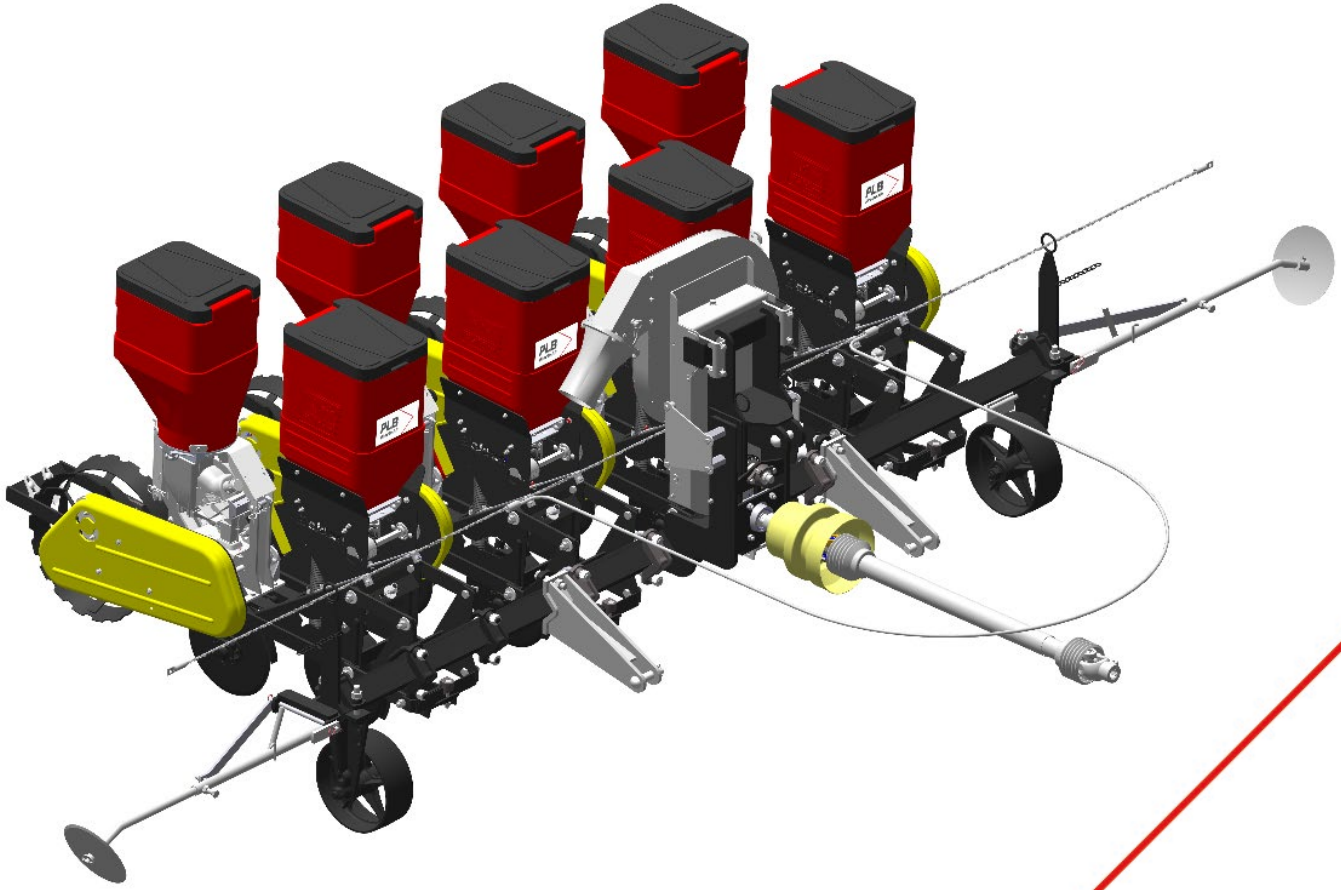
Instruction Manual



PLB DIRECTA AIR - VSET

Mounted Row Crop Planter

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.

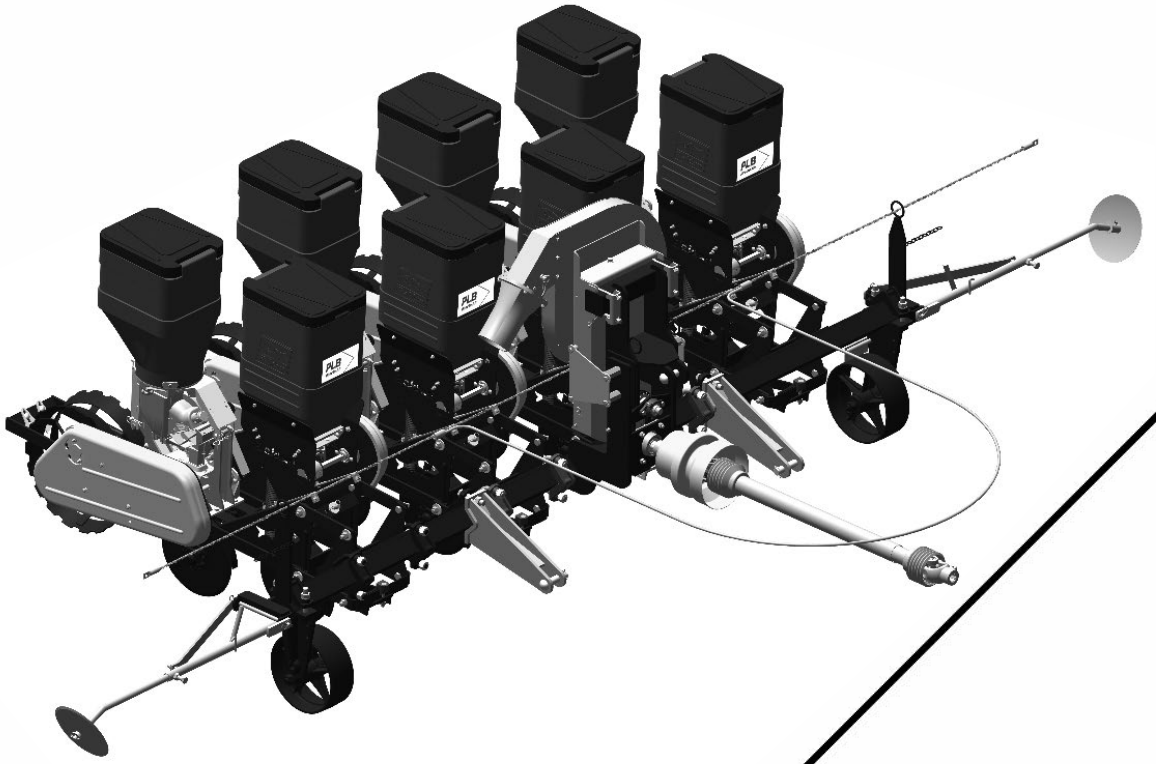
The retailer was responsible for the custody and conservation during the period in its possession, as well as for the assembly, retightening, lubrication, and overhaul.

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



PLB DIRECTA AIR - VSET

Mounted Row Crop Planter

BALDAN IMPLEMENTOS AGRÍCOLAS S/A.
CNPJ: 52.311.347/0009-06
Insc. Est.: 441.016.953.110

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

BALDAN

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▪ Baldan Warranty

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

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

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

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

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

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

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

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

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

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

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

▪ General Information

• To the owner

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

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

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

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

⚠ ATTENTION

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

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

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

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

▪ Safety rules

• To the operator

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

⚠ ATTENTION

Carefully read the instructions manual tolearn about the recommended safety practices.

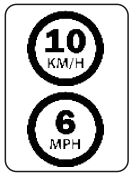
⚠ ATTENTION

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

⚠ ATTENTION

Do not perform adjustments while PLB DIRECTA AIR is running. When performing any service on PLB DIRECTA AIR, switch off the tractor first. Use appropriate tools.

⚠ ATTENTION

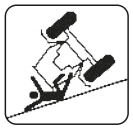


When transportation PLB DIRECTA AIR, do not exceed 10Km/h or 6 MPH, avoinding risks of injury and accident.

⚠ ATTENTION

Do not transport people on the tractor or over the equipment.

⚠ ATTENTION

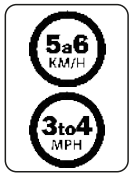


There are risks of severe injuries due to tipping when working in sloped terrains. Do not over speed.

⚠ ATTENTION

When operating PLB DIRECTA AIR, do not allow people to stand on the sower.

⚠ ATTENTION



When working with PLB DIRECTA AIR, do not exceed 5 to 6 Km/h or 3 to 4 MPH, avoiding risks of injury and accident.

⚠ ATTENTION

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

⚠ ATTENTION

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

⚠ ATTENTION

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

⚠ ATTENTION

Before working on or transporting the PLB DIRECTA AIR, check for people or obstructions near the machine.

▪ Safety rules

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

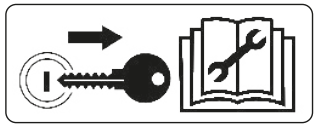
⚠ ATTENTION

Always stay away from the active elements of the PLB DIRECTA AIR is in operation. When servicing discs, wear safety gloves in your hands.

⚠ ATTENTION

Avoid accidents caused by the intermittent action of line markers.
By starting PLB DIRECTA AIR, check if there are people under line markers on in their action area.

⚠ ATTENTION



Remove the ignition key before carrying out maintenance on PLB DIRECTA AIR. Protect yourself from injuries or death caused by an unforeseen start up of PLB DIRECTA AIR.
If PLB DIRECTA AIR is not properly hitched, do not start the tractor.

⚠ ATTENTION

No hacer cualquier servicio en la transmisión de la PLB DIRECTA AIR, desactive los molinetes.
Simplemente quite los protectores para cambiar de marcha, reemplácelos de inmediato.
No haga regulados con la PLB DIRECTA AIR en movimiento.

⚠ ATTENTION

Dispose residues inappropriately affects the environment and the ecology since you will be polluting rivers, canals or the soil.
Inform yourself about the proper way of recycling or disposing residues.

PROTECT THE ENVIRONMENT!

⚠ ATTENTION

The turbine may expel residues of toxic products used in seed treatment.

- Do not expose yourself to the air leaving the turbine when it is operating.

Carefully read the label of the product used to treat seeds.

- While handling, applying and planting, use Personal Protection Equipment (PPE).
- Wash your hands throughtly after handling products.
- Treated seeds should not be exposed to people unrelated to the service, domestic animals, birds, nor allowed contat with human or animal consumption products.
- In case of intoxication due to inhalation or aspiration, keep the victim in a place with fresh air and seek a doctor immediately, taking with you the chemical product label or packaging.

⚠ | SINTOMAS DE INTOXICACIÓN: Debilidad, dolor de cabeza, presión en el pecho, visión turbia, pupilas no reactivas, saliva abundante, sudores, náuseas, vómitos y dolores abdominales.

▪ Safety rules

• PPE Equipment

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

When performing certain procedures with **PLB DIRECTA AIR,** wear the following Safety Equipament (PPE):

❗ IMPORTANT

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

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

▪ Warnings

⚠ When operating with the PLB DIRECTA AIR, do not let people stay close or on it.

⚠ When performing any maintenance service, use PPEs equipment.

⚠ Do not wear loose clothing, as they may get caught in the PLB DIRECTA AIR.

⚠ When operating the tractor engine, be properly seated in the operator's seat and be aware of the full knowledge of the correct and safe handling of both the tractor and the PLB DIRECTA AIR. Always put the gear shift in neutral position, unplug the power take-off gear switch and place the hydraulic controls in neutral position.

⚠ Do not start the motor in a closed environment or with no proper ventilation since the exhaust gases are harmful to health.

⚠ When maneuvering the tractor to the PLB DIRECTA AIR hitch, make sure you have adequate clearance and that there are no people too close, always maneuver at idle and be prepared to brake in an emergency.

⚠ Do not make adjustments with the PLB DIRECTA AIR 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 PLB DIRECTA AIR.

⚠ Always conduct the tractor in speeds compatible to the safety, especially during works in bumpy lands or slopes, keep the tractor always engaged.

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

⚠ Do not work with the tractor with light rear. If the rear has a tendency to lift, add more weights on the rear wheels.

⚠ When leaving the tractor, put the gear lever in neutral position and apply the parking brake. Never leave the PLB DIRECTA AIR on the tractor in the raised position of the hydraulic system.

⚠ The PLB DIRECTA AIR must be turned off before any maintenance work.

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

⚠ If you need to travel with the PLB DIRECTA AIR on highways, consult traffic authorities.

⚠ The PLB DIRECTA AIR must not be operated by untrained people, i.e. people who do not know to properly operate it.

⚠ Do not transport or work with the PLB DIRECTA AIR near obstacles, rivers or streams.

⚠ Se prohíbe el transporte de personas en máquinas autopropulsadas e implementos.

▪ Warnings

⚠ Changes to the original PLB DIRECTA AIR characteristics are not allowed, as they may alter the safety, operation and life of the PLB DIRECTA AIR.

⚠ Read all safety information contained in this manual and the PLB DIRECTA AIR carefully.

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

⚠ Always check that the PLB DIRECTA AIR is in perfect condition. In the event of nay irregularity tha may interfere with the operation of PLB DIRECTA AIR, ensure that it is properly maintained before carrying out any work or transport.

⚠ Maintenance and especially inspection in PLB DIRECTA AIR risk areas should only be carried out by a qualified or trained worker, observing all safety guidelines. Before maintenance, disconnect all drive system of the PLB DIRECTA AIR.

⚠ Periodically check all PLB DIRECTA AIR components before use.

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

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

⚠ When transporting the PLB DIRECTA AIR, travel at speeds compatible with the terrain and never exceed 16 km/h, as this reduces maintenance and consequently increases the life of the PLB DIRECTA AIR.

⚠ Alcoholic beverage or some medications may cause loss of reflexes and change the operator´s physical conditions. Therefore, never operate this PLB DIRECTA AIR under the influence of these substances.

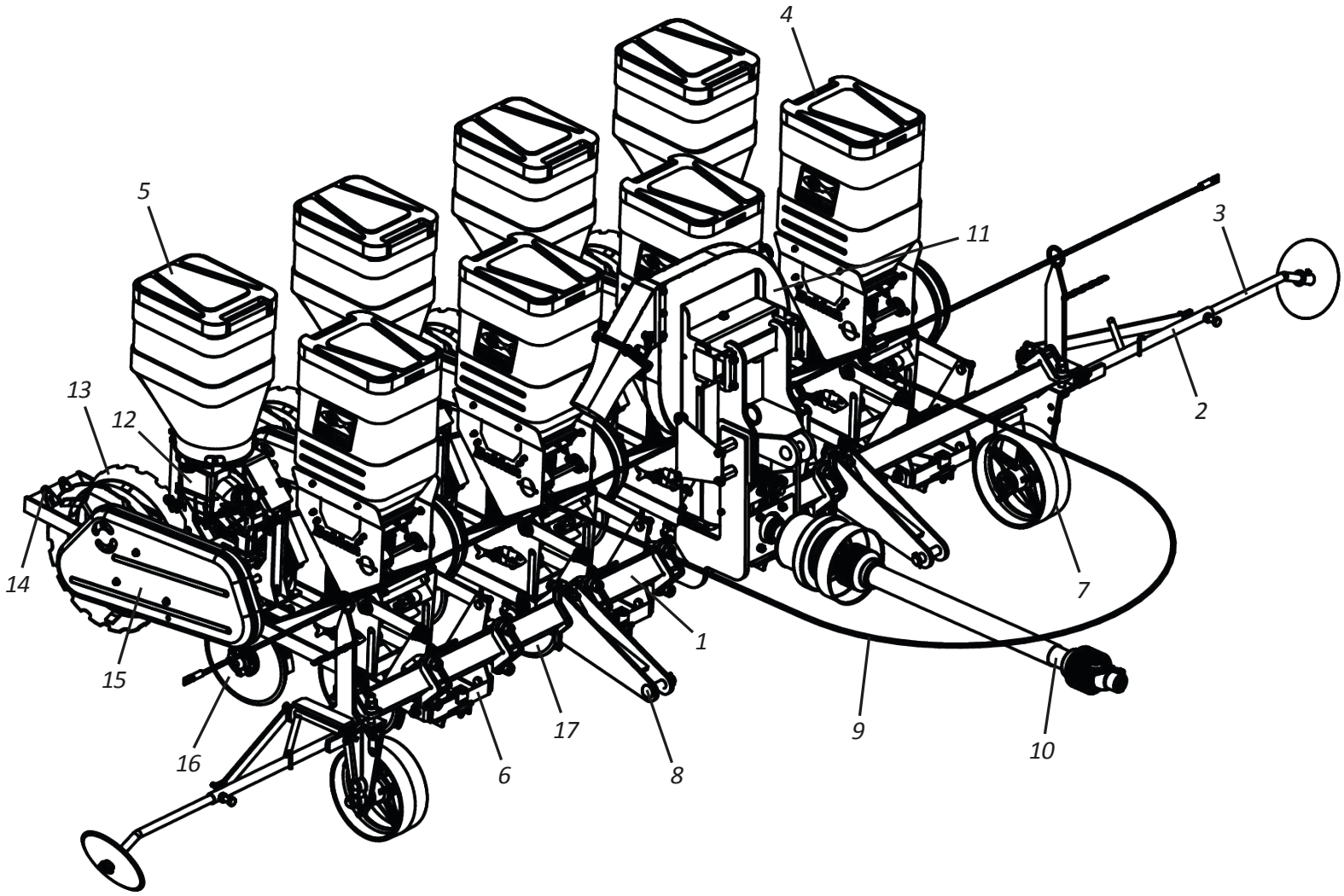
⚠ Read or explain all the procedures of this manual to the operator who cannot read.

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

▪ Components

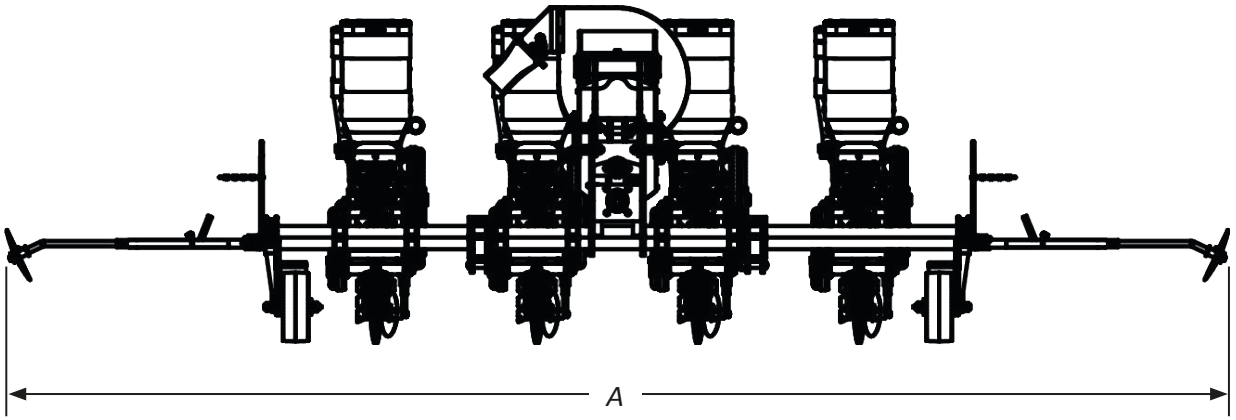
• PLB DIRECTA AIR - Mounted Row Crop Planter

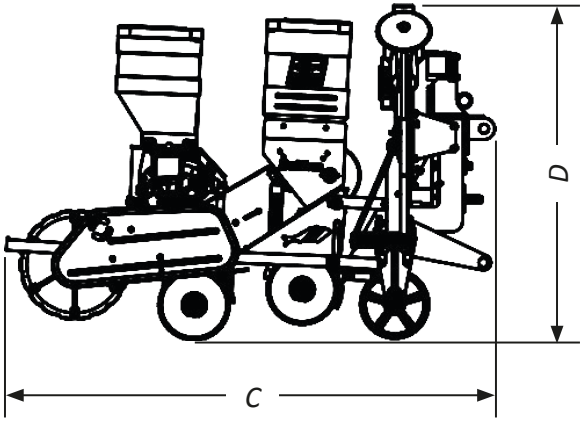
1. Header
2. Marker limiter
3. Line marker
4. Fertilizer tank
5. Seed tank
6. Planting line
7. Depth wheel
8. Coupling header
9. Drive rope of makers
10. Propeller shaft
11. Turbine
12. Pneumatic feeder
13. Compaction wheel
14. Wiper
15. Dust cover
16. Seed double disc
17. Fertilizer double disc

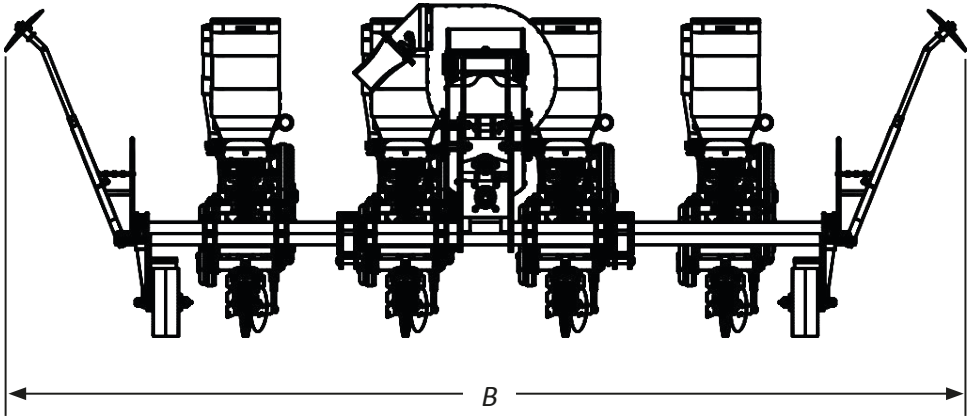


▪ Dimensions

• PLB DIRECTA AIR - Mounted Row Crop Planter







Model	Total width (mm)	Measurement A (mm)	Measurement B (mm)	Measurement C (mm)	Measurement D (mm)
PLB Directa Air	1800	4180	2990	2280	1552
	2300	4684	3494	2280	1552
	2800	5178	3988	2280	1552
	3300	5684	4494	2280	1552
	3800	6178	4988	2280	1552
	4400	6778	5588	2280	1552

▪ Specifications

• PLB DIRECTA AIR - Mounted Row Crop Planter

Model	Nr of Rows	Header Width (mm)	Useful Width (mm)	Overall Width (mm)	Approximate Weight (Kg)	Tractor Power (HP)
PLB Directa Air	2	1800 / 2300	1400 / 1900	2300 / 2800	649 / 660	40 to 50
	3	1800 / 2300 / 2800 / 3300	1400 / 1900 / 2400 / 2900	2300 / 2800 / 3300 / 3800	825 / 835 / 846 / 857	50 to 66
	4	1800 / 2300 / 2800 / 3300 / 3800	1400 / 1900 / 2400 / 2900 / 3400	2300 / 2800 / 3300 / 3800 / 4300	1003 / 1012 / 1023 / 1033 / 1044	60 to 75
	5	2300 / 2800 / 3300 / 3800 / 4400	1900 / 2400 / 2900 / 3400 / 4000	2800 / 3300 / 3800 / 4300 / 4900	1188 / 1199 / 1210 / 1221 / 1275	75 to 90
	6	2800 / 3300 / 3800 / 4400	2400 / 2900 / 3400 / 4000	3300 / 3800 / 4300 / 4900	1516 / 1337 / 1348 / 1453	85 to 95

Working depth (mm) ..... 0 - 120
Fertilizer happer capacity (L) 60
Seed hooper capacity (L) 45
Minimum row spacing (mm) 420

Baldan reserves the right to change and/or perfect the technical characteristics of its products, without previous notice, and without obligation to proceed in the same way with the products previously manufactured. Technical specifications are approximate and informed under normal work conditions.

