, cover it with a tarpaulin and keep it in a dry environment.

Thoroughly inspect all parts and replace any that are damaged or worn.

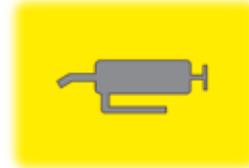
The following table shows the maintenance tasks to be carried out on the machine, with the approximate frequency of the operations to be performed.

AREA OF INTERVENTION	OPERATION TO BE PERFORMED	HOURS			
		20	50	100	500
Seeding row units	Check the axial play of the bearings.				•
	Check and, if necessary, adjust the Suffolk coulters with the disc.			•	
	Check for wear and tear and replace any parts that need replacing.				•
Roller	Grease and rotate the roller to distribute the grease.	•			
Weight transfer	Grease.				•
Pneumatic circuit	Check the hopper for leaks and replace rubber seals if necessary.			•	
	Air cleaning			•	
Hydraulic circuits	Check that the components are in good condition.				•

11.2 GREASE POINTS AND LUBRICATION

All metal components of the machine that are not painted are exposed to atmospheric and climatic factors, causing these components to rust. For this reason, it is important to grease and lubricate these row units well.

On the machine, you will find stickers with symbols indicating the points to be OILED.



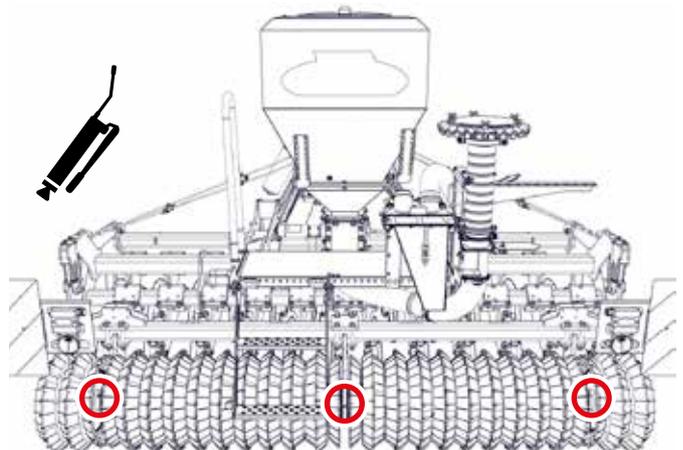
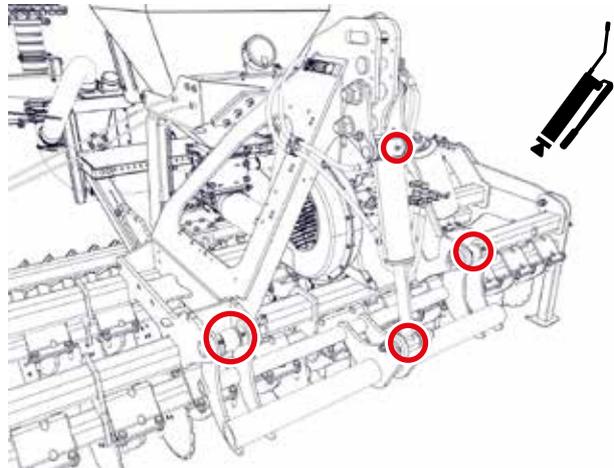
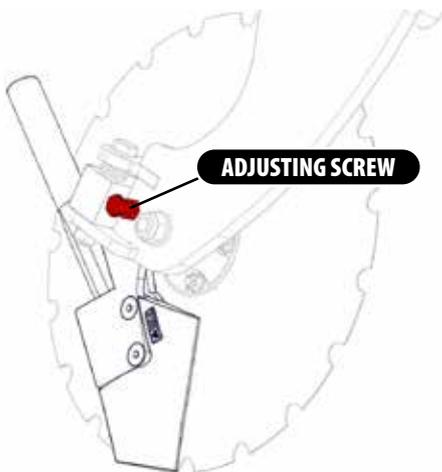
USE CONSISTENT CALCIUM-BASED GREASE.



THE SEED DRILL HAS SEVERAL GREASE POINTS THAT MUST BE GREASED. FAILURE TO COMPLY WITH THIS RULE COULD RESULT IN DAMAGE TO THE MACHINE AND PREMATURE WEAR.



IMPORTANT: BEFORE ADJUSTING THE SUFFOLK COULTER WITH THE DISC, CHECK THE AXIAL PLAY OF THE DISC. IF THE DISC HAS PLAY, THE BEARING MUST BE REPLACED.



*This manual is also available in digital format via the QR code installed on your machine,
, along with the monitor manual and spare parts book.*



<https://solagrupo.com/es/QRDocs/GS>



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