INTENDED USE OF THE PLB DIRECTA AIR

The **PLB DIRECTA AIR** is designed to accurately sow summer crops.
The **PLB DIRECTA AIR** must be conducted and operated only by a properly instructed operator.

UNAUTHORIZED USE OF THE PLB DIRECTA AIR

To avoid damage, serious accident or death, do not transport people over any part of the **PLB DIRECTA AIR.**
The **PLB DIRECTA AIR** must not be used by an inexperienced operator who is not familiar with all driving, command and operation techniques.

▪ Assembly

The **PLB DIRECTA AIR** leaves the factory disassembled. The most practical method for mounting the **PLB DIRECTA AIR** is to use easels or the like. To assemble it, follow the instructions below:

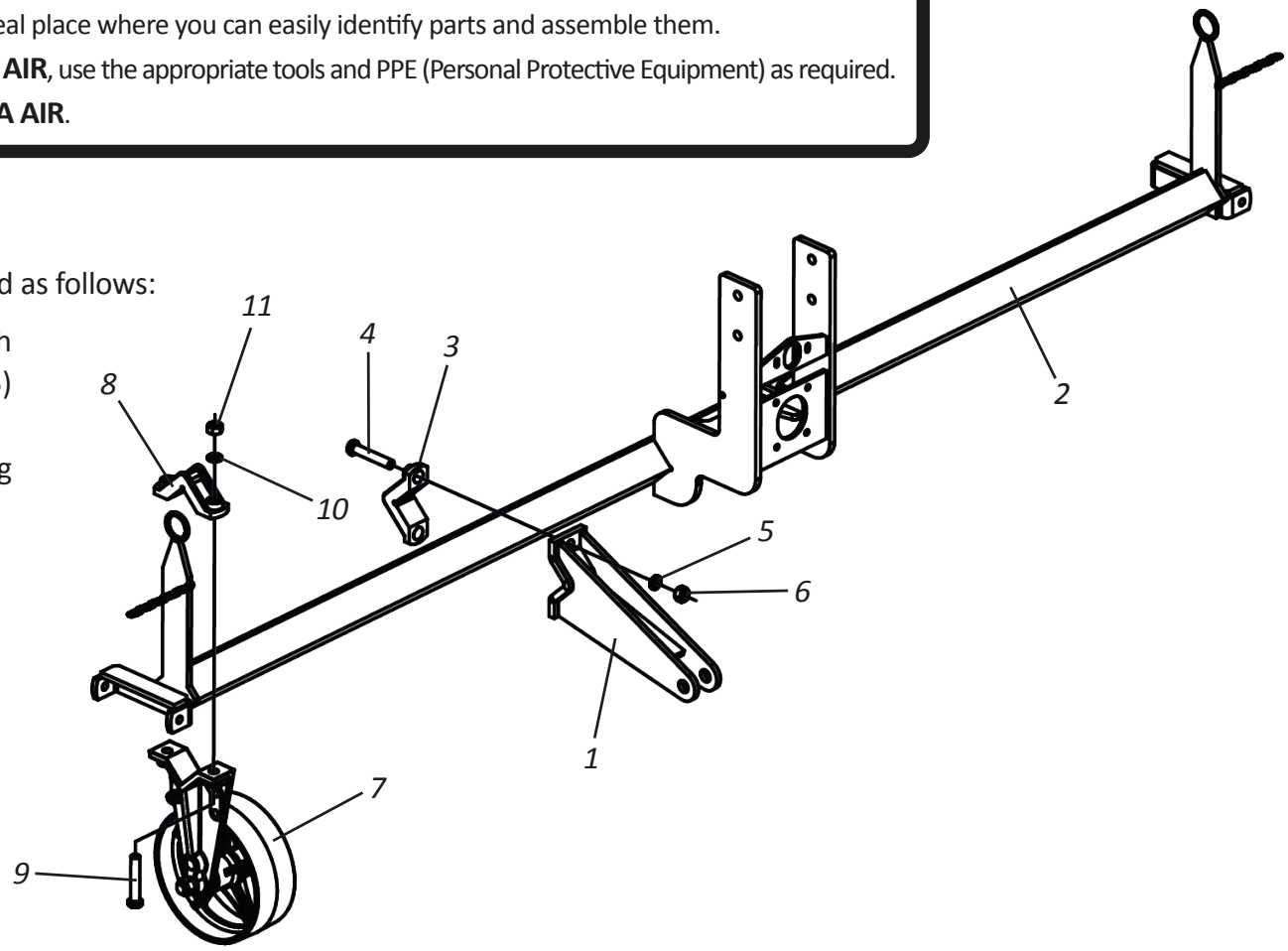
⚠ The assembly of the **PLB DIRECTA AIR** must be done by the reseller, by people who are trained and qualified for this work.
⚠ Before starting the assembling of **PLB DIRECTA AIR**, find and ideal place where you can easily identify parts and assemble them.
⚠ When performing an assembly or disassembly of the **PLB DIRECTA AIR**, use the appropriate tools and PPE (Personal Protective Equipment) as required.
⚠ Do not wear loose clothing as it may get caught on the **PLB DIRECTA AIR**.

• Assembly of the coupling head

To assemble the **PLB DIRECTA AIR**, coupling head, proceed as follows:

01 - Place the coupling (1) on the coupling head (2) through the support (3) securing it with the screws (4), washers (5) and nuts (6).

02 - Then place the wheels (7) through the support (8) securing it with the bolts (9), lock washers (10) and nut (11).



⚠ ATTENTION

Adjust the couplings (1) according to the category of tractor that will operate the sower.
- Category I: 685 mm / - Category II: 826 mm.

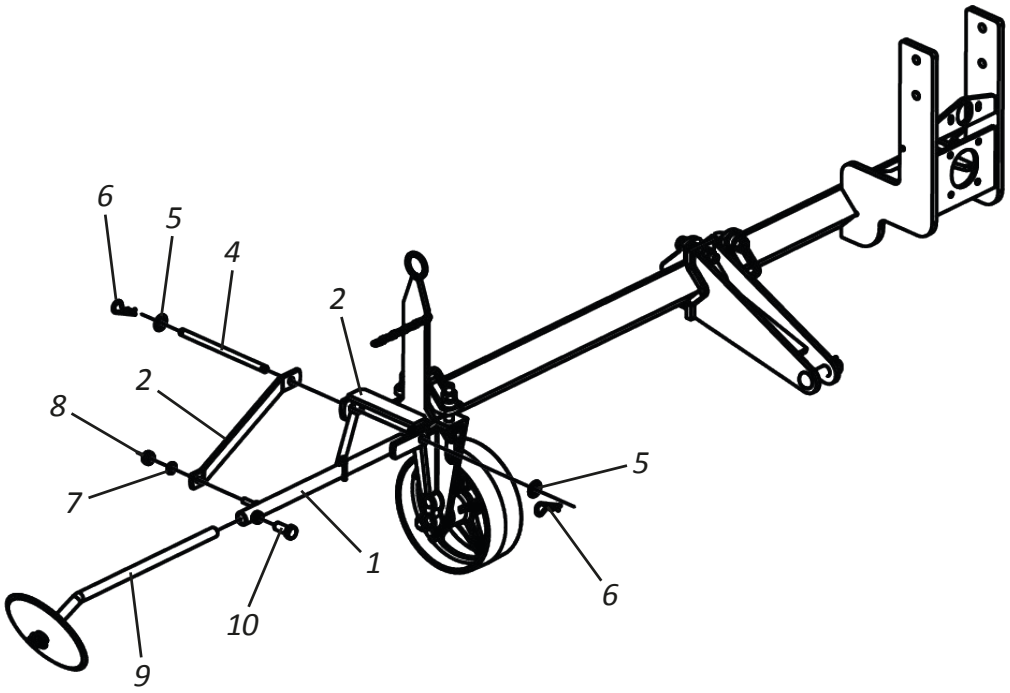
▪ Assembly

• Assembly of the line marker

To assemble the **PLB DIRECTA AIR** line marker (1), proceed as follows:

01 - Place the goal support (1) and bar (2) on the coupling head (3), securing it with the pin (4), flat washer (5), lock (6), lock washer (7) and nut (8).

02 - The insert the line marker (9) into the goal support (1) securing it through the screw (10).

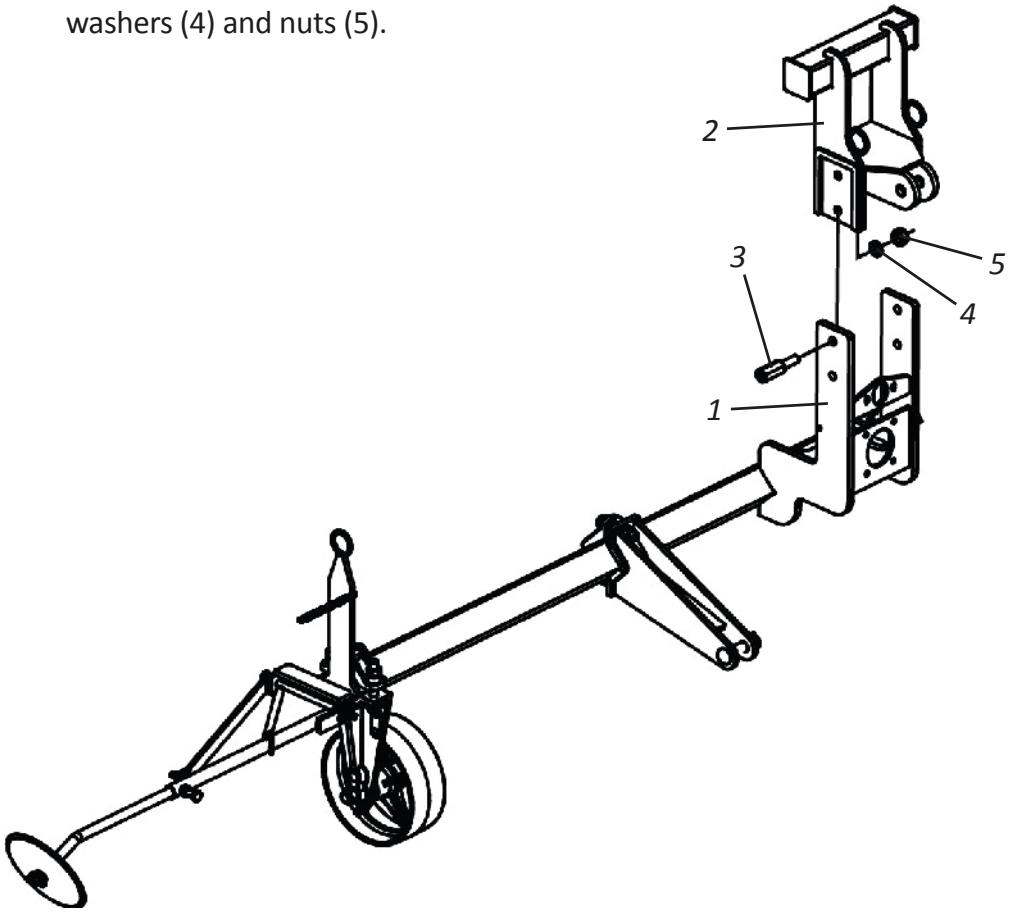


NOTE Repeat the procedure above to assemble the other line marker.

• Assembly of the turbine support

To assemble the **PLB DIRECTA AIR**, turbine support (1), proceed as follows:

01 - Attach the turbine support (1) to the coupling head (2) by securing it through the bolts (3), lock washers (4) and nuts (5).

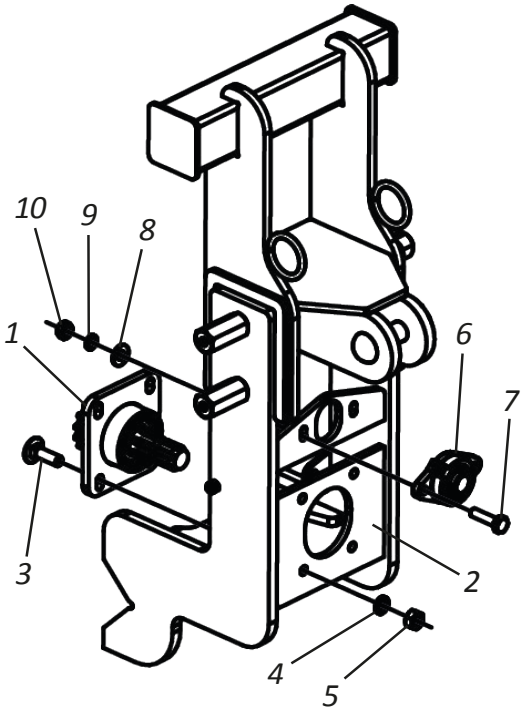


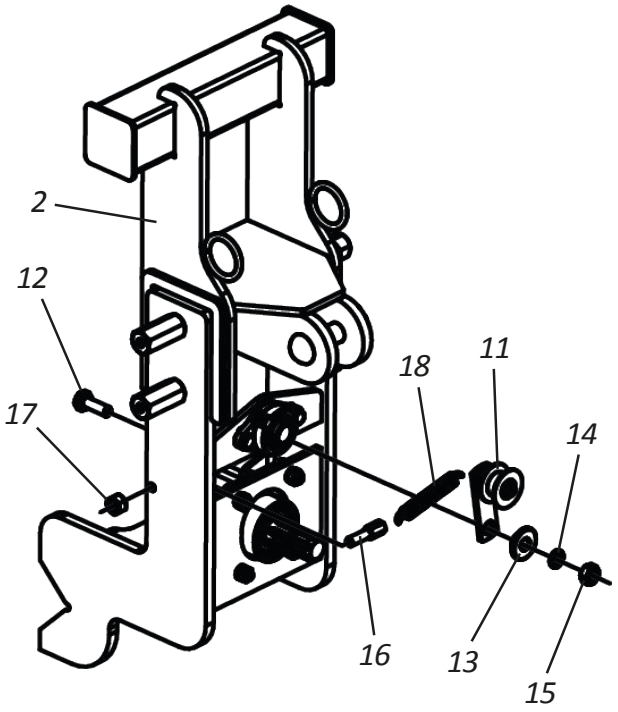
▪ Assembly

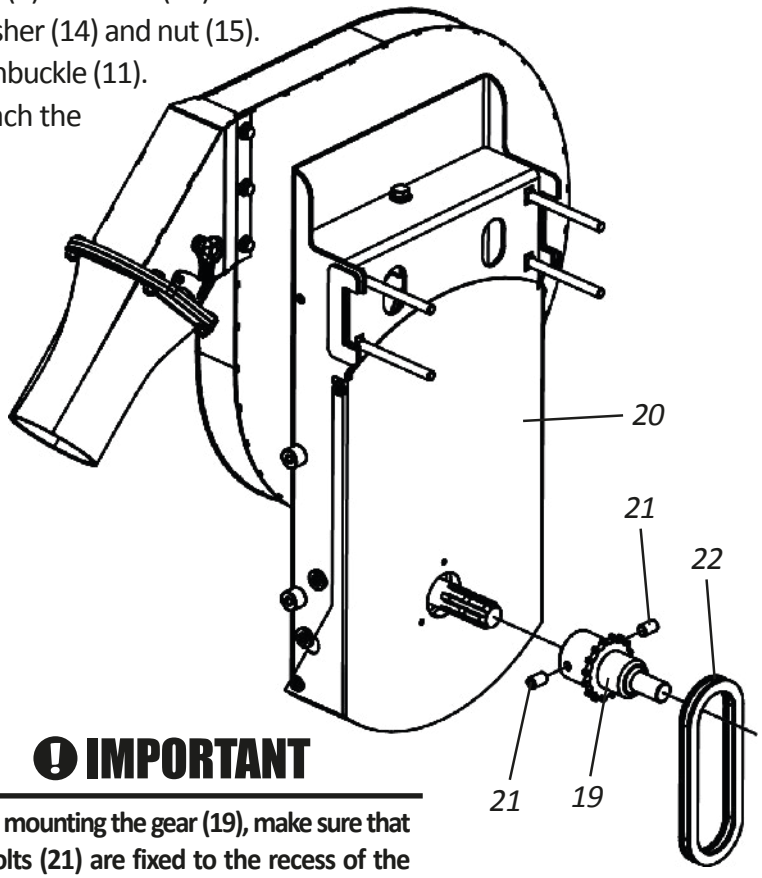
• Assembly of the turbine - Part I

To assemble the **PLB DIRECTA AIR** turbine, proceed as follows:

01 - Couple the bearing (1) on the coupling head (2) through the bolts (3), lock washers (4) and nuts (5).
02 - Then attach the bearing (6) to the coupling head (2) through the bolts (7), flat washers (8), lock washers (9) and nuts (10).
03 - Then secure the turnbuckle (11) to the coupling head (2) through the screw (12), flat washer (13), lock washer (14) and nut (15).
04 - Then couple the shaft (16) through the nut (17). Finally, attach the spring (18) to the shaft (16) and the turnbuckle (11).
05 - Then couple the gear (19) on the notched shaft of the turbine (20) securing with the bolts (21) and attach the chain (22).







IMPORTANT

When mounting the gear (19), make sure that the bolts (21) are fixed to the recess of the notched turbine shaft (20).

▪ Assembly

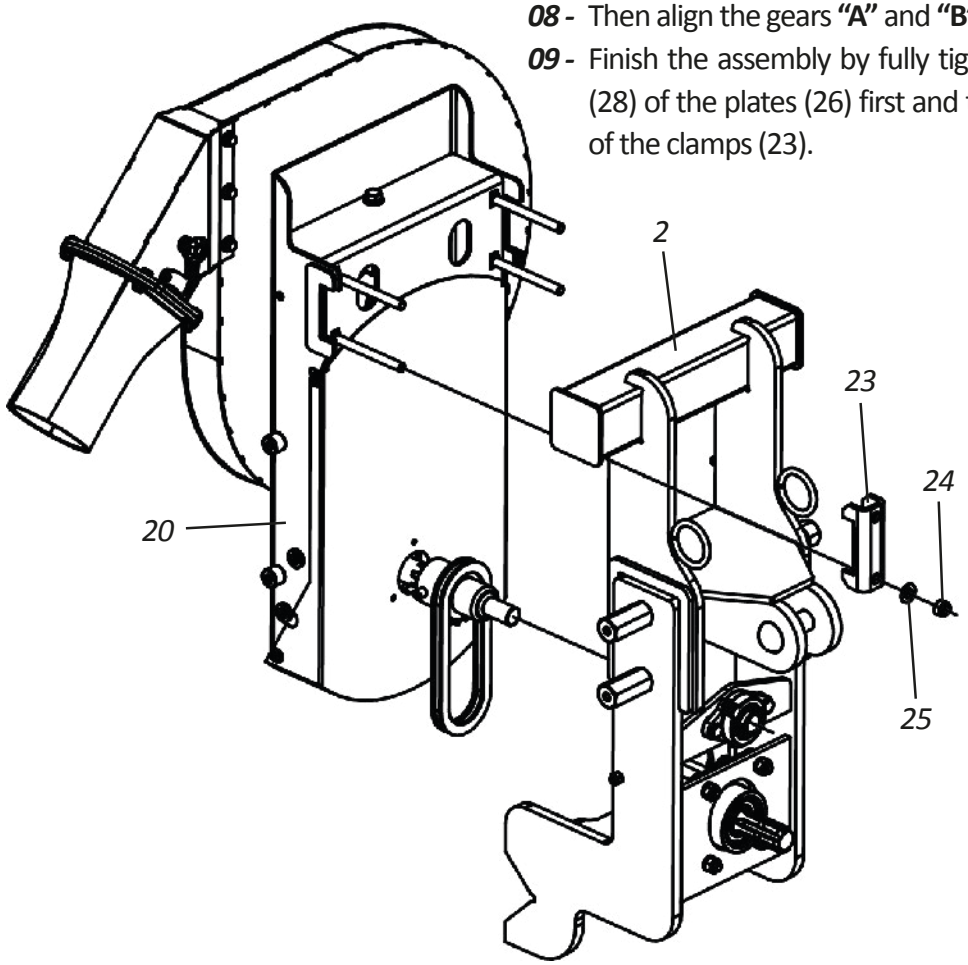
• Assembly of the turbine - Part II

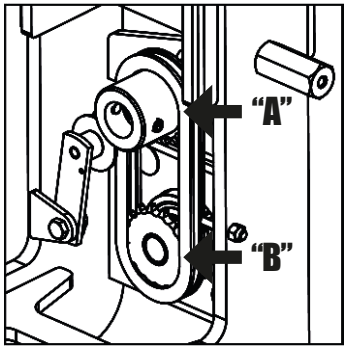
06 - Then couple the turbine (20) on the coupling head (2) through the clamps (23) by partially tightening the nuts (24) and lock washers (25).

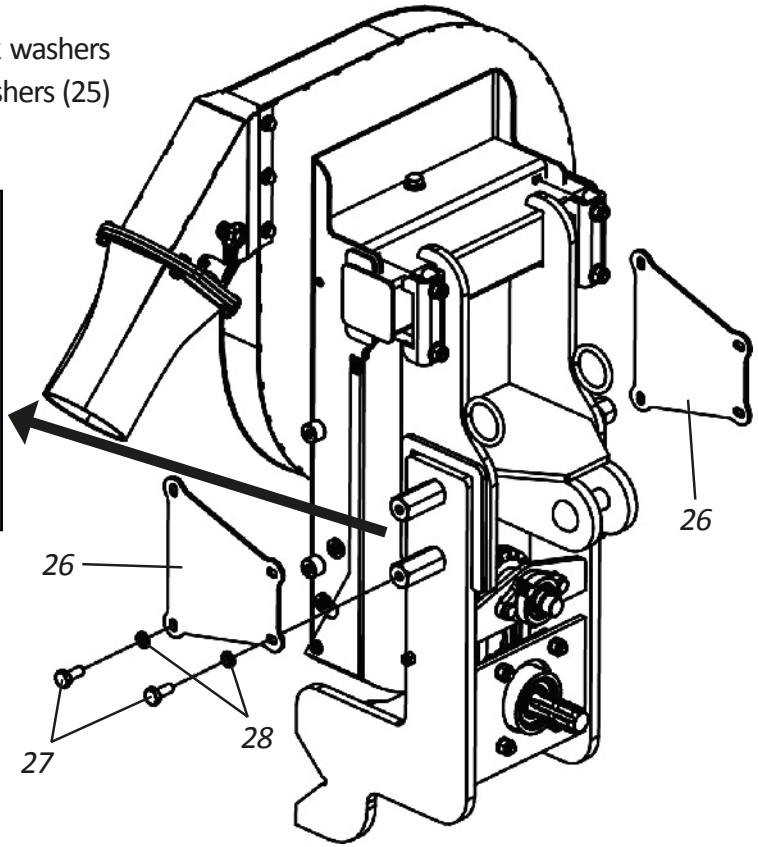
07 - Then attach the plates (26) and partially tighten the screws (27) and lock washers (28).

08 - Then align the gears **"A"** and **"B"**.

09 - Finish the assembly by fully tightening the bolts (27) and lock washers (28) of the plates (26) first and then the nuts (24) and lock washers (25) of the clamps (23).







⚠ ATTENTION | **DO NOT work if gears "A" and "B" are NOT aligned. Ignoring this warning may cause damage to the PLB DIRECTA AIR.**

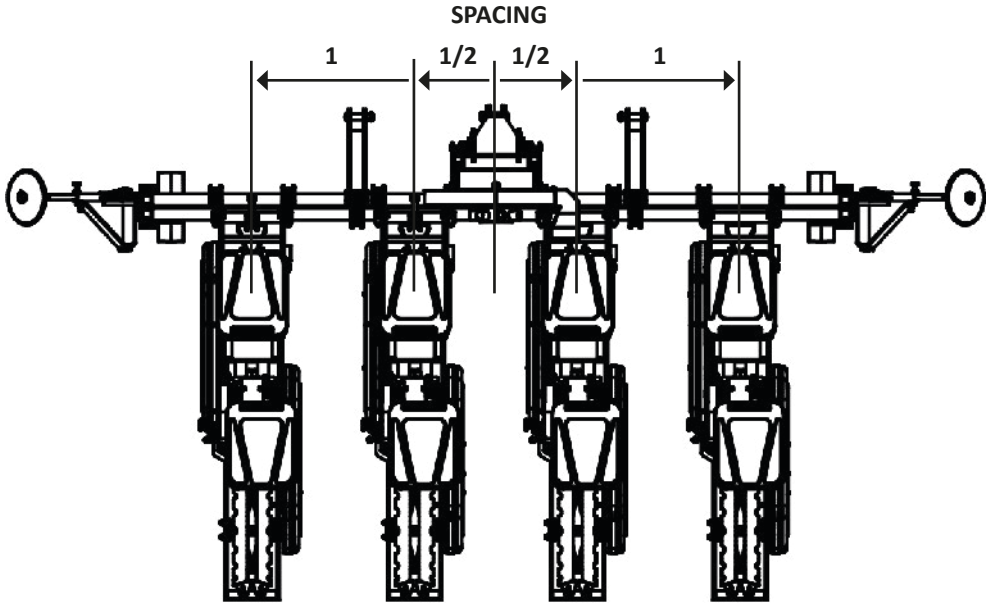
▪ Assembly

• Assembly of the lines (Spacing)

PLB DIRECTA AIR sowing machines are supplied with spacing according to the number of rows requested and new spacings can be made according to the desired crop type:

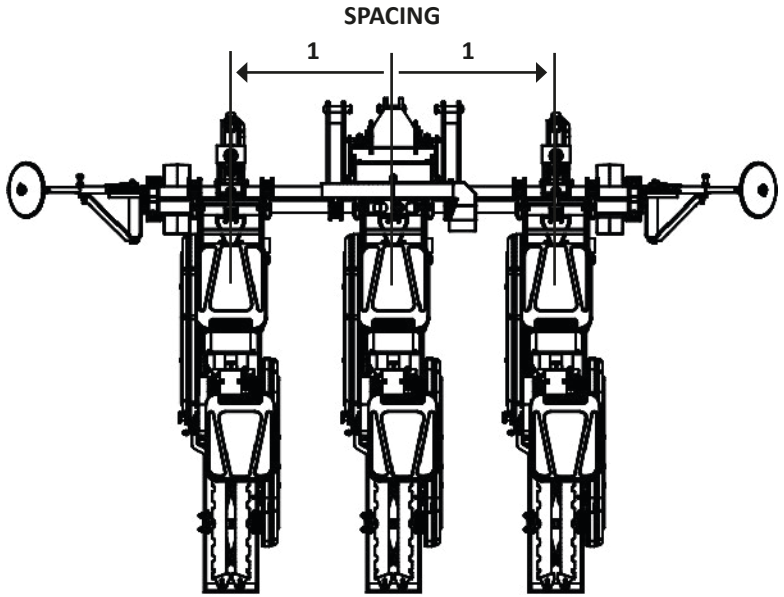
NUMBER OF EVEN LINES

Mark the center of the **PLB DIRECTA AIR** coupling head and divide 1/2 (half) left spacing and 1/2 (half) right spacing by fixing the first two lines at these points. Then, starting from them, assemble the other lines with the desired spacing.



NUMBER OF ODD LINES

Fixe a line in the center of the **PLB DIRECTA AIR** coupling head and from it, assemble the other lines with the desired spacing.



NOTE On the next page, check the possible spacings, observing the assembly instructions above, to assemble the number of odd or even lines.

▪ Assembly

• Assembly of the lines (Spacing tables in millimeters)

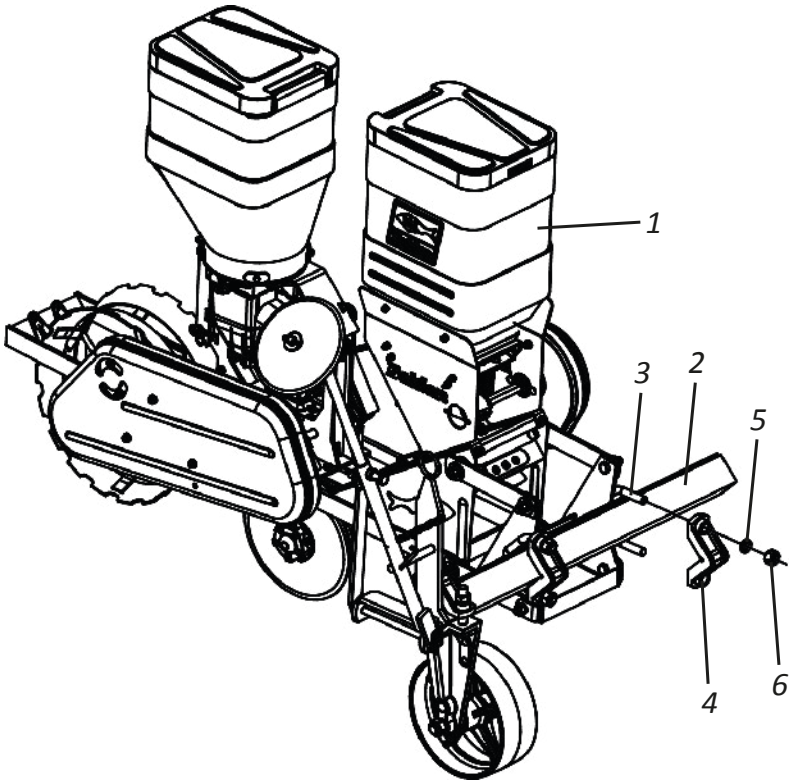
COUPLING HEAD 1800		COUPLING HEAD 2300		COUPLING HEAD 2800		COUPLING HEAD 3300		COUPLING HEAD 3800		COUPLING HEAD 4400	
Lines	Spacing	Lines	Spacing	Lines	Spacing	Lines	Spacing	Lines	Spacing	Lines	Spacing
4	450	5	450	6	450	6	450	6	450	6	450
3	500	4	500	5	500	6	500	6	500	6	500
3	550	4	550	5	550	6	550	6	550	6	550
3	600	4	600	5	600	5	600	6	600	6	600
3	650	3	650	4	650	5	650	6	650	6	650
3	700	3	700	4	700	5	700	5	700	6	700
2	750	3	750	4	750	4	750	5	750	6	750
2	800	3	800	4	800	4	800	5	800	6	800
2	850	3	850	3	850	4	850	5	850	5	850
2	900	3	900	3	900	4	900	4	900	5	900
2	950	3	950	3	950	4	950	4	950	5	950
2	1000	2	1000	3	1000	3	1000	4	1000	5	1000

▪ Assembly

• Assembly of the lines (Coupling)

For lines (1) in coupling head (2), do the following:

01 - Attach the lines (1) to the coupling head (2), securing through the clamps (3 and 4), lock washers (5) and nuts (6).

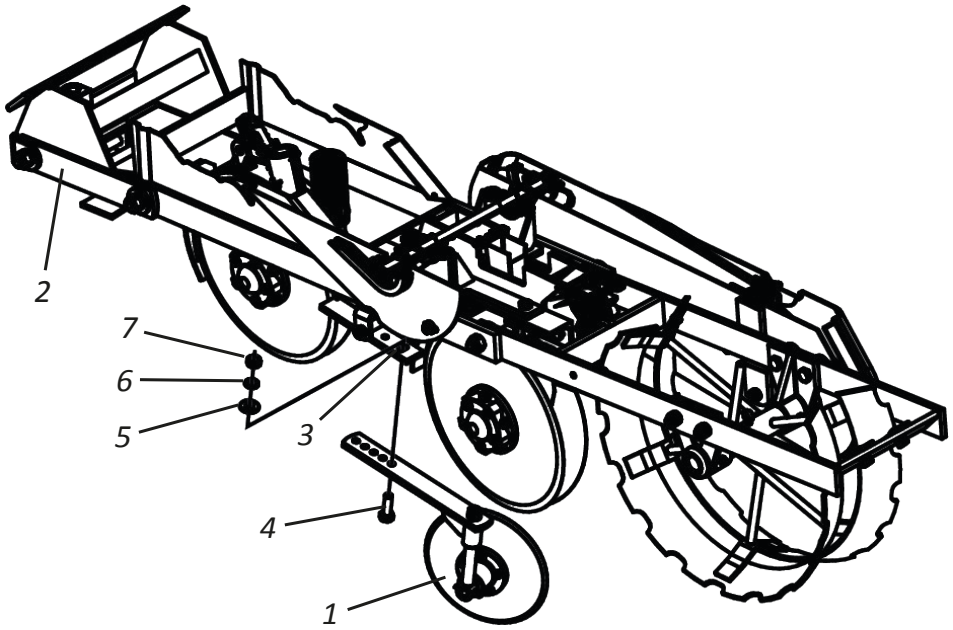


⚠ ATTENTION | **Repeat this procedure for assembling the other lines in the coupling head (2).**

• Assembly of the covering disc

To assemble the covering disc (1) on line (2), proceed as follows:

01 - Attach the covering disc (1) to the plate (3), securing the screws (4), flat washers (5), lock washers (6) and nuts (7).



⚠ ATTENTION | **Repeat this procedure for mounting the cover discs (1) on the other lines.**

▪ Assembly

• Assembly of the fertilizer double disc

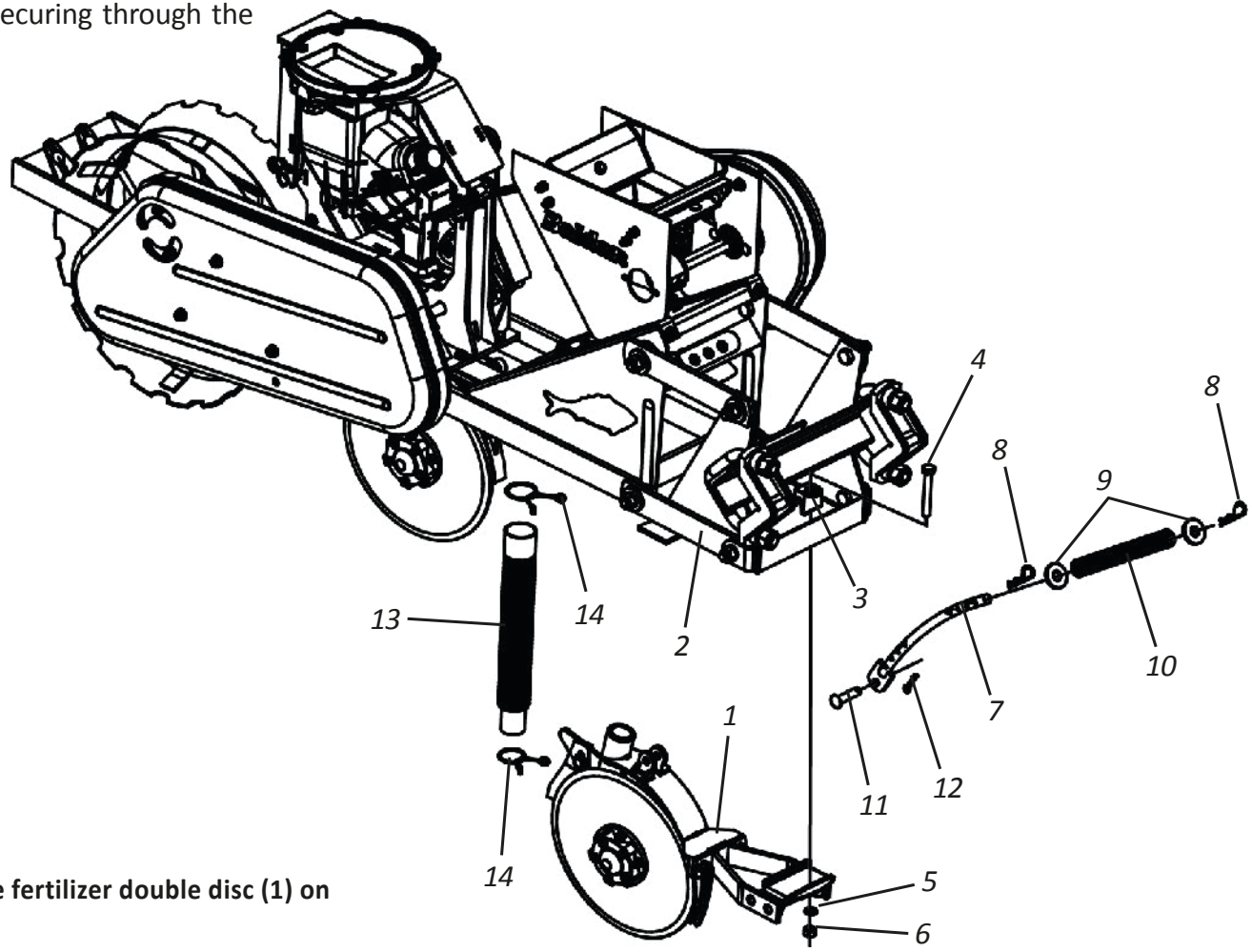
To assemble the fertilizer double disc (1), proceed as follows:

01 - Couple the fertilizer double disc (1) into the line (2), securing through the lock (3), screw (4), lock washer (5) and nut (6).

02 - Then mount the rod (7) by placing the latches (8), flat washers (9) and spring (10).

03 - Then fix the rod (7) to the fertilizer double disc (1) securing it through the pin (11) and cotter pin (12).

04 - Finish by coupling the hose (2) securing through the locks (14).



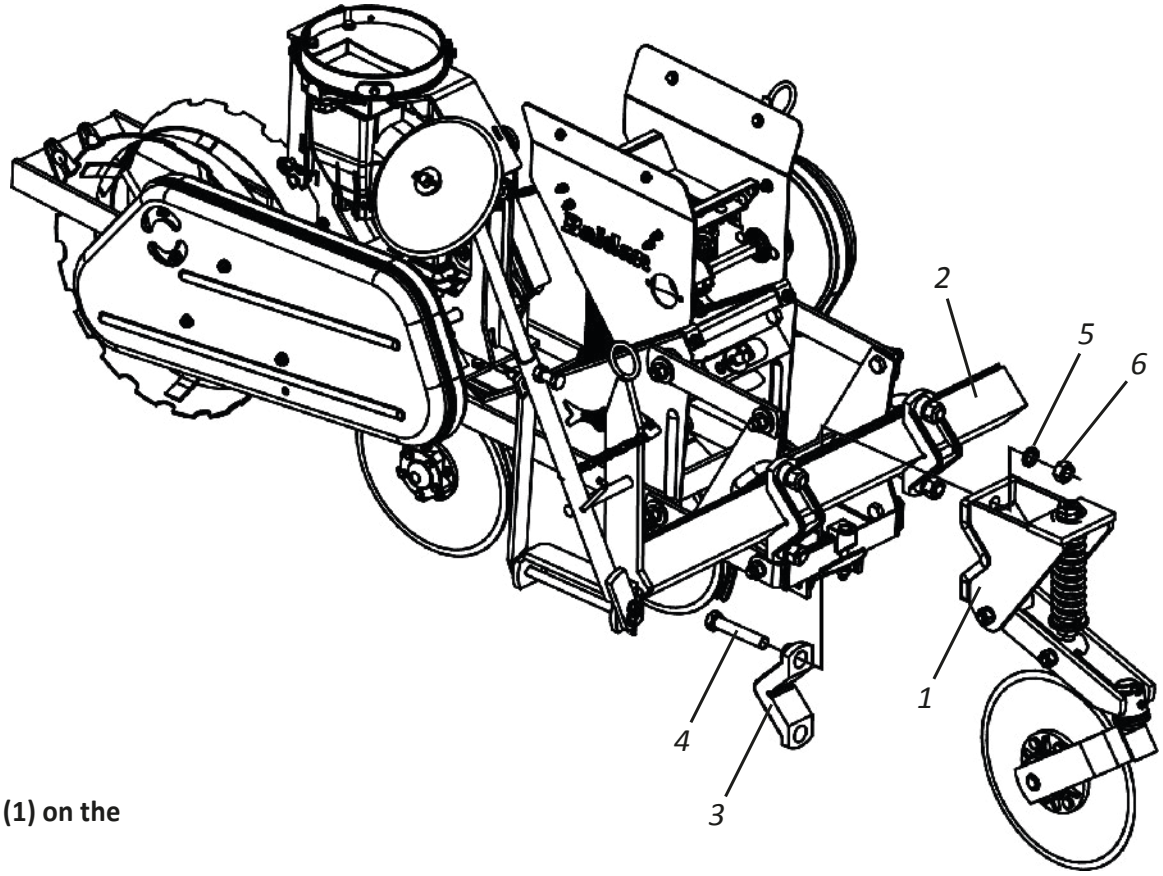
⚠ ATTENTION | **Repeat this procedure for mounting the fertilizer double disc (1) on the other lines.**

▪ Assembly

• Assembly of the cutting disc (Optional)

PLB DIRECTA AIR was developed for conventional planting, but it also works in no-till farming. To assemble the cutting disc (1) for no-till farming, proceed as follows:

01 - Attach the cutting disc (1) to the coupling head (2) by securing the clamp (3), screws (4), lock washers (5) and nuts (6).



⚠ ATTENTION | **Repeat this procedure for mounting the cutting discs (1) on the other lines.**

▪ Assembly

• Assembly of the ridger (Optional)

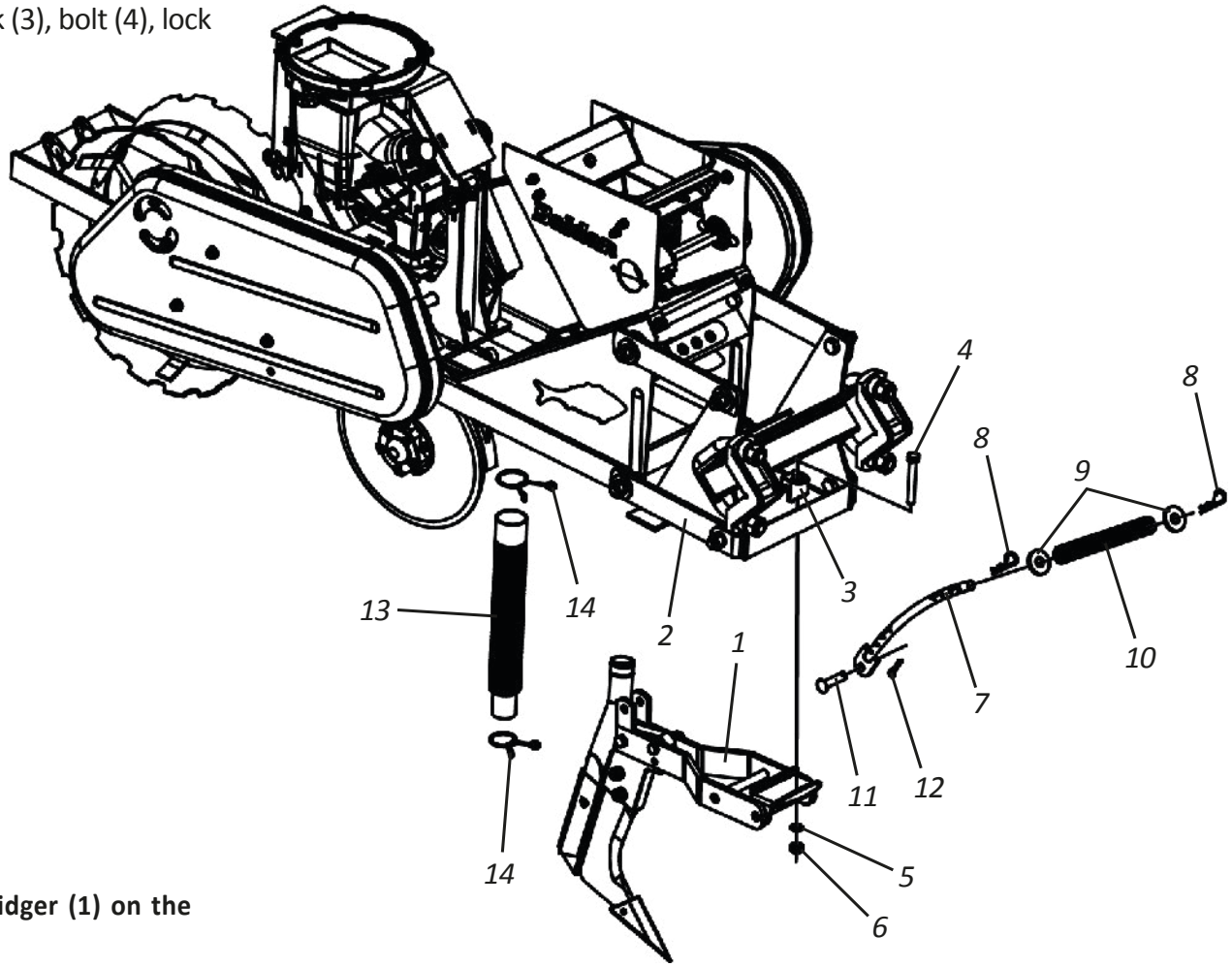
To assemble the ridger (1), proceed as follows:

01 - Attach the ridger (1) to the line (2), securing through the lock (3), bolt (4), lock washer (5) and nut (6).

02 - Then mount the rod (7) by attaching the latches (8), plain washers (9) and spring (10).

03 - Then attach the rod (7) to the ridger (1), securing it through the pin (11) and cotter pin (12).

04 - Finish by coupling the hose (13) to the ridger (1) and line (2) securing through the locks (14).



⚠ ATTENTION | **Repeat this procedure for mounting the ridger (1) on the other lines.**

▪ Assembly

• Assembly of the ridger for corn plating (Optional)

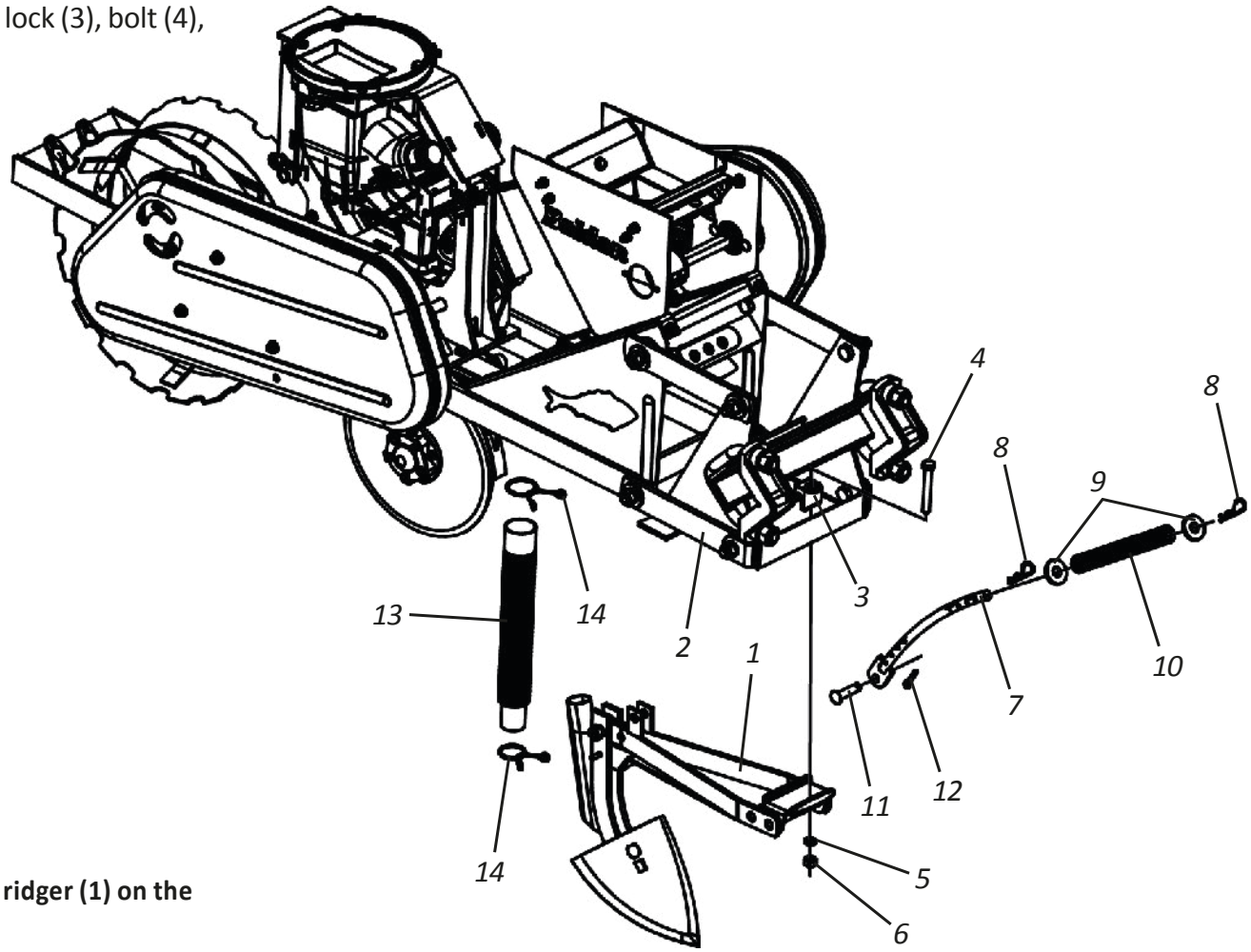
To assemble the ridger (1), proceed as follows:

01 - Attach the ridger (1) to the line (2), securing through the lock (3), bolt (4), lock washer (5) and nut (6).

02 - Then mount the rod (7) by placing the latches (8), flat washers (9) and spring (10).

03 - Then attach the rod (7) to the ridger (1), securing it through the pin (11) and cotter pin (12).

04 - Finish by coupling the hose (13) to the ridger (1) and line (2) securing through the locks (14).



⚠ ATTENTION | **Repeat this procedure for mounting the ridger (1) on the other lines.**

▪ Assembly

• Assembly of the cutting nozzle for deep fertilization (Optional)

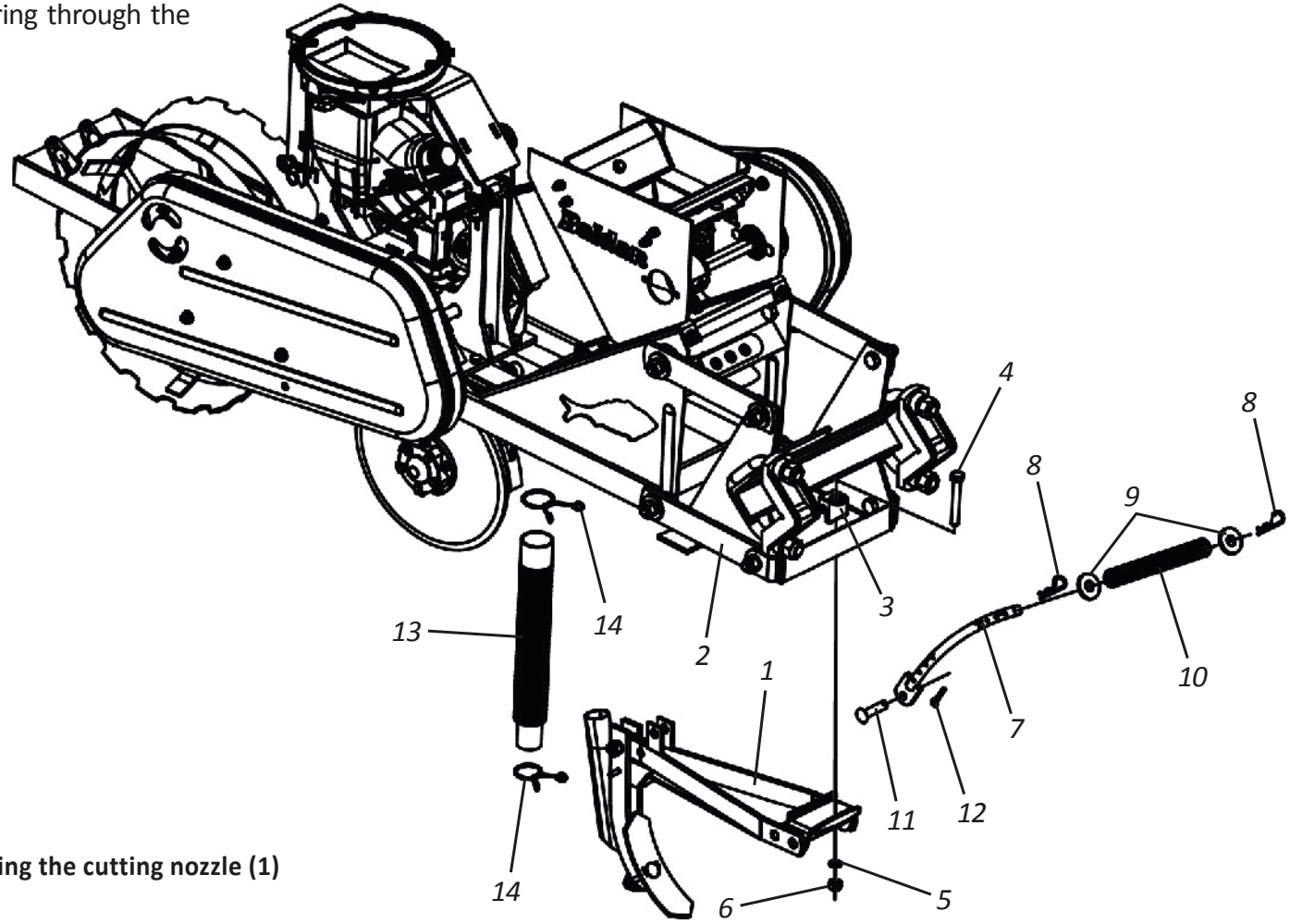
To assemble the cutting nozzle (1), proceed as follows:

01 - Attach the cutting nozzle (1) to the line (2), securing through the lock (3), bolt (4), lock washer (5) and nut (6).

02 - Then mount the rod (7) by placing the latches (8), flat washers (9) and spring (10).

03 - The attach the rod (7) to the cutting nozzle (1), securing it through the pin (11) and cotter pin (12).

04 - Finish by coupling the hose (13) to the cutting nozzle (1) and line (2) securing through the locks (14).



⚠ ATTENTION | **Repeat this procedure for mounting the cutting nozzle (1) on the other lines.**

▪ Hitch

• Tractor hitch

Before coupling the seeder to the tractor, make sure the tractor is ready for work by observing the following items:

- Check that the tractor is equipped with weights or ballasts on the front or on the front wheels to avoid lifting the tractor. The rear wheels will give the tractor greater stability and traction on the ground.

- Adjust the lower arms eye of the tractor.

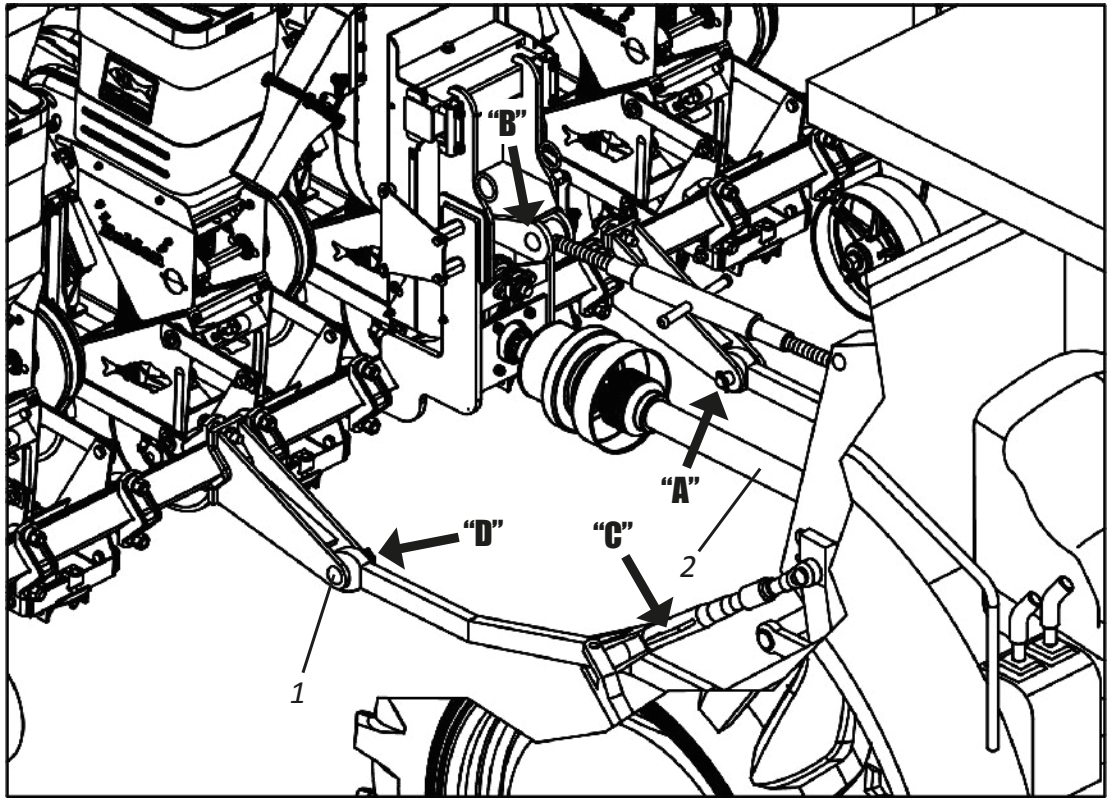
To couple the **PLB DIRECTA AIR**, proceed as follows:

01 - Approach the tractor slowly with the seeder in reverse gear, paying attention to the application of the brakes. Use the hydraulic position control lever as you approach the seeder, leaving the lower left arm at seeder engagement level.

02 - Engage the lower left arm of the tractor throuugh the hitch pin (1) on the seeder support **"A"**.

03 - Engage the 3rd point of the tractor on the seeder support **"B"**.

04 - Finally with the aid of the regulator lever **"C"**, engage the lower right arm of the tractor in the holder **"D"** of the seeder.



❗ IMPORTANT

When engaging the PLB DIRECTA AIR, find a safe and easily accessible place, always use a low gear with low acceleration. Make sure that when relieving tractor hydraulics, no one is dose to the seeder's moving area.

❗ NOTE

Before coupling the cardan shaft (2), check its length in relation to the tractor model used. If necessary, make the cardan shaft cut as instructed on pages 31 and 32.

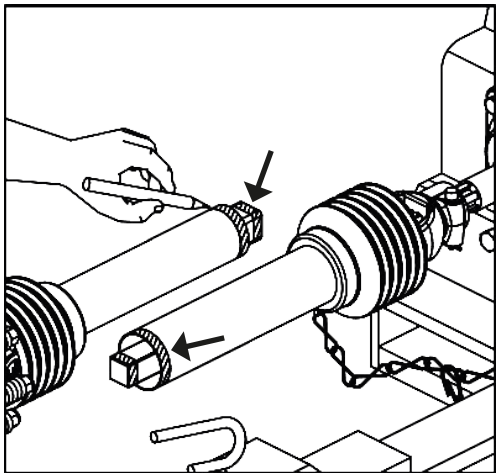
▪ Hitch

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

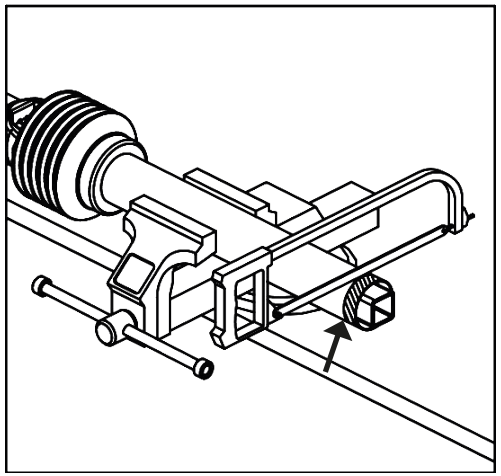
• Cardan shaft cut - Part I

⚠ ATTENTION | **Before cutting the cardan, check the adjustment of the tractor's drawbar, which can increase its compliance, avoiding the cardan cut.**

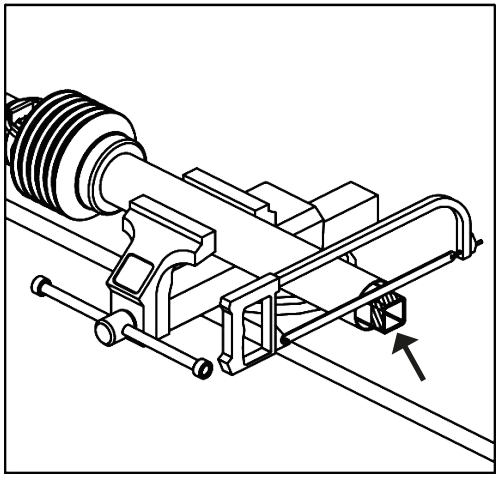
To perform the cardan cut, proceed as follows:



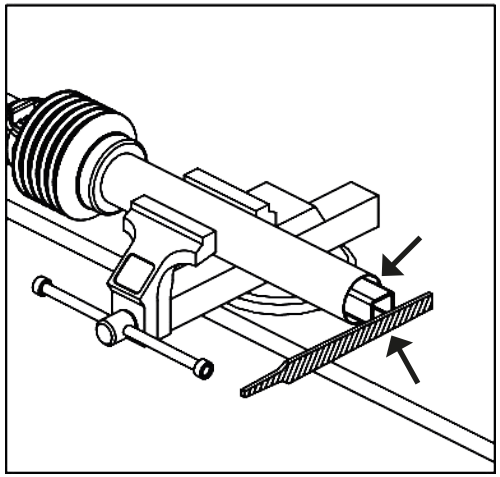
Segure the shaft halves from the shaft close to each other in the working position and mark the part to be cut.



Shorten the inner and outer guards of the cardan proportionally.



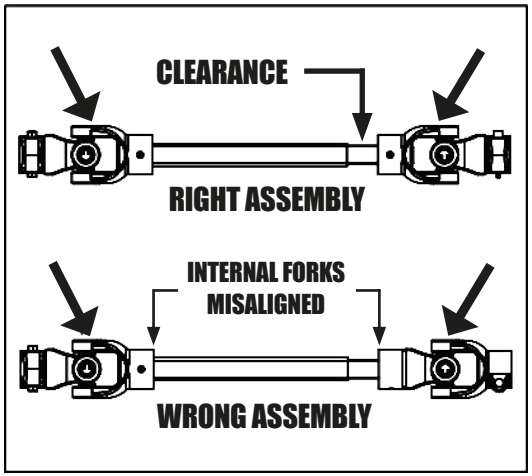
Cut the inner bars of the cardan in the same length as the protective tubes.



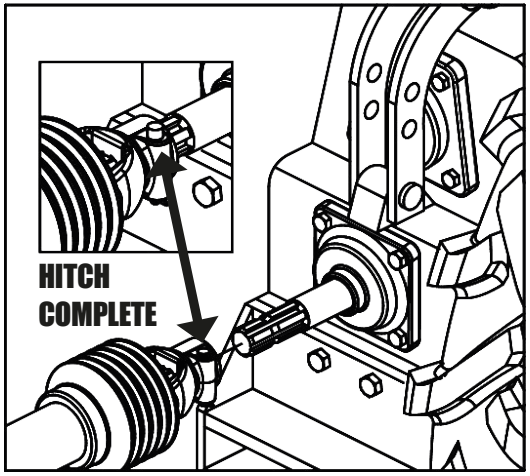
Remove all burrs and edges. Clean and grease the cardan sliding bars.

▪ Hitch

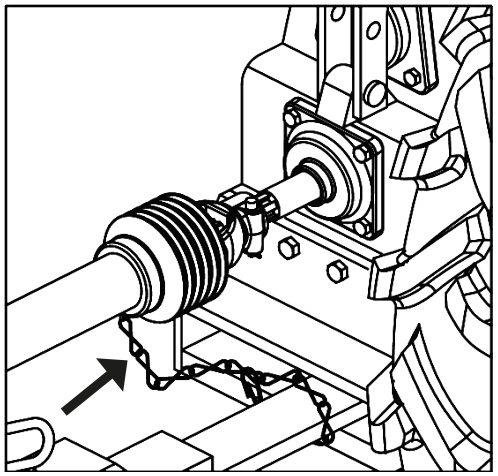
• Cardan shaft cut - Part II



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



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



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

⚠ ATTENTION

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

❗ IMPORTANT

Evey time you change the tractor, check the cardan shaft lenght again.

❗ NOTE

Check the cardan joint angle on page 67 and other recommendations for using it.

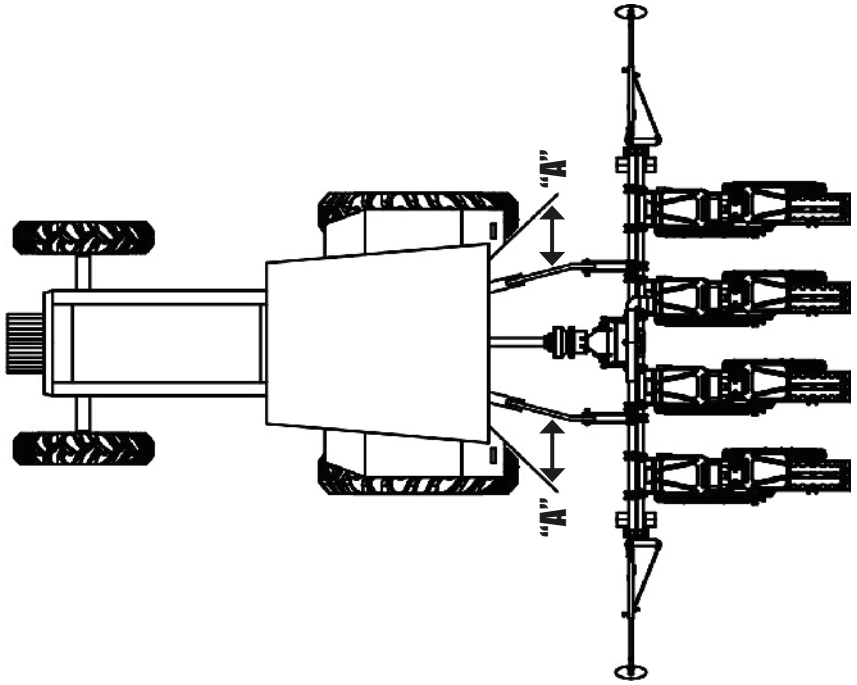
▪ Adjustments

• Centralization

To center the **PLB DIRECTA AIR** in relation to the longitudinal axis of the tractor, proceed as follows:

01 - Align the upper **PLB DIRECTA AIR** hitch with the 3rd point the tractor.

02 - Then check that the distances **"A"** of the lower linkage arms are equal to the tractor tires. The lower arms should be level with each other.



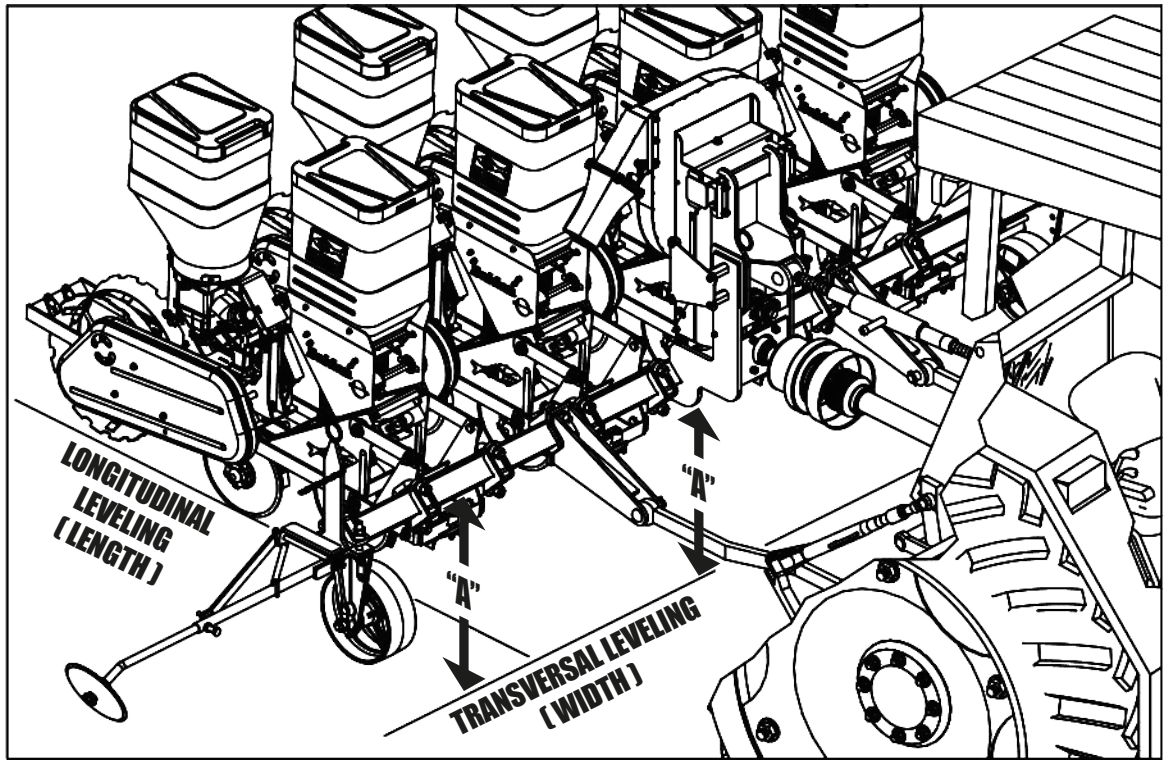
• Levelling

To level the **PLB DIRECTA AIR**, proceed as follows:

01 - The tractor must be in a flat location.

02 - Then level the **PLB DIRECTA AIR** transverse (width) through the cranck on the lower right arm of the hydraulic hitch. Observe the measurements **"A"** which must be the same.

03 - Longitudinal leveling (length) is done through the 3rd point arm. Note that the lines must be parallel to the ground.



▪ Adjustments

• Line markers adjustment

The regulating of the line markers is important to obtain evenly spaced planting, making so that the edge line of the seeder is at the same spacing as the last planted line, facilitating future operations. To adjust the line markers, proceed as follows:

01 - First of all, you must know the line spacing, the number of lines to be used in the operation and the tractor's front gauge. Use the formula below, followed by an example.

Example: *For planting with* ***PLB DIRECTA AIR*** *with header 3300 04 lines, spacing of 0.75 mts and the front gauge of tractor with 1.43 m, determine:*

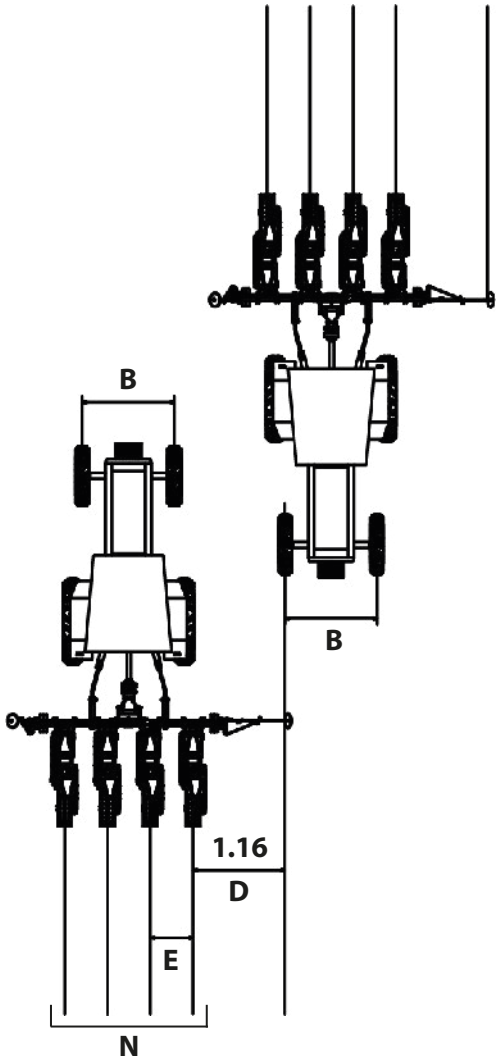
Formula: $D = \frac{E \times (N+1) - B}{2}$

Resolve: $D = \frac{0.75 \times 5 - 1.43}{2}$

D = 1.16 meter.

Formula Data:

E = Spacing between lines (m)
N = Number of seeder rows
B = Front gauge of tractor
D = Marker distance



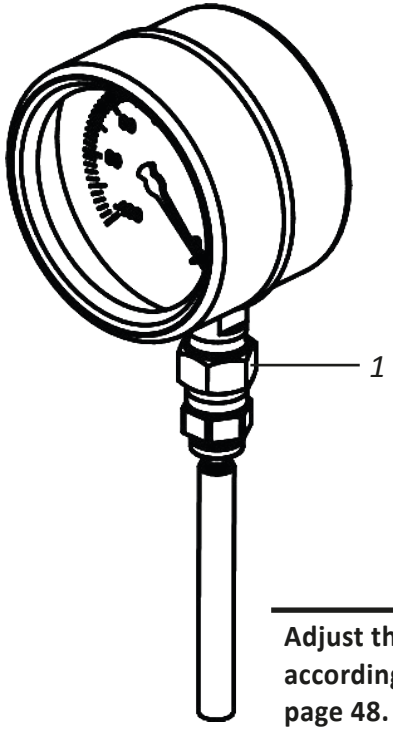
02 - Set the 1.16 m line marker disc to the center of the first planting line.

03 - Line markers are alternating, one lowers after the other, so if during planting before the end of the line there is the need to stop work, engange the piston so that the sower goes up and down twice to continue working with the marker on the right side.

▪ Adjustments

• Vacuum meter

PLB DIRECTA AIR has a vacuum gauge (1), which is used to measure the vacuum level in the lines. To check the generated vacuum level, proceed as instructed on page 66.



IMPORTANT

Adjust the pressure according to each culture according to the Culture Guie on the previous page 48.

ATTENTION

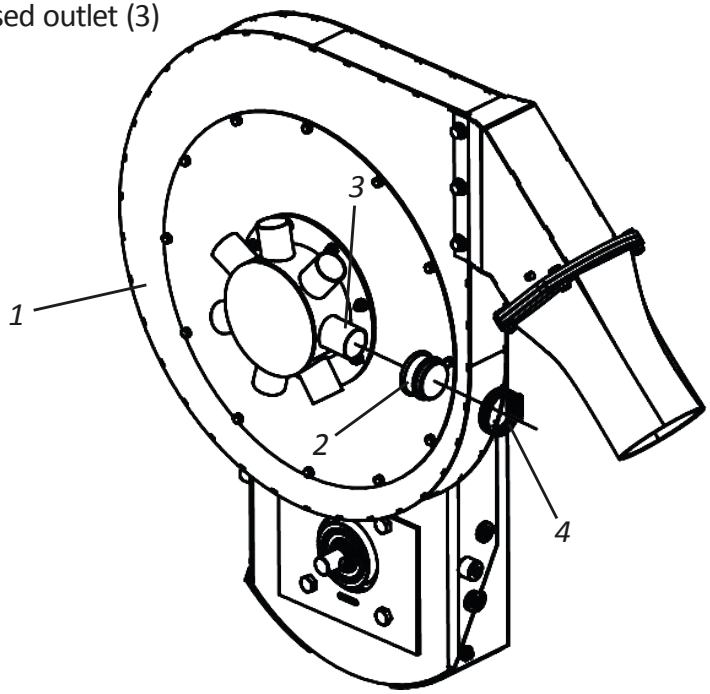
Turbine pressure is 80 mbar and can vary between 50 and 80 mbar air drop, depending on the number of lines

• Turbine

The turbine (1) is composed of several air outlets that are used according to the number of lines.

When working with fewer lines than the number of turbine outputs, cover the unused outputs by doing the following:

01 - Attach the plug (2) to the unused outlet (3) by locking it with the clip (4).



ATTENTION

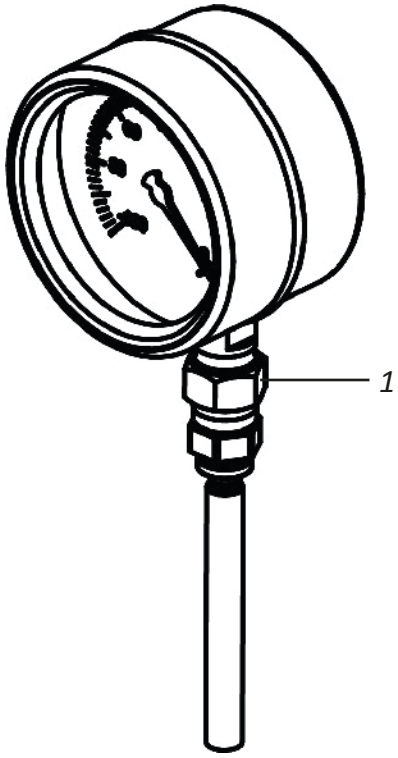
Do not work with the turbine (1) outputs (3) open as this may result in an accident or equipment damage.

▪ Adjustments

• Floodgate adjustment

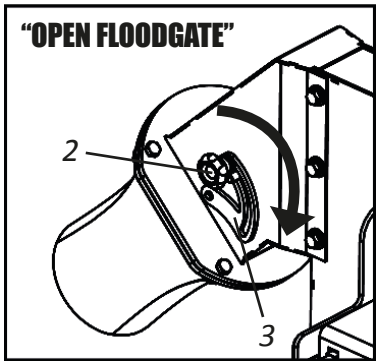
The turbine must generate a certain negtive pressure (vacuum) depending on the specific weight of the seed to be used. To adjust the negative pressure, proceed as follows:

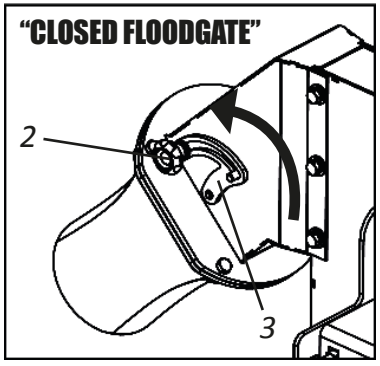
01 - Rotate the turbine through the tractor TDP, which should operate at a constant **540 RPM.**
02 - Check the generated vacuum level per instructions on page 66. The vacuum is indicated in mbar (milibar) by the vacuum gauge (1).
03 - To increase or decrease the vacuum, release the knob (2) by turning it counterclockwise.
04 - Then move the plate (3), the higher or lower the displacement, the higher or lower the vacuum level generated.

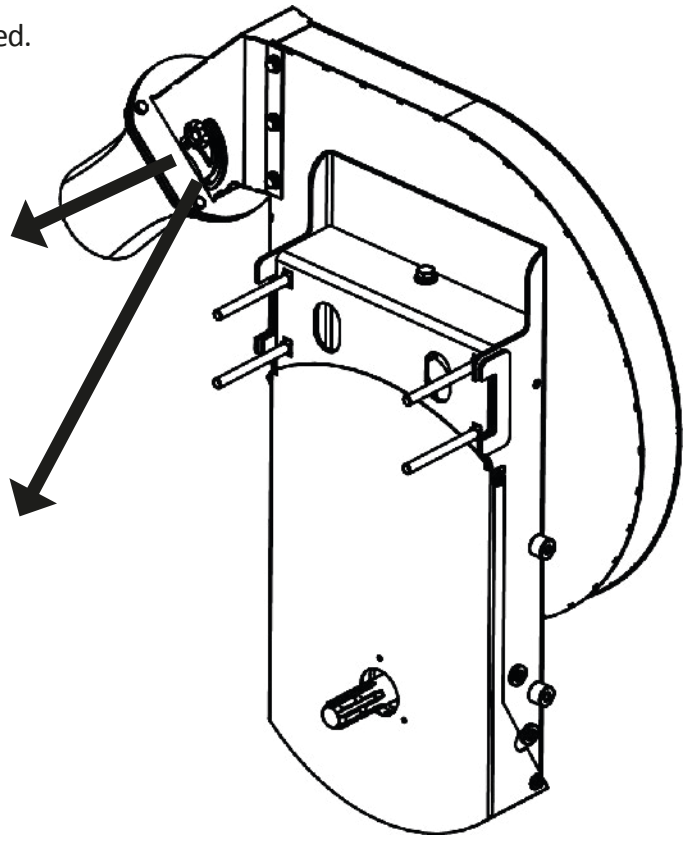


⚠ ATTENTION

The vacuum should be adjusted according to the type of crop to be used as shown in the Culture guide on page 48.



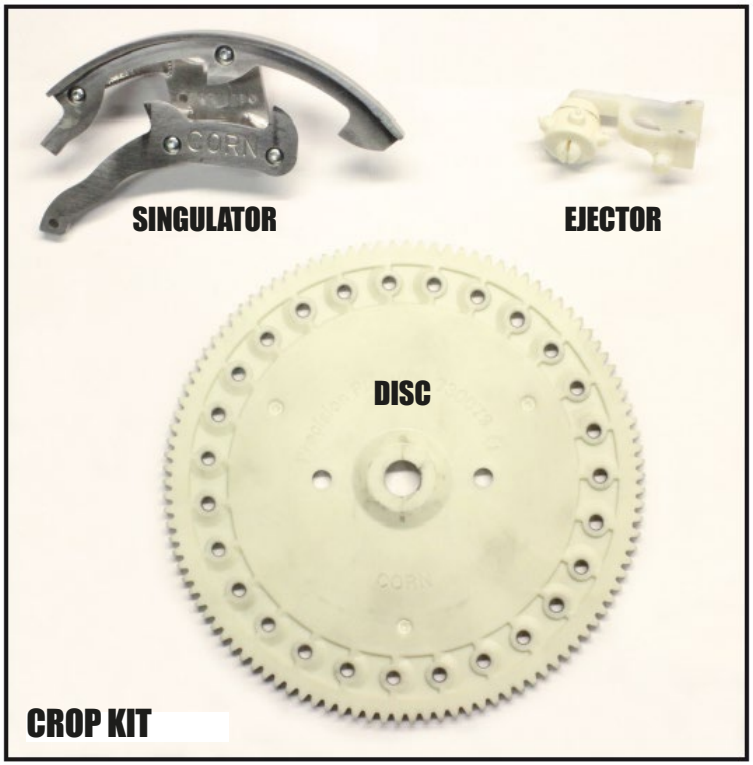




▪ Systems

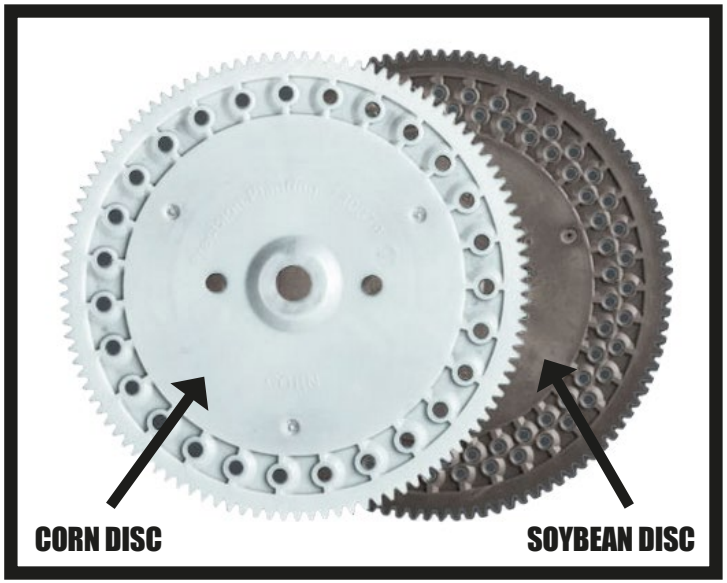
• Kits and discs for crops

PLB DIRECTA AIR leaves the factory with 2 crop kits: soybean kit (mounted on the sower) and the Corn kit (shipped in the package). Each kit has 3 components: Singulator, ejector and disc, as shown below.



KITS		
CROPS	CODES	DESCRIPTIONS
SOYBEAN	6020210296-7	KIT CROP SOYBEANS (768342)
CORN	6020210298-3	KIT CROP CORN (768341)

In the kits that come with **PLB DIRECTA AIR** are the soybean and corn distribution discs, **as shown below.**



⚠ ATTENTION | **All 3 items in the kit will need to be changed every time you change the crop you are planting.**

❗ IMPORTANT | **To understand supported crops, see the Crop Guide on page 48.**

▪ Systems

• Installation to distributor VSET 2 - Precision Planting

DISTRIBUIDOR VSET (FOR SEED TUBE)

Modes vSet 2 Base Meter (housing* + cover)

*vDrive installed

▪ Systems

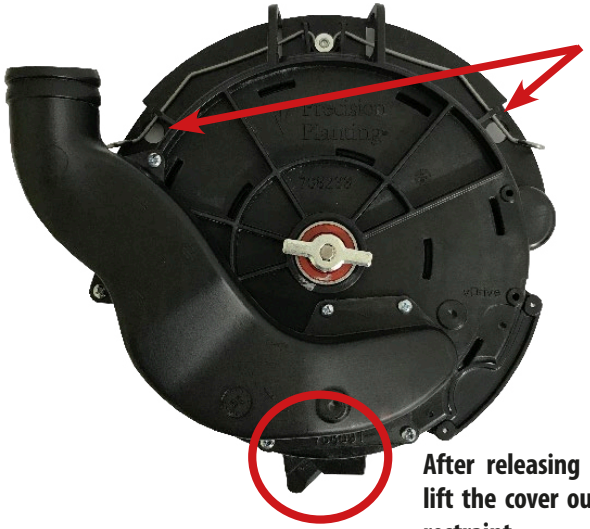
• Installation of kit for crop - Part I

Before you begin installing the kit in the distributor, identify the crop kit to be used.

STAGE 1

Open the manifold by releasing the retaining springs by pulling and separating the two halves and lifting the cover out of the integrated slot and latch restraint.

The distributor housing contains the disc the ejector wheel. The singulator is mounted on the mounted on the opposite half of the meter, also know as the seed containment cap.



Distributor retaining springs: to release, pull back andup.

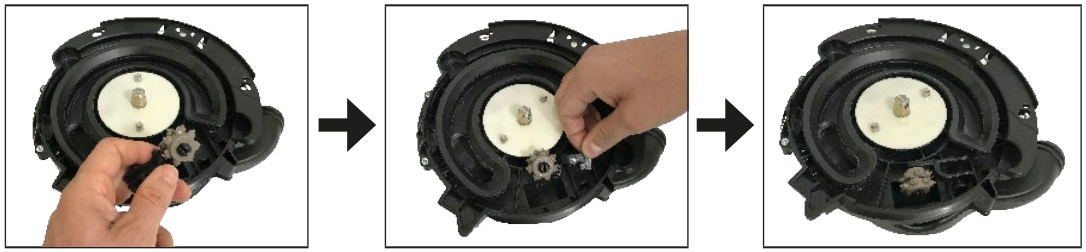
After releasing the retaining springs, lift the cover out of the slot and latch restraint.

STAGE 2

The vSet 2 ejector should be placed first in the housing and behind the distributor seal.

To begin, seat the lower pin in the spring before placing the plastic in place. The images illustrate how the ejector is inserted into position.

To remove, simply apply pressure to the end of the holder that keeps it in place.

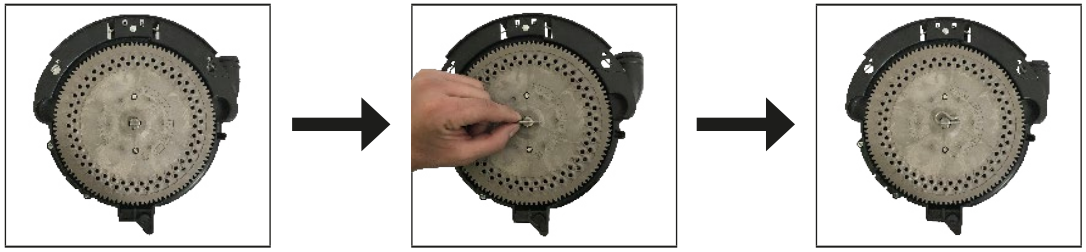


STAGE 3

Align the disc and slide the locking pin into place. The pin will have less resistance if inserted vertically. The distributor will have shims inserted in its center. The shim installation process it at the end of the manual.

When inserting the disc, be sure not to crush or curl the vacuum seal. If there are cracks or broken seams in the seal, replace it immediately.

To remove the locking pin, hold the disc in place and pull the locking pin with it vertically as shown in the image below. Do not lose the locking pin. Also, be sure to leave the shims under the disc in place during removal.

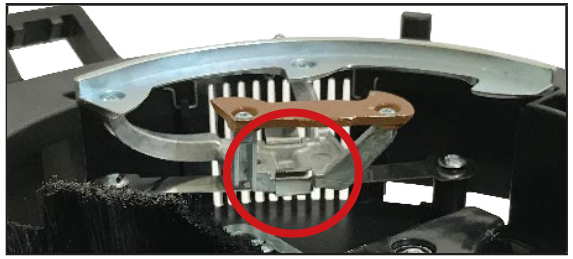


▪ Systems

• Installation of kit for crop - Part II

STAGE 4

The final step in the crop kit instalattion is to connect the singulator to the distributor cap. First, insert the singulator base into the lower bracket and press against the upper bracket. Make sure the upper and lower sides of the singulator are level with the spring latches. Make sure that the singulator is fully seated to ensure proper dispenser connection when assembling the cover and housing. To remove the singulator, pull back the release latch and it will pop out.



STAGE 5

In order to remove vSet 2 components for maintenance, remove parts as they were installed in Steps 1-4.

STAGE 6

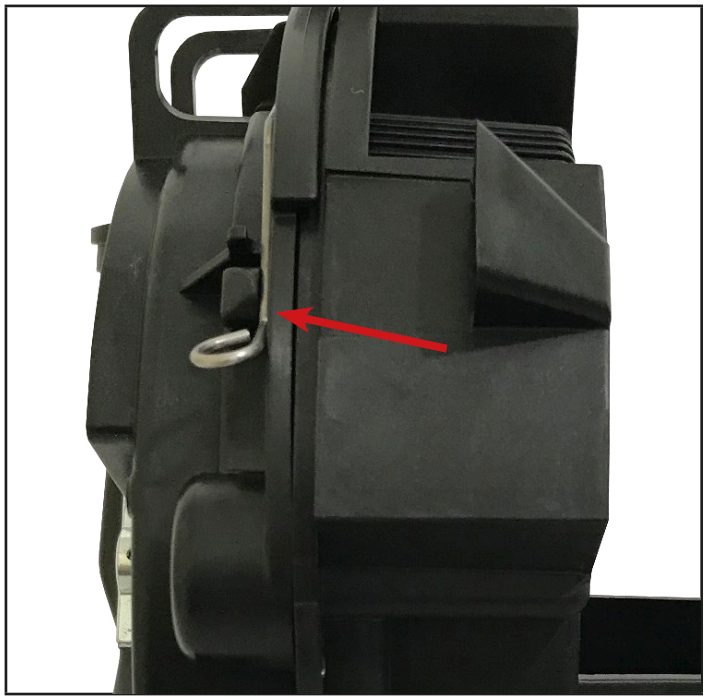
When assembling the two halves of the dispenser, start by placing the housing slit in the seed cover latch to ensure proper alignment.

▪ Systems

• Installation of kit for crop - Part III

STAGE 7

The two halves of the distributor are correctly connected when the retention springs are fully engaged with the seed coer retention posts. Be sure to keep the singulator pressed against the cover so that it rests correctly on the seed disc.



STAGE 8

The position of the deflector may need to be adjusted depending on the crop to be planted. See the Crop guide for vSet 2 for baffle adjustment for multiple crops. As a general rule, set the deflector plate to the lowest possible position, but ensuring that the seeds always flow and do not obstruct the distributor inlet chute.

▪ Systems

• Seed container set - Part I

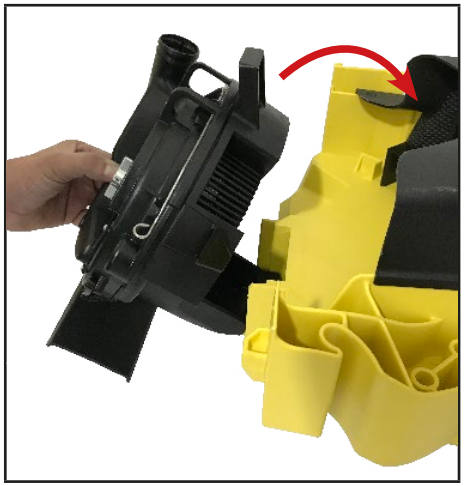
STAGE 1

After properly installing the distributor crop kits, you must connect it to the seed container. Align the vSet2 hooks using an angle to connect the distributor hook interface to the seed container. This will ensure proper connection. If these looks do not lock, the distributor will not attach properly to the seed container.

The images below illustrate the incorrect (red circle) and correct (green circle) locking of the vSet 2 distributor in the seed container.

STAGE 2

Rotate the distributor toward the seed container lock.



▪ Systems

• Seed container set - Part II

STAGE 3

Lock the distributor in the seed container. Apply enough force to bend the lock until the upper bracket snaps into place. Note the final position below. To remove the distributor, use the vSet 2 distributor housing braket as a lever to pull the distributor while bending the seed container lock in one fluid motion.

STAGE 4

To release the distributor, press the lock and pull it away from the seed container. Then rotate until the seed inlet hooks are free to slide out of the seed container latches.

Systems

Maintenance

ANNUAL MAINTENANCE

1. Check for wear on the singulator.
    - Replace when excessive wear occurs. An increase in doubles may indicate excessive wear on this part.
    - A singular check can be done using the eSet kit tool.
2. Check the vacuum seal for cracks/wear.
3. Verify that the disc's graphite has been removed. (Reapply graphite if it is removed).
    - Replace the disc if the disc holes become too deformed or if seeds cross to the vacuum side.
4. Check for ejector wheel wear.
    - Replace the assembly if excessive arm wear occurs inside the ejector wheel.
    - Inspect each ejector wheel pin to make sure it is intact.
    - Check the plastic tension and replace it if it is loose at the mounting location.
5. Check for excessive wear on the brushes.
    - Replace when brush clearance/wear becomes significant enough to allow seeds to pass through
6. Test the distributors on the MeterMax Ultra test bench to ensure maximum performance.
7. When out of the planting season, disassemble the distributors.
    - Remove the crop kit components from the distributor housing.
    - Store in a flat and dry environment.
8. vSet 2 vacuum seal replacement.
    - Remove the current seal by pulling it out of the meter housing.
    - Check that both the new seal and the socket in the meter housing are clean of debris. If they need cleaning, use hot water and a cloth or compressed air.
    - Insert a new seal at the beginnin latches on the distributor cavity surface are showing. Make sure the seal is firmly seated an there are no bumps or protrusions.
    - All retaining latches must be used and the seal must be seated in the cavity. Alignment of the retaining latches will help ensure proper sealing.

▪ Systems

• Troubleshooting - Part I

TROUBLESHOOTING TIP

A good way to troubleshoot specific lines is through the elimination process. Try replacing the components of the “bad” lines with the components of the “good” lines until you determine the root cause.

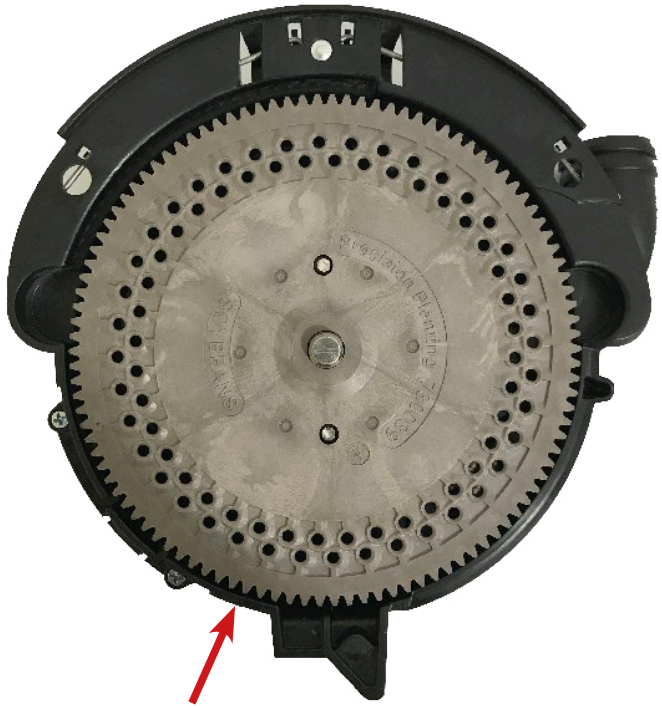
Symptom: the meter for sowing.
Solution:

• If a meter stops sowing while others continue and this is not due to a section cut event, then it is likely that the line has run out of seed, the clutch has failed or the vacuum has been disconnected.

• If none of this explains the problem, check the drive system. One component to look at is the safety pin that connects the drive adapter to the drive shaft. Its is simply a 2,3 x 15,8mm (3/32 x 5/8 in), cylindrical pin designed to break under torque greater than allowed. Replace the pin by inserting the new one, wich will simultaneously push the old one out. Also, lock insid the distributor to investigate the cause of the disruption. The likelihood of something being locked inside the meter is high, as the safety pin is designed to break in this situation.

• Seed blockage is another possible cause of distributor failure when planting. If you detect obstrucion, consider openning the deflector to a higher position.

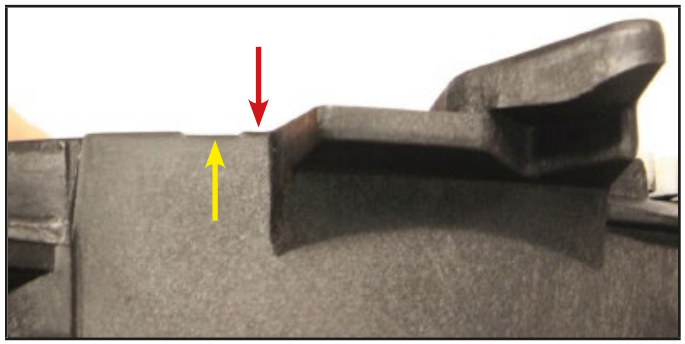
• If there are no foreign objects in the dispenser, look for evidence of seed grinding. If this seems to be the case, the disc may not be properly shimmed. Disc shims are factory set, but they may fall. At the bottom end of the meter housing is an alignment gauge for the disc. The arrow points to the gauge. The process of installing the disc shims is different from that used on the vSet Classic meter largely due to the overall meter design. You should receive your vSet 2 meters with a properly fitted meter disc.



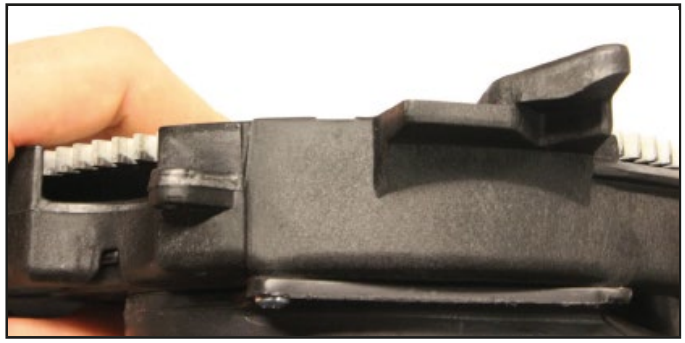
▪ Systems

• Troubleshooting - Part II

• The disc must be wedged between each housing plan. Visualize the surface of the disc relative to the shoulder. The disc surface should be between the first and the second shoulder, as shown by the arrows below.



• To check, keep disc level against the central unit board. The number of shims required is determined by adding or removing shims from the disc between the lower and upper planes. The meter disc must be checke in at least two positions to determine the final shim count. Turn 180° to check.



Symptom: too many flaws.
Solution:

• Verify that the correct singulator, disc, and ejector wheel are installed on the meter. Do not exchange components with each other as this will result in performance degradation.

• If the distributor is constantly failing, make sure that there are no fragments lodged in the disc holes.

• When mounting the distributor, make sure the singulator is properly installed and the shoulders are seated are seated and level against the surface of the disc.

• Check the manifold and seed tube outlet chute on the line unit for debris that could divert seeds.

• Check that the disc has proper shims as shown above. The disc may have difficulty loading if the wrong number of shims is used.

• Increase the vacuum. Check for leaks in the vacuum system that could cause certain lines to have less vacuum. However, if singulation problems are the result of lack of vacuum pressure, singulation errors will generally occur throughout the planter.

▪ Systems

• Troubleshooting - Part III

Symptom: Excess Dobles.
Solution:

• Verify that the correct singulator, disc, and ejector wheel are installed on the meter. Do not exchange components amongst them selves as this will result in performance degradation.

• When mounting the distributor, make sure the singulator is properly installed and the shoulders are seated and level against the surface of the disc. Make sure that the radial spring (which pushes the singulator toward the center of the disc) is installed and acting on the singulator.

• Check the manifold and seed tube outlet chute on the line unit for debris that could divert seeds.

• Check for excessive wear on the singulator.

• Reduce the vacuum. In general, 20 in. of water are suitable for all types of seeds, but reduce if necessary. Continue to reduce vacuum pressure until gauge separation improves. If doubles are caused by excessive vacuum pressure, singulation erros will generally occur throughout the planter.

Symptom: Bad Spacing.
Solution:

• Check the meter and seed tube outlet chute on the line unit for debris that could divert seeds.

• Check distributor drive system. Confirm that the chains are in good condition and well lubricated.

• Try rotating the meter manually. Look, feel and listen for unusual sounds as it spins. If it is difficult to rotate, remove the disc and look for debris that may be stuck in the distributor, ensuring that it has proper shims as shown above.

• When using vDrive, check for seed fragments between the disc teeth. Clean and add shims.

• Look for evidence of where the seed is making contact with the seed tube and outlet chute. Make sure that seed container is positioned so that the meter releases the seeds in the center of the seed tube.

• Check that the distributor is properly aligned.

• Make sure your air vents are allowing free air flow through the meter. The vent is integrated into the mini-hopper housing.

• Reduce speed to see if poor spacing is caused by drive system operation.

• Make sure graphite is being used and mixed in the seed box.

Symptom: Incorrect Population.
Solution:

• If you are using hydraulic motors, vDrive or SpeedTube, double-check the engine calibration and configuration. Verify that the “seeds per distributor rotation” setting is correct..

Systems

VSET 2 Crop guide

Precision PLANTING

Graphite should be used in good proportion.
The color in the table corresponds to the actual colors of the parts. BOLD components already included in the KIT.

*WaveVision reads seeds at least 3mm in size.
** Millet screens are used in planter with center box.

Crop		Corn	Sweet Corn				Popcorn			Sorghum/ Millet	Pumpkin	Cotton			Bean			Soybeans	Peanut		Sunflowers				Sugarbeets/Onion		Canola
Size (Qualitative)			Small	Average	Large	X-Large	Small	Average	Large	26k-42k	Del Monte/ Libby	Singled	2 seeds at a time	3 seeds at a time	Small	Average	Large		Large Edible	Small Edible	#1	#2	#3	#4	Small	Large	
Size (Seeds/KG)		2200 6200	4400 10200				3300 10650			26k 42k		8300 14000			>4400	2860 4400	2860	4400 10000	4400 8800		6,6k 10k				>62K	>62k	166k 400k
Millibar Vacuum		50	45 to 55				50			25 to 40	27 to 30	50			45 to 55	45 to 60	45 to 65	50	30 to 33	27 to 30			17 to 20	15 to 17	25 to 50		-
Vacuum (in. water)		20"	18"-22"	18"-22"	18"-22"	18"-22"	20"	20"	20"	10"-16"	11"-12"	20"	20"	20"	18"-22"	18"-24"	18"-26"	20"	12"-13"	11"-12"	11"-12"	11"-12"	7"-8"	6"-7"	10"-20"	10"-20"	
Input adjust pos.		2	4	4	4	4	2	2	2	1	3	2	1	1	2	3	4	2	4	4	4	4	3	2	1	1	
PN Complete Kit		768341								768347			768344	768345	768342	768349	768343	768342	768341	768341					768346	768347	768348
Disc	Name	Corn	Special	Special	Special	Special	Special	Special	Special	Large Sugarbeet	Special	Special	2-Seed Hilldrop Cotton	3-Seed Hilldrop Cotton	Soybean	Edible Beans Med	Edible Beans Larg	Soybean	Corn	Corn	Special	Special	Special	Special	Small Sugarbeet	Large Sugarbeet	Canola
	# of holes	27	27	27	27	27	27	27	27	32	27	27	40	39	80	70	32	60	27	27	27	27	27	27	32	32	80
	row	single	single	single	single	single	single	single	single	single	single	single	doble	triple	doble	doble	single	doble	single	single	single	single	single	single	single	single	doble
	hole size (in.)	0,176	0,125	0,135	0,145	0,155	0,115	0,115	0,125	0,086	0,125	0,115	0,115	0,115	0,155	0,170	0,210	0,155	0,176	0,176	0,155	0,135	0,115	0,115	0,062	0,086	0,047
	hole size (mm)	4,470	3,175	3,429	3,683	3,937	2,921	2,921	3,175	2,184	3,175	2,921	2,921	2,921	3,937	4,318	5,334	3,937	4,470	4,470	3,937	3,429	2,921	2,921	1,575	2,184	1,194
	PN	730079	730082	730083	730084	730085	730081	730081	730082	730291	730082	730081	730292	730293	730039	730295	730294	730039	730079	730079	730085	730083	730081	730081	730290	730291	768338
Singulator	Name	Corn	Corn	Corn	Corn	Corn	Corn	Corn	Corn	Corn	Corn	Corn	Soybean	Soybean	Soybean	N. Edible	Soybean	Soybean	Corn	Corn	Corn	Corn	Corn	Corn	Corn	Corn	Corn
	PN	768355	768355	768355	768355	768355	768355	768355	768355	768355	768355	768355	768360	768360	768360	768360	768360	768360	768355	768355	768355	768355	768355	768355	768355	768355	768355
Ejector Wheel	Name	Corn	Special	Special	Special	Special	Special	Special	Special	Sugarbeet	Special	Special	2 Seed Hilldrop Cotton	3 Seed Hilldrop Cotton	Soybean	Soybean	L.Edible	Soybean	Corn	Corn	Special	Special	Special	Special	Sugarbeet	Sugarbeet	N/A
	PN	768291	768293	768293	768293	768293	768293	768293	768293	768295	768293	768293	768296	768297	768292	768292	768294	768292	768291	768291	768293	768293	768293	768293	768295	768295	N/A
Additional components	Description									Millet screen**			Brush raised	Brush raised		Brush raised	Brush raised			Use L-brush					Millet screen**	Millet screen**	KIT Cleaner
	PN									720253**			768379	768379		768428	768428								720253**	720253**	768335
¿WaveVision Recommended?		Yes								Yes*			Yes	Yes	Yes	Yes	Yes	Yes	Yes						Without mon. Population	Yes*	Without mon. Population

▪ Seed distribution system

• Seed distribution tables - Part I

Seed distribution tables are made according to the number of distributor disc holes, gear changes and number of seeds to be distributed.

27 HOLES DISC			
Motor	Driven	Disc	Seed Quantity
8	21	27	3,0
8	19	27	3,3
8	17	27	3,7
8	15	27	4,2
8	13	27	4,8
8	12	27	5,2
8	11	27	5,7
8	10	27	6,3
8	9	27	7,0
8	8	27	7,8
9	8	27	8,8
10	8	27	9,8
11	8	27	10,8
12	8	27	11,7
13	8	27	12,7
15	8	27	14,7

32 HOLES DISC			
Motor	Driven	Disc	Seed Quantity
8	21	32	3,5
8	19	32	3,9
8	17	32	4,4
8	15	32	4,9
8	13	32	5,7
8	12	32	6,2
8	11	32	6,7
8	10	32	7,4
8	9	32	8,2
8	8	32	9,3
9	8	32	10,4
10	8	32	11,6
11	8	32	12,8
12	8	32	13,9
13	8	32	15,1
15	8	32	17,4

▪ Seed distribution system

• Seed distribution tables - Part II

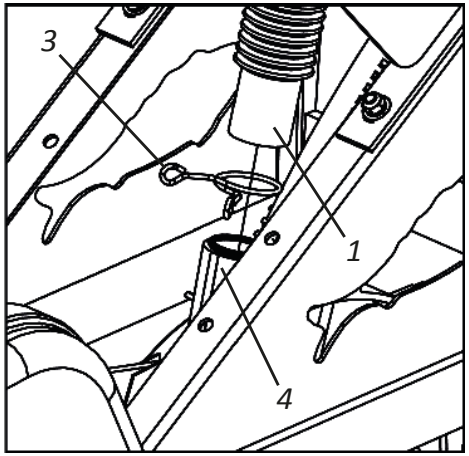
56 HOLES DISC			
Motor	Driven	Disc	Seed Quantity
8	21	56	6,2
8	19	56	6,8
8	17	56	7,6
8	15	56	8,7
8	13	56	10,0
8	12	56	10,8
8	11	56	11,8
8	10	56	13,0
8	9	56	14,4
8	8	56	16,2
9	8	56	18,3
10	8	56	20,3
11	8	56	22,3
12	8	56	24,3
13	8	56	26,4
15	8	56	30,4

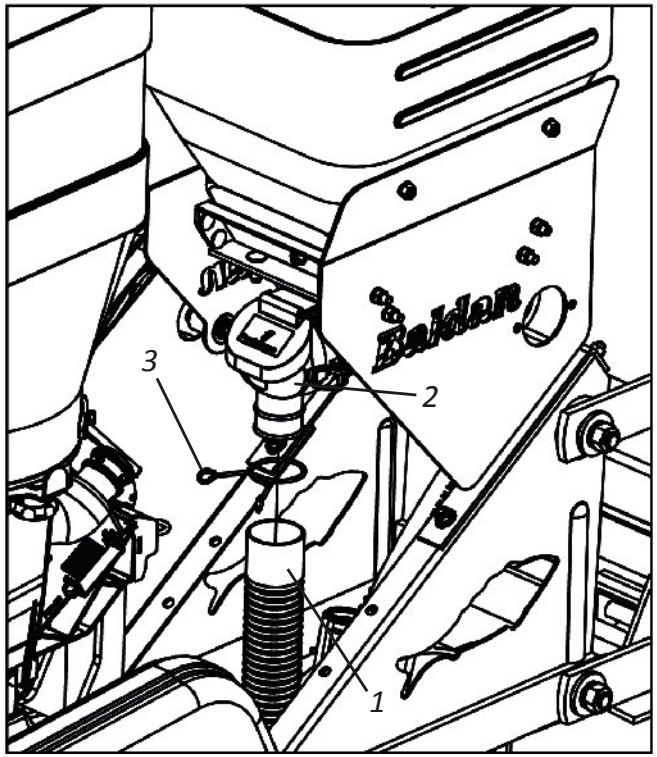
80 HOLES DISC			
Motor	Driven	Disc	Seed Quantity
8	21	80	8,8
8	19	80	9,8
8	17	80	10,9
8	15	80	12,4
8	13	80	14,3
8	12	80	15,5
8	11	80	16,9
8	10	80	18,5
8	9	80	20,6
8	8	80	23,2
9	8	80	26,1
10	8	80	29,0
11	8	80	31,9
12	8	80	34,8
13	8	80	37,7
15	8	80	43,5

▪ Seed distribution system

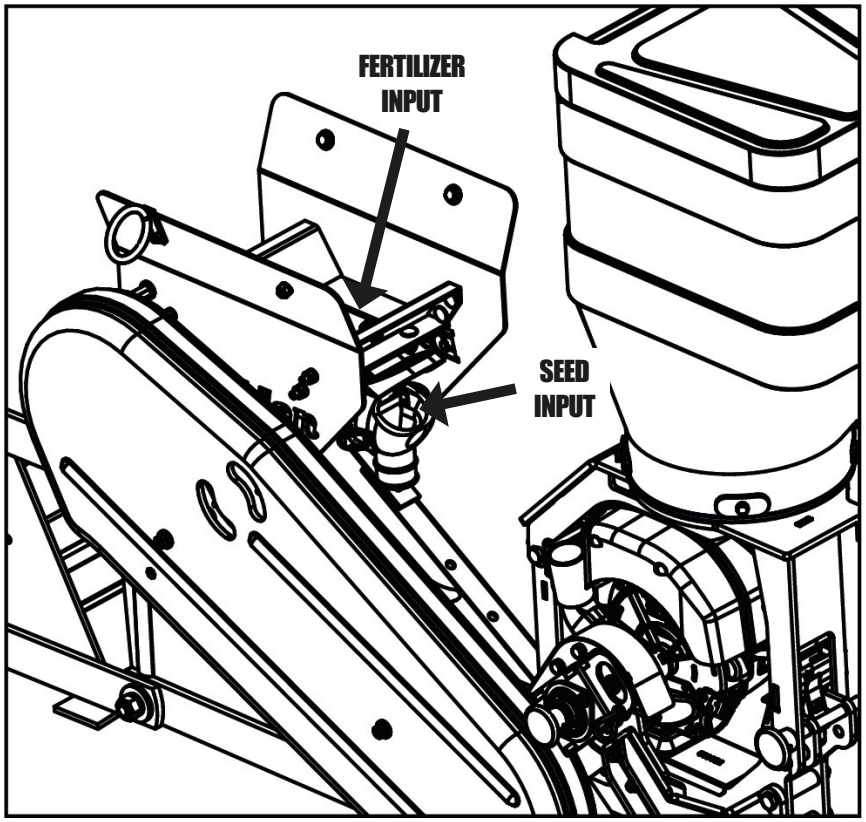
• Fertisystem fertilizer conductor

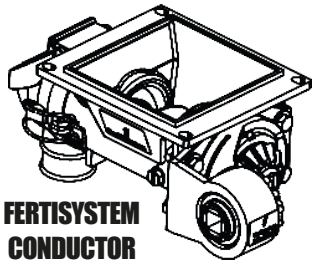
To guide the fertilizer from the distributor to the ground, attach the hose (1) to the Fertisystem fertilizer conductor (2) through the clip (3). Then attach the hose (1) to the housing (4) through the clip (3).





The Fertisystem has safety outputs that guarantee the proper functioning of the system without damaging it. In case of clogging of the hose and the batcher, clean the batcher until the end of the hose near the furrower rod or double disc, as the system may become clogged by roots, pieces of plastic and other objects.





⚠ ATTENTION

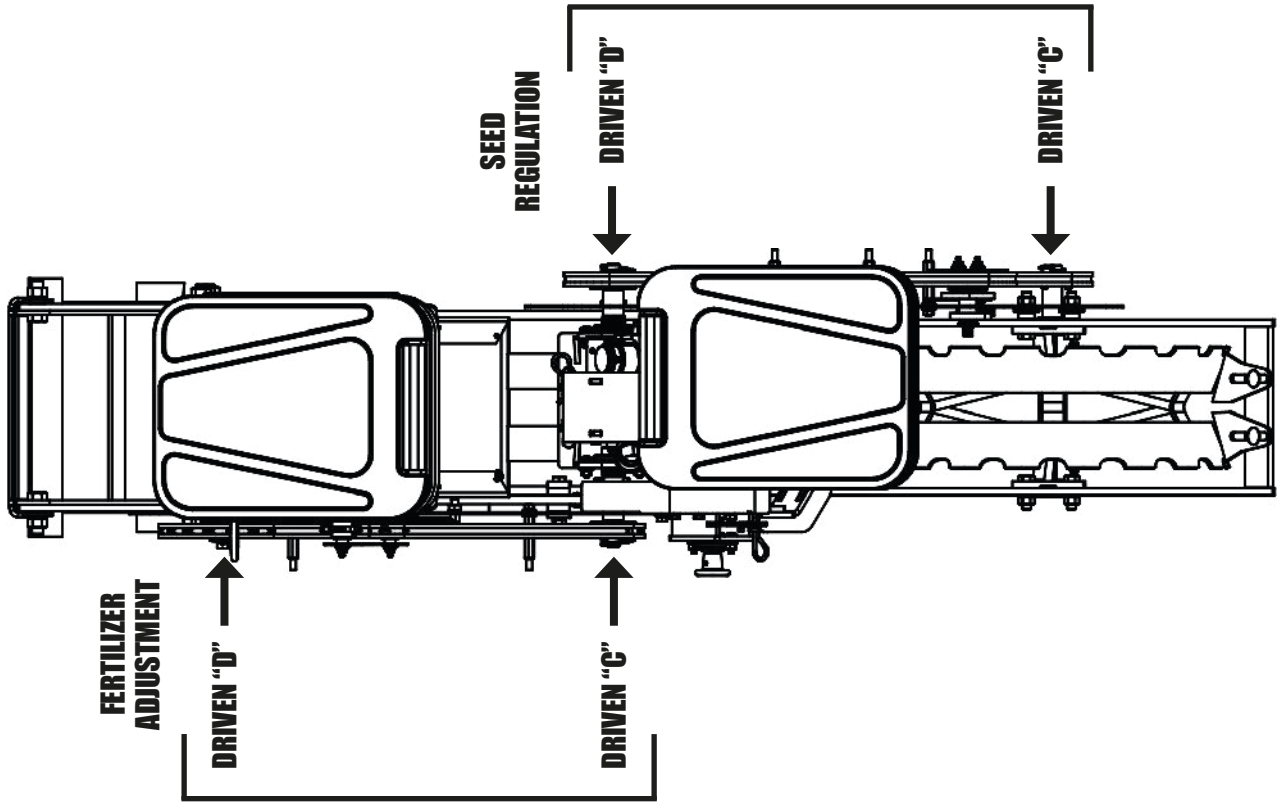
Check distributors and hoses daily and clean their outlets. When the fertilizer has impurities or is clamp, clean it more often.

▪ Fertilizer distribution system

• Fertilizer and seed adjustment

Seed distribution is done by the distributing discs. To increase or decrease the amount of seeds distributed per linear meter, the motor gear **"A"** and driven gear **"B"** must be replaced.

Fertilizer adjustments is done by changing gears **"C"** and **"D"**, observing that the choice of them is made after defining the seed gears. The fertilizer distribution tables indicate the ratios used to apply the different amounts of fertilizer, spacing between 400 mm and 1000 mm.



▪ Fertilizer distribution system

APPROXIMATE TABLE FOR FERTILIZER DISTRIBUTION														
Motor "A"	Seed Driven "B"	Fertilizer Motor "C"	Driven "D"	Grams / 16 linear meters	*Kilogram per hectare (10.000 m²) for different line spacings*												
					420	*450*	*500*	*550*	*600*	*650*	*700*	*750*	*800*	*850*	*900*	*950*	*1000*
8	17	8	21	66	102,75	92	82	75	68	63	59	55	51	48	46	43	41
8	17	8	19	73	113,74	101	91	83	76	70	65	61	57	54	51	48	46
8	17	8	17	81	127,12	113	102	92	85	78	73	68	64	60	57	54	51
8	17	8	15	92	144,07	128	115	105	96	89	82	77	42	68	64	61	58
8	17	8	13	106	166,23	148	133	121	111	102	95	89	83	78	74	70	67
8	17	8	12	115	180,09	160	144	131	120	111	103	96	90	85	80	76	72
8	17	8	11	126	196,46	175	157	143	131	121	112	105	98	92	87	83	79
8	17	8	10	138	216,10	192	173	157	144	133	123	115	108	102	96	91	86
8	17	8	9	154	240,11	243	192	175	160	148	137	128	120	113	107	101	96
8	17	8	8	173	270,13	240	216	196	180	165	154	144	135	127	120	114	108
8	17	21	8	454	709,09	630	567	516	473	436	405	378	354	334	315	299	284
8	17	19	8	411	641,55	570	513	467	428	395	367	342	321	302	285	270	256
8	17	17	8	367	574,02	510	459	417	383	353	328	306	287	270	255	242	230
8	17	15	8	324	506,49	450	405	368	338	312	289	270	253	238	225	213	203
8	17	13	8	281	438,96	390	351	319	293	270	251	234	219	207	195	185	176
8	17	12	8	259	405,19	360	324	295	270	249	232	216	203	191	180	171	162
8	17	11	8	238	371,43	330	297	270	248	229	212	198	186	175	165	156	149
8	17	10	8	216	337,66	300	270	245	225	208	193	180	169	159	150	142	135
8	17	9	8	194	303,89	270	243	221	203	187	174	162	152	143	135	128	122
8	15	8	21	75	116,50	103	93	85	78	72	67	62	58	55	52	49	47
8	15	8	19	82	128,87	114	103	94	86	79	74	69	64	61	57	54	52
8	15	8	17	92	144,04	128	115	105	96	89	82	77	72	68	64	61	58
8	15	8	15	104	163,24	145	131	119	109	100	93	87	82	77	73	69	65
8	15	8	13	120	188,35	167	151	137	125	116	108	100	94	89	84	79	75
8	15	8	12	130	204,05	181	163	148	136	126	117	109	102	96	91	86	82
8	15	8	11	142	222,6	198	178	162	148	137	127	119	111	105	99	94	89
8	15	8	10	157	244,86	218	196	178	163	151	140	130	122	115	109	103	98
8	15	8	9	174	272,07	242	218	198	181	167	155	145	136	128	121	115	109
8	15	8	8	196	306,08	272	245	223	204	188	175	163	153	114	136	129	122
8	15	21	8	514	803,45	714	643	584	536	497	459	428	402	378	357	338	321
8	15	19	8	465	726,93	646	581	529	485	447	415	387	363	342	323	306	291
8	15	17	8	416	650,41	578	520	473	434	400	372	346	325	306	289	274	260
8	15	15	8	367	573,89	510	459	417	382	353	328	306	287	270	255	242	230
8	15	13	8	318	497,37	442	398	362	332	306	284	265	249	234	221	209	199
8	15	12	8	294	459,11	408	367	334	306	282	262	244	230	216	204	194	184
8	15	11	8	269	420,85	374	337	306	280	259	240	224	210	198	187	177	168
8	15	10	8	245	382,59	340	306	278	255	235	219	204	191	180	170	161	153
8	15	9	8	220	344,33	306	275	250	230	212	197	183	172	162	153	145	138

▪ Fertilizer distribution system

APPROXIMATE TABLE FOR FERTILIZER DISTRIBUTION														
Motor "A"	Seed Driven "B"	Fertilizer Motor "C"	Driven "D"	Grams / 16 linear meters	*Kilogram per hectare (10.000 m²) for different line spacings*												
					420	*450*	*500*	*550*	*600*	*650*	*700*	*750*	*800*	*850*	*900*	*950*	*1000*
8	13	8	21	86	134	119	107	98	90	83	77	71	67	63	60	57	54
8	13	8	19	95	149	132	119	108	99	91	85	79	74	70	66	63	59
8	13	8	17	106	166	148	133	121	111	102	95	88	83	78	74	70	66
8	13	8	15	121	188	167	151	137	126	116	108	100	94	89	84	79	75
8	13	8	13	139	217	193	174	158	145	134	124	116	109	102	97	91	87
8	13	8	12	151	235	209	188	171	157	145	134	125	118	111	105	99	94
8	13	8	11	164	257	228	205	186	171	158	147	137	128	121	114	108	103
8	13	8	10	181	282	251	226	205	188	174	161	150	141	133	126	119	113
8	13	8	9	201	314	279	251	228	209	193	179	167	157	148	139	132	126
8	13	8	8	226	353	314	282	257	235	217	202	188	177	166	157	149	141
8	13	21	8	593	927	824	741	674	618	570	530	493	463	436	412	390	371
8	13	19	8	537	839	745	671	610	559	516	479	447	419	395	373	353	335
8	13	17	8	480	750	667	600	546	500	462	429	400	375	353	333	316	300
8	13	15	8	424	662	588	530	481	441	407	378	353	331	312	294	279	265
8	13	13	8	367	574	510	459	417	382	353	328	306	287	270	255	242	229
8	13	12	8	339	530	471	424	385	353	326	303	282	265	249	235	223	212
8	13	11	8	311	485	432	389	353	324	299	277	259	243	228	216	204	194
8	13	10	8	282	441	392	353	321	294	272	252	235	221	208	196	186	177
8	13	9	8	254	397	353	318	289	265	244	227	212	199	187	177	167	159
8	12	8	21	93	146	130	117	106	97	90	83	78	73	69	65	61	58
8	12	8	19	103	161	143	129	117	107	99	92	86	81	76	72	68	64
8	12	8	17	115	180	160	144	131	120	111	103	96	90	85	80	76	72
8	12	8	15	131	204	181	163	148	136	126	117	109	102	96	91	86	81
8	12	8	13	151	235	209	188	171	157	145	135	125	118	111	105	99	94
8	12	8	12	163	255	227	204	185	170	157	146	136	128	120	113	108	102
8	12	8	11	178	278	247	223	202	185	171	159	148	139	131	124	117	111
8	12	8	10	196	306	272	245	223	204	188	175	163	153	144	136	129	122
8	12	8	9	218	340	302	272	247	227	209	194	181	170	160	151	143	136
8	12	8	8	245	383	340	306	278	255	235	219	204	191	180	170	161	153
8	12	21	8	643	1004	893	803	730	669	618	574	535	502	472	446	423	402
8	12	19	8	581	909	808	727	661	606	559	519	484	454	428	404	383	363
8	12	17	8	520	813	723	650	591	542	500	464	433	406	383	361	342	325
8	12	15	8	459	717	638	574	522	478	441	409	382	359	338	319	302	287
8	12	13	8	398	622	553	497	452	414	383	355	331	311	293	276	262	249
8	12	12	8	367	574	510	459	417	383	353	328	306	287	270	255	242	230
8	12	11	8	337	526	467	421	383	651	324	301	208	263	248	234	221	210
8	12	10	8	306	478	425	383	348	319	294	273	255	239	225	213	201	191
8	12	9	8	275	430	383	344	313	287	265	246	229	215	203	191	181	172

▪ Fertilizer distribution system

APPROXIMATE TABLE FOR FERTILIZER DISTRIBUTION														
Motor "A"	Seed Driven "B"	Fertilizer Motor "C"	Driven "D"	Grams / 16 linear meters	*Kilogram per hectare (10.000 m²) for different line spacings*												
					420	*450*	*500*	*550*	*600*	*650*	*700*	*750*	*800*	*850*	*900*	*950*	*1000*
8	11	8	21	102	159	141	127	116	106	98	91	85	80	75	71	67	61
8	11	8	19	112	176	156	141	128	117	108	100	94	88	83	78	74	70
8	11	8	17	126	196	175	157	143	131	121	112	105	98	92	87	83	79
8	11	8	15	142	223	198	178	162	148	137	127	119	111	105	99	94	89
8	11	8	13	164	257	228	206	187	171	158	147	137	128	121	115	109	103
8	11	8	12	178	278	247	223	202	186	171	159	148	139	131	124	117	112
8	11	8	11	194	304	270	243	221	202	187	173	162	152	143	135	128	121
8	11	8	10	214	334	297	267	243	223	206	191	178	167	157	148	141	134
8	11	8	9	237	371	330	297	270	247	229	212	198	185	175	165	156	148
8	11	8	8	267	417	371	334	304	278	257	238	222	209	196	186	176	167
8	11	21	8	701	1096	974	877	795	731	674	626	584	548	516	487	461	438
8	11	19	8	635	91	881	793	721	661	610	567	528	496	466	441	417	397
8	11	17	8	568	887	789	710	645	591	546	507	472	444	417	394	374	355
8	11	15	8	501	783	696	626	569	522	482	447	417	391	368	348	330	313
8	11	13	8	534	378	603	543	493	452	417	688	361	339	319	302	286	271
8	11	12	8	401	626	557	501	455	417	385	358	333	313	295	278	264	250
8	11	11	8	367	574	510	459	417	383	353	328	306	287	270	255	242	230
8	11	10	8	334	522	464	417	380	348	321	298	278	261	245	232	220	209
8	11	9	8	301	470	417	376	341	313	289	268	250	235	221	209	198	188
8	10	8	21	112	175	155	140	127	116	108	100	93	88	82	78	74	70
8	10	8	19	124	193	172	155	148	129	119	110	103	97	91	86	81	77
8	10	8	17	138	216	192	173	157	144	133	123	115	108	102	96	91	86
8	10	8	15	157	245	218	196	178	163	151	140	130	122	115	109	103	98
8	10	8	13	181	282	251	226	205	188	174	161	150	141	133	125	119	113
8	10	8	12	196	306	272	245	223	204	188	175	163	153	144	136	129	122
8	10	8	11	214	334	297	267	243	223	205	191	178	167	157	148	141	134
8	10	8	10	235	367	326	294	267	245	226	210	196	184	173	163	155	147
8	10	8	9	261	408	363	326	297	272	251	233	217	204	192	181	172	163
8	10	8	8	294	459	408	367	334	306	282	262	244	229	216	204	193	184
8	10	21	8	771	1205	1071	964	876	803	742	689	642	602	567	532	507	482
8	10	19	8	698	1090	969	872	793	727	671	623	581	545	513	485	459	436
8	10	17	8	624	975	867	780	709	650	600	557	519	488	459	434	411	390
8	10	15	8	551	861	765	689	626	574	530	492	458	430	405	383	362	344
8	10	13	8	477	746	663	597	542	498	459	426	397	373	351	331	314	298
8	10	12	8	441	689	612	551	501	459	424	393	367	344	324	306	290	275
8	10	11	8	404	631	561	505	459	421	388	361	336	316	297	281	266	252
8	10	10	8	367	574	510	459	417	383	353	328	306	287	270	255	242	230
8	10	9	8	330	516	459	413	376	344	318	295	275	258	243	230	217	207

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▪ Fertilizer distribution system

APPROXIMATE TABLE FOR FERTILIZER DISTRIBUTION														
Motor "A"	Seed Driven "B"	Fertilizer Motor "C"	Driven "D"	Grams / 16 linear meters	*Kilogram per hectare (10.000 m²) for different line spacings*												
					420	*450*	*500*	*550*	*600*	*650*	*700*	*750*	*800*	*850*	*900*	*950*	*1000*
8	9	8	21	124	195	173	156	141	130	120	111	104	97	92	86	82	78
8	9	8	19	137	215	191	173	156	143	132	123	114	107	101	95	90	86
8	9	8	17	154	240	213	192	175	160	148	137	128	120	113	107	101	96
8	9	8	15	174	272	242	218	198	181	167	155	145	136	128	121	115	109
8	9	8	13	201	314	279	251	228	209	193	179	167	157	148	139	131	126
8	9	8	12	218	340	302	272	247	227	209	194	181	170	160	151	143	136
8	9	8	11	237	370	330	297	270	274	228	212	198	185	175	165	156	149
8	9	8	10	261	408	363	326	297	272	251	233	217	204	192	181	172	163
8	9	8	9	290	453	403	363	330	302	279	259	241	227	231	201	191	181
8	9	8	8	326	510	453	408	371	340	314	291	272	255	240	227	215	204
8	9	21	8	857	1339	1190	1080	974	893	824	765	713	669	630	595	564	535
8	9	19	8	775	1211	1077	969	881	808	795	692	645	606	570	538	510	484
8	9	17	8	694	1084	963	867	788	723	667	919	577	542	510	482	456	433
8	9	15	8	612	956	850	765	695	638	588	546	509	478	450	425	403	382
8	9	13	8	530	829	737	663	603	553	510	473	441	414	390	368	349	331
8	9	12	8	489	765	680	312	556	510	471	473	407	382	360	340	322	306
8	9	11	8	49	701	623	561	510	468	432	401	373	351	330	312	295	280
8	9	10	8	408	638	567	510	464	425	392	364	339	319	300	283	268	255
8	9	9	8	367	574	510	459	417	383	353	328	306	287	270	255	242	229
8	8	8	21	140	219	194	175	159	146	134	125	116	109	103	97	92	87
8	8	8	19	155	241	215	193	176	161	149	138	129	121	114	107	102	97
8	8	8	17	173	270	240	216	196	180	166	154	144	135	127	120	114	108
8	8	8	15	196	306	272	245	222	204	188	175	167	153	144	136	129	122
8	8	8	13	226	353	314	282	257	235	217	202	188	176	166	157	149	41
8	8	8	12	245	382	340	306	278	255	235	218	204	191	180	170	161	153
8	8	8	11	267	417	371	334	303	279	257	238	224	209	196	185	176	167
8	8	8	10	294	459	408	367	334	306	282	262	244	229	216	204	194	184
8	8	8	9	326	510	453	408	371	340	314	291	271	255	240	227	215	204
8	8	8	8	367	573	510	459	417	382	353	328	305	287	270	255	241	229
8	8	21	8	963	1505	1338	1204	1095	1004	926	860	802	753	708	669	534	602
8	8	19	8	872	1362	1213	1084	991	908	838	778	725	681	641	605	573	545
8	8	17	8	780	1218	1083	975	886	812	750	696	649	609	574	542	513	487
8	8	15	8	688	1075	956	860	782	717	662	614	573	538	506	478	453	430
8	8	13	8	596	932	828	746	978	621	574	532	496	466	439	414	392	373
8	8	12	8	551	860	764	688	626	574	529	491	458	430	405	382	362	344
8	8	11	8	505	789	701	631	574	526	485	451	420	394	371	350	332	315
8	8	10	8	459	717	637	573	521	478	441	410	382	358	337	319	302	287
8	8	9	8	413	645	574	516	469	430	397	369	343	323	304	287	272	258

▪ Fertilizer distribution system

APPROXIMATE TABLE FOR FERTILIZER DISTRIBUTION														
Motor "A"	Seed Driven "B"	Fertilizer Motor "C"	Driven "D"	Grams / 16 linear meters	*Kilogram per hectare (10.000 m²) for different line spacings*												
					420	*450*	*500*	*550*	*600*	*650*	*700*	*750*	*800*	*850*	*900*	*950*	*1000*
8	9	8	21	158	246	219	197	179	164	152	141	131	123	16	109	104	98
8	9	8	19	174	272	242	218	198	181	167	155	145	136	128	121	114	109
8	9	8	17	194	304	270	243	221	203	187	174	162	152	143	135	128	122
8	9	8	15	220	344	306	276	250	230	212	197	183	172	162	153	145	138
8	9	8	13	254	398	353	318	289	265	245	227	212	199	187	177	167	159
8	9	8	12	276	431	383	344	313	287	265	246	229	215	203	191	181	172
8	9	8	11	301	470	417	376	342	313	289	268	250	235	221	209	198	188
8	9	8	10	331	517	459	413	376	344	318	295	275	258	243	230	218	207
8	9	8	9	367	574	510	459	417	383	354	328	306	287	270	255	242	230
8	9	8	8	413	646	574	517	470	431	397	369	344	323	304	287	272	258
8	9	21	8	1085	1695	1507	1356	1233	1130	1043	969	903	855	798	753	714	678
8	9	19	8	982	1534	1363	1227	1115	1022	944	876	817	767	722	682	646	613
8	9	17	8	878	1372	1220	1098	998	915	844	784	731	686	646	610	578	549
8	9	15	8	775	1211	1076	969	881	807	745	692	645	605	570	538	510	484
8	9	13	8	672	1049	933	839	763	700	646	600	559	525	494	466	442	420
8	9	12	8	620	967	861	775	704	646	596	554	516	484	456	430	408	387
8	9	11	8	568	888	789	710	646	592	546	507	473	444	418	395	374	355
8	9	10	8	517	807	717	646	587	538	597	461	430	404	380	359	340	323
8	9	9	8	465	726	646	581	528	484	447	415	387	363	342	323	306	291
8	8	8	21	175	273	243	218	199	180	168	156	145	136	128	121	115	109
8	8	8	19	193	302	268	241	220	201	186	172	161	151	142	134	127	121
8	8	8	17	216	337	300	270	245	225	208	193	180	169	159	150	142	135
8	8	8	15	245	382	340	306	278	255	235	218	204	191	180	170	161	153
8	8	8	13	282	441	392	353	321	294	272	252	235	221	208	196	186	176
8	8	8	12	306	478	425	382	348	319	294	273	255	239	225	212	201	191
8	8	8	11	334	521	463	417	379	348	321	298	278	261	245	232	220	209
8	8	8	10	367	574	510	459	417	382	353	328	305	287	270	246	241	229
8	8	8	9	408	637	566	510	463	425	392	364	339	319	300	283	268	255
8	8	8	8	459	717	637	574	521	478	441	407	382	358	337	319	302	287
8	8	21	8	1204	1882	1673	1506	1369	1255	1158	1075	1002	941	886	836	792	753
8	8	19	8	1090	1703	1513	1363	1238	1135	1048	943	907	851	801	757	717	681
8	8	17	8	975	1523	1354	1219	1108	1015	938	871	811	762	716	677	641	609
8	8	15	8	860	1344	1195	1075	978	896	827	768	716	672	633	597	566	538
8	8	13	8	744	1165	1036	932	847	776	717	666	620	582	548	518	490	466
8	8	12	8	688	1075	956	860	782	717	662	615	573	538	506	478	453	430
8	8	11	8	631	986	876	789	717	657	607	563	525	493	464	438	415	394
8	8	10	8	574	896	797	717	652	597	551	512	477	448	422	398	377	358
8	8	9	8	516	807	717	645	587	538	496	461	429	403	380	358	340	323

▪ Fertilizer distribution system

APPROXIMATE TABLE FOR FERTILIZER DISTRIBUTION														
Motora "A"	Seed Driven "B"	Fertilzier Motor "C"	Driven "D"	Grams / 16 linear meters	*Kilogram per hectare (10.000 m²) for different line spacings*												
					420	*450*	*500*	*550*	*600*	*650*	*700*	*750*	*800*	*850*	*900*	*950*	*1000*
11	8	8	21	192	301	267	241	219	200	185	172	160	151	142	134	127	120
11	8	8	19	213	332	295	266	242	222	204	190	177	166	156	148	140	133
11	8	8	17	238	371	330	297	270	248	229	212	198	186	175	165	156	149
11	8	8	15	269	421	374	337	306	281	259	241	224	210	198	187	177	168
11	8	8	13	311	486	432	389	353	324	299	278	259	243	229	216	204	194
11	8	8	12	337	526	468	413	383	351	324	301	280	283	248	234	222	210
11	8	8	11	367	574	510	459	417	383	353	328	306	287	270	255	242	230
11	8	8	10	404	631	561	505	459	421	389	361	336	316	297	281	266	253
11	8	8	9	449	701	624	561	510	468	432	401	374	351	330	312	295	281
11	8	8	8	505	798	701	631	574	526	486	451	420	395	371	351	323	316
11	8	21	8	1326	2072	1841	1657	1507	1381	1275	1184	1103	1036	975	921	872	829
11	8	19	8	1200	1874	1666	1499	1363	1250	1153	1071	998	937	882	933	789	750
11	8	17	8	1073	1677	1491	1342	1220	1118	1032	658	893	839	789	745	706	671
11	8	15	8	947	1480	1315	1184	1076	986	911	846	788	740	696	657	623	592
11	8	13	8	821	1282	1140	1026	933	855	789	733	683	641	604	570	540	513
11	8	12	8	758	1184	1052	947	861	456	728	676	630	592	557	526	498	474
11	8	11	8	694	1085	965	868	789	723	667	620	578	543	511	482	457	434
11	8	10	8	631	986	877	789	717	658	607	563	525	493	464	438	415	395
11	8	9	8	568	888	789	710	646	592	546	507	473	444	418	395	374	355
13	8	8	21	227	355	316	284	258	237	219	203	189	178	167	158	150	142
13	8	8	19	251	393	349	314	286	262	242	224	209	196	185	175	165	157
13	8	8	17	281	439	390	351	319	293	270	251	234	219	207	195	185	176
13	8	8	15	318	497	442	398	362	332	306	284	265	249	234	221	209	199
13	8	8	13	367	574	510	459	417	383	353	328	306	287	270	255	242	230
13	8	8	12	398	622	553	497	452	414	383	355	331	311	293	276	262	250
11	8	8	11	434	378	603	543	493	452	417	388	361	339	319	301	286	271
13	8	8	10	447	746	663	597	543	497	459	426	397	373	351	332	314	298
13	8	8	9	531	829	737	663	603	553	510	474	441	414	390	368	349	332
13	8	8	8	597	933	829	746	678	622	574	533	497	466	439	414	393	373
13	8	21	8	1567	2448	2176	1958	1780	1632	1507	1399	1304	1224	1152	1088	1075	979
13	8	19	8	1418	2215	1969	1772	1611	1477	1363	1266	1180	1107	1042	984	933	886
13	8	17	8	1268	1982	1762	1585	1441	1321	1220	1132	1055	991	933	881	834	793
13	8	15	8	1119	1749	1554	1399	1272	1166	1076	999	931	874	823	777	736	699
13	8	13	8	970	1515	1347	1212	1102	1010	933	866	807	758	713	674	638	606
13	8	12	8	895	1399	1243	1119	1017	933	861	799	745	699	658	622	589	560
13	8	11	8	821	1282	1140	1026	933	855	789	732	683	641	603	570	540	513
13	8	10	8	746	1166	1036	933	848	777	717	666	621	584	549	518	491	466
13	8	9	8	671	1049	933	839	764	699	646	600	559	525	494	466	442	420

▪ Fertilizer distribution system

APPROXIMATE TABLE FOR FERTILIZER DISTRIBUTION														
Motor "A"	Seed Driven "B"	Fertilizer Motor "C"	Driven "D"	Grams / 16 linear meters	*Kilogram per hectare (10.000 m²) for different line spacings*												
					420	*450*	*500*	*550*	*600*	*650*	*700*	*750*	*800*	*850*	*900*	*950*	*1000*
15	8	8	21	262	410	364	328	298	273	252	234	218	205	193	182	173	164
15	8	8	19	290	453	403	362	329	302	279	259	241	277	213	201	191	181
15	8	8	17	324	506	450	405	368	338	312	289	270	253	238	225	213	203
15	8	8	15	367	574	510	459	417	383	353	328	306	287	270	255	242	230
15	8	8	13	424	662	589	530	482	441	407	378	353	331	312	294	279	265
15	8	8	12	459	717	638	574	522	478	441	410	382	359	338	319	302	287
15	8	8	11	501	783	696	626	569	522	482	447	417	391	368	348	329	313
15	8	8	10	551	861	765	689	626	574	530	492	458	430	405	383	362	344
15	8	8	9	612	956	850	765	696	638	589	547	509	478	450	425	403	383
15	8	8	8	689	1076	956	861	783	717	662	615	573	538	506	478	453	430
15	8	21	8	1808	2825	2511	2260	2054	1883	1783	1614	1504	1412	1329	1255	1189	1130
15	8	19	8	1635	2556	2272	2044	1859	1704	1573	1460	1360	1278	1203	1136	1075	1022
15	8	17	8	1643	2587	2032	1829	1663	1524	1407	1307	1218	1143	1076	1016	963	914
15	8	15	8	1291	2018	1793	1614	1467	1345	1242	1153	1074	1009	949	897	849	807
15	8	13	8	1119	1749	1554	1399	1272	1166	1076	999	931	874	823	777	736	699
15	8	12	8	1033	1614	1435	1291	1174	1076	993	922	860	807	760	717	680	646
15	8	11	8	947	1479	1315	1184	1076	986	910	845	788	740	696	658	623	592
15	8	10	8	861	1345	1196	1076	978	897	828	769	716	673	633	598	566	538
15	8	9	8	775	1211	1076	968	880	807	745	692	645	605	570	538	510	548
17	8	8	21	297	465	413	372	338	310	286	266	247	232	219	207	196	186
17	8	8	19	329	513	456	411	373	342	316	293	273	257	542	228	216	205
17	8	8	17	367	574	510	459	417	383	353	328	306	287	270	255	242	230
17	8	8	15	416	650	578	520	473	434	400	372	346	325	306	289	274	260
17	8	8	13	480	750	667	600	546	500	462	428	400	375	353	333	316	300
17	8	8	12	520	813	723	650	591	542	500	464	433	406	383	361	342	325
17	8	8	11	568	887	788	709	644	591	546	507	472	443	417	394	373	355
17	8	8	10	624	975	867	780	709	650	600	557	519	488	459	434	411	390
17	8	8	9	693	1084	963	867	788	723	667	619	577	542	510	482	456	434
17	8	8	8	780	1219	1084	975	887	913	750	697	649	610	574	542	513	488
17	8	21	8	2048	3201	2845	2560	2328	2134	1970	1829	1704	1600	1506	1422	1348	1280
17	8	19	8	1853	2896	2574	2317	2106	1931	1782	1655	1542	1448	1363	1287	1219	1158
17	8	17	8	1658	2591	2303	2073	1884	1727	1594	1481	1380	1295	1219	1151	1091	1036
17	8	15	8	1643	2286	2032	1829	1663	1524	1407	1306	1217	1143	1076	1016	963	914
17	8	13	8	1268	1981	1761	1585	1441	1321	1219	1132	1055	991	932	881	834	793
17	8	12	8	1170	1829	1626	1463	1331	1219	1125	1045	974	914	861	813	770	732
17	8	11	8	1073	1676	1490	1341	1219	1118	1032	958	893	838	789	745	706	671
17	8	10	8	975	1524	1355	1219	1108	1016	938	871	812	762	717	677	642	610
17	8	9	8	878	1372	1219	1097	998	914	844	784	730	686	645	610	578	549

▪ Calculations

• Practical calculation for fertilizer distribution

01 - Determine the line spacing and the amount of fertilizer to be distributed per bushel (Aa) or hectare (Ha).

02 - **Example:** Seeder with a spacing of 450 mm, to distribute 500 kgs of fertilizer per Ha, use the formula below:

Formula: $X = \frac{E \times Q}{A} \times D$

WHERE:

E = Spacing between lines (mm)
Q = Amount of fertilizer to be distributed (kg)
A = Area to be fertilized (m^2)
D = 50 meters distance (test)
X = Fertilizer grams to 50 meters

Resolve: $X = \frac{450 \times 500}{10.000} \times 50$

X = 22.50 x 50 = 1125

X = 1125 grams to 50 meters per line

• Practical test to measure the amount of fertilizer and seed distribution

01 - For greater precision in the distribution of fertilizer or seed, make the test of the amount to be distributed at the place of planting, because for each land there is a condition.

02 - Mark the test distance in the table, we opted for 50 linear meters.

03 - Fill the tanks of the seeder at least halfway. Run an average of 10 meters outside the test area so that the fertilizer and seeds fill the batchers.

04 - Seal the exit from the seed nozzles and place collection receptacles on the manure exits. Move the tractor in the demarcated area, always at the same speed you will plant, from 5 to 7 Km/h.

05 - After going through the demarcated space, remove the seed nozzle seal and collect for counting and also collect the fertilizer for weighing the amount collected. If necessary, increase or decrease the amount of seed and fertilizer to be distributed, check the table.

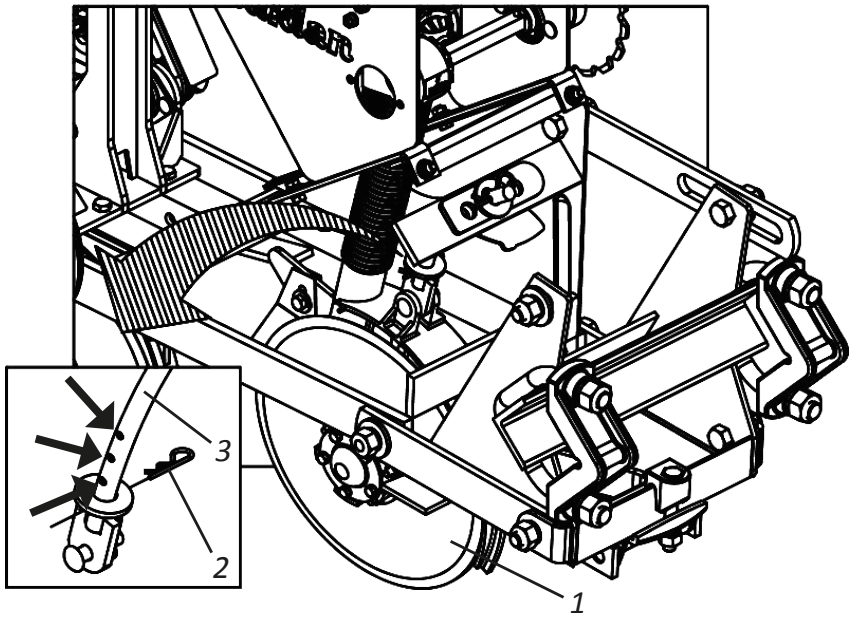
⚠ ATTENTION | **We suggest that a practical test be carried out on the distribution of the fertilizer and seed, over 50 m, to later compare the results of the fertilizer and the seed.**

▪ Line adjustments

• Fertilizer depth adjustment

The depth adjustment of the fertilizer is made by the spring pressure exerted on the double disc cart (1). To adjust the depth of the fertilizer, proceed as follows:

REDUCE DEPTH:	INCREASE DEPTH:
Place the lock (2) into the lower hole of the rod (3).	Place the lock (2) into the upper hole of the rod (3).

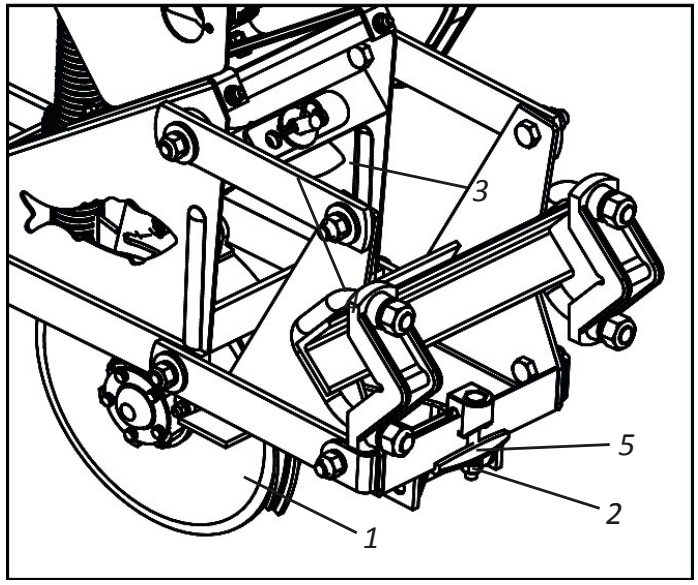


⚠ ATTENTION | **At eh end of the adjustment, repeat the procedure on all lines, avoiding variations between them.**

• Ridge opening adjustment for the fertilizer in relation to seed

The ridge opening for the fertilizer is made through the double disc (1). To adjust the distance from the fertilizer line to the seed line, proceed as follows:

01 - First, loosen the nut (2).
02 - Then insert the rod (3) into the side hole of the support (4).
03 - Then move the cart (5) to the desired size and retighten the nut (2).



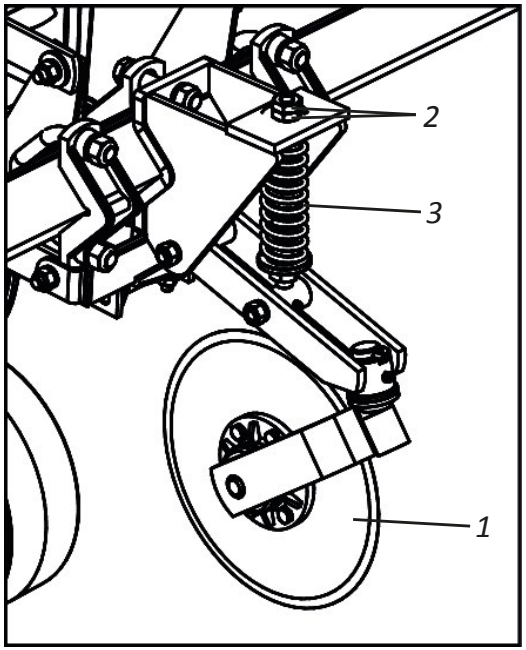
⚠ ATTENTION | **At the end of the adjustment, repeat the procedure on all lines, avoiding variations between them.**

▪ Line adjustments

• Cutting disc pressure adjustment (Optional)

To adjust the pressure of the cutting disc (1), proceed as follows:

01 - Turn nut and locknut (2) clockwise for increased spring pressure (3). For spring pressure, turn nut and locknut (2) counterclockwise.



⚠ ATTENTION

When adjusting the pressure of the cutting disc, take care not to negate the pivoting action of the cutting disc.

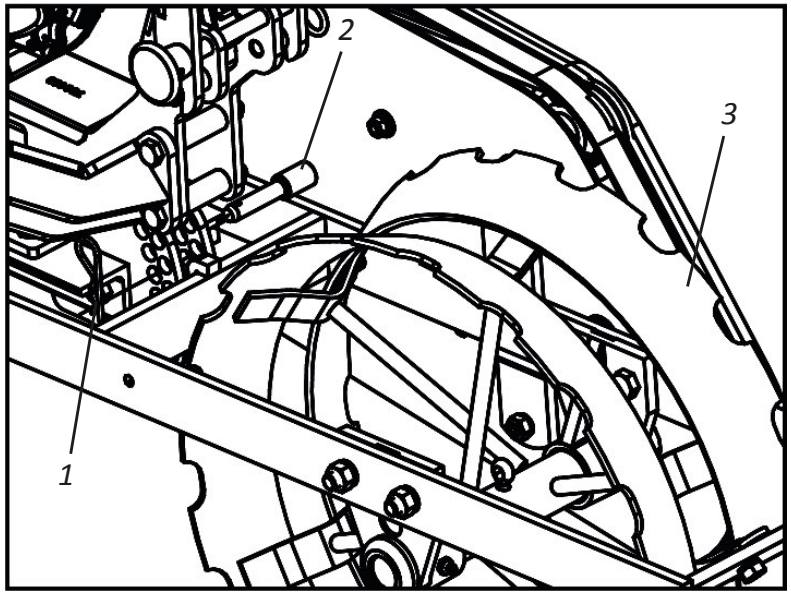
❗ IMPORTANT

This adjustment, giving greater or lesser pressure to the spring, should be done in the field before starting work, observing the type of soil to be worked for better sower performance.

• Seed depth adjustment

Seed depth adjustment is done through the pressure exerted on the double disc cart. To adjust seed depth, proceed as follows:

01 - Release the lock (1), remove the pin (2) and adjust the iron wheel (3) according to the work to be done, locking it again through the lock (1) and pin (2).



❗ IMPORTANT

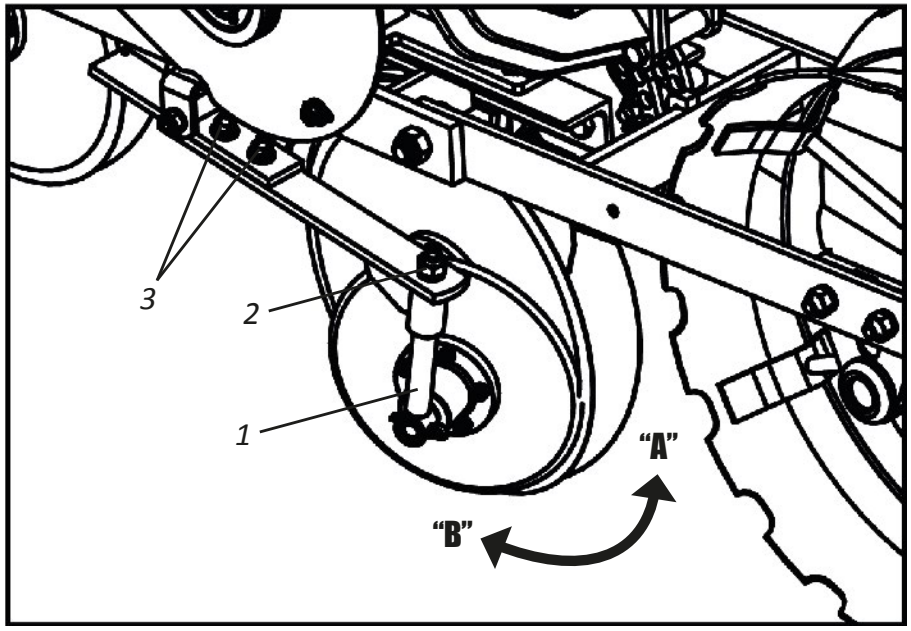
The seed depth adjustment should be done in the field before starting work observing the type of soil to be worked to obtain better performance of the sower.

▪ Line adjustments

• Covering disc adjustment (Optional)

The seed is covered by the covering disc (1) which, depending on the soil type, must be ajusted to place more or less soil on the seed. To adjust the covering disc (1), proceed as follows:

01 - Loosen the nut (2) and turn the disc (1) in **posición "A"** for more soil over seed and in **position "B"** for less soil over seed.

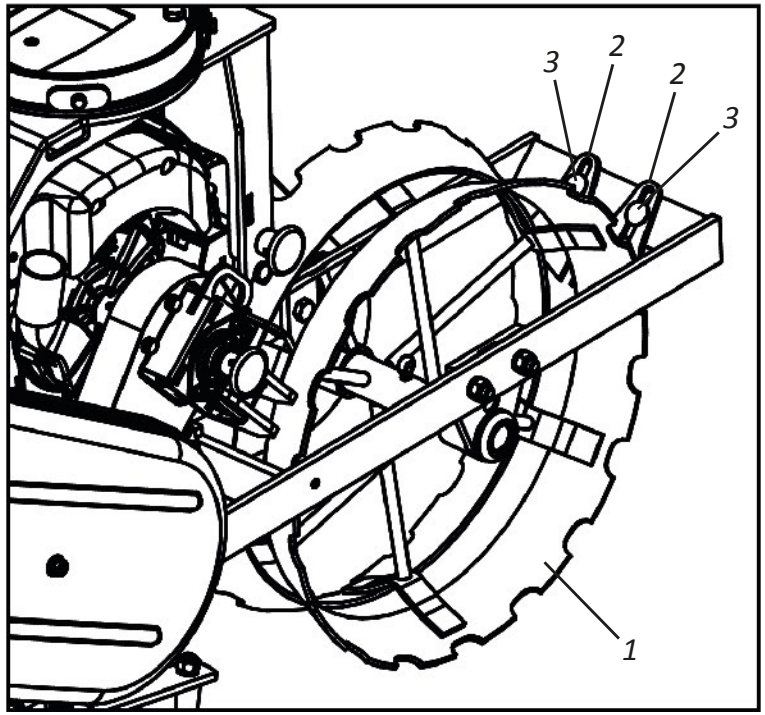


⚠ ATTENTION | **To place the cover disc (1) closer to the groove, loosen the nuts (3) and place it in the desired position.**

• Cleaner adjustment

The iron wheels (1) have flexible wipers (2) that keep them clean while working ensuring uniformity of depth. To adjust the wipers (2), proceed as follows:

01 - Loosen the screws (3), adjust the wipers (2) and tighten the screws (3).

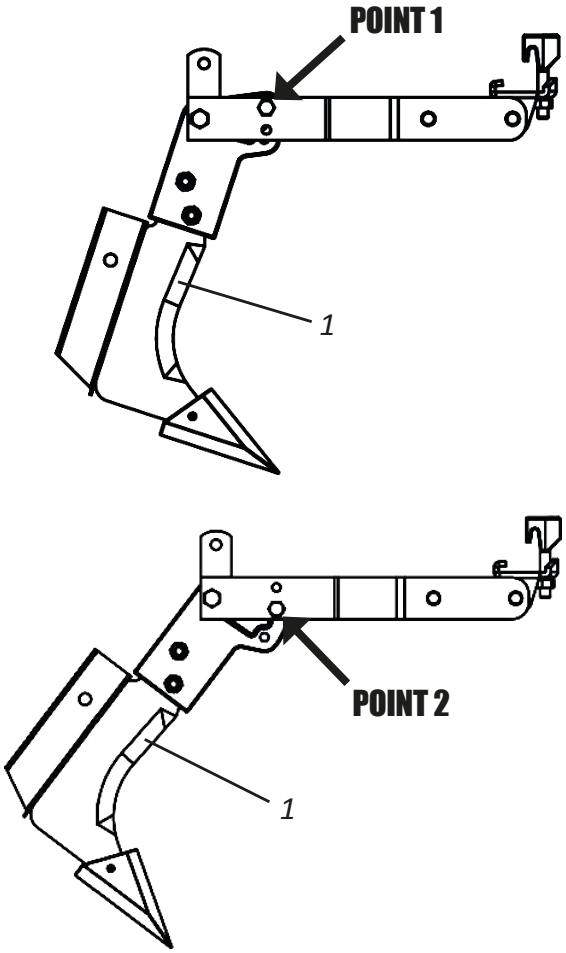


⚠ ATTENTION | **Repeat this procedure to adjust the wipers on the other lines.**

▪ Line adjustments

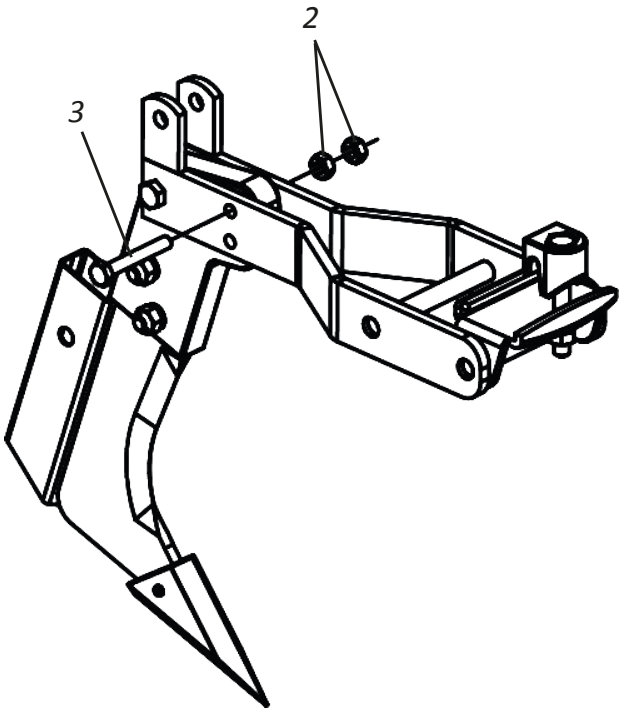
• Ridger attack angle adjustment

The ridger (1) has 2 working adjustments points for better adjustment to the type of soil to be worked.



To adjust the angle of attack of the ridger, proceed as follows:

01 - Loosen the nut and locknut (2) and remove the screw (3).
02 - Then articulate the ridger (1) at the optiomal set point.
03 - Then replace screw (3), nut and locknut (2).



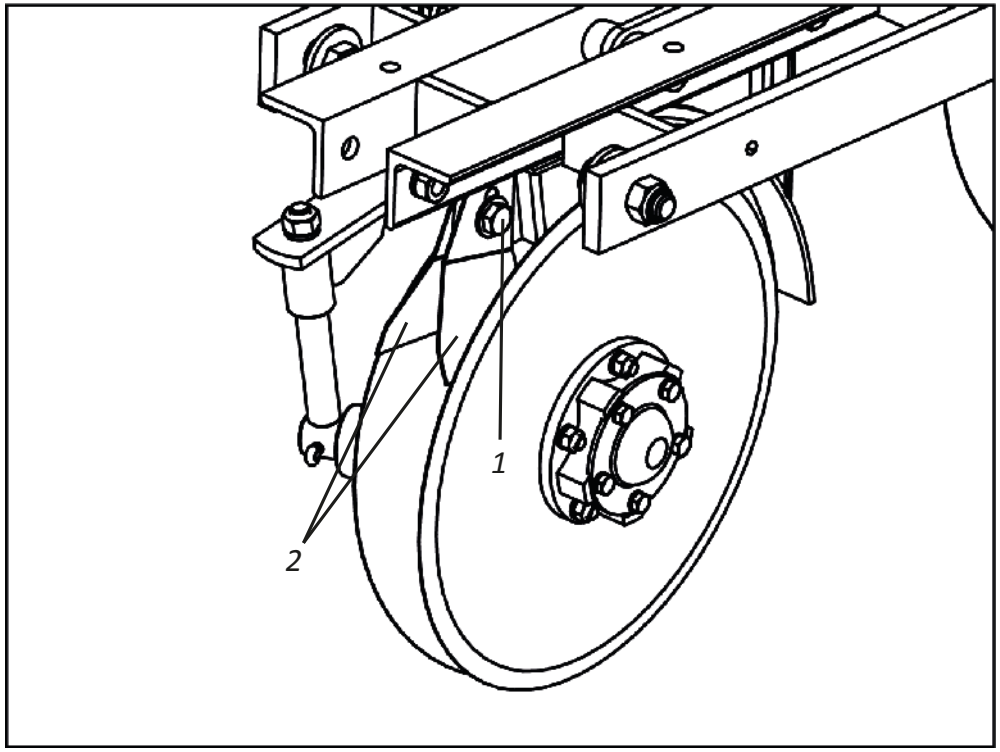
⚠ ATTENTION | **When finishing the ridger (1) adjustment, repeat the procedure on all lines, avoiding variations between them.**

▪ Line adjustments

• Double disc cleaners adjustment

The double disc features flexible, adjustable wipers to remove dirt adhering to the discs. To adjust the wipers, proceed as follows:

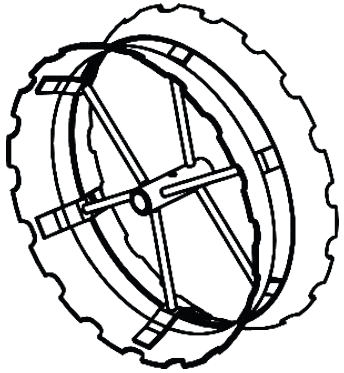
01 - Loosen the screw (1), adjust the wipers (2) in the optimal position and replace the screw.



⚠ ATTENTION | **At the end of the adjustment of the wipers (2), repeat the procedure on all lines, avoiding variations between them.**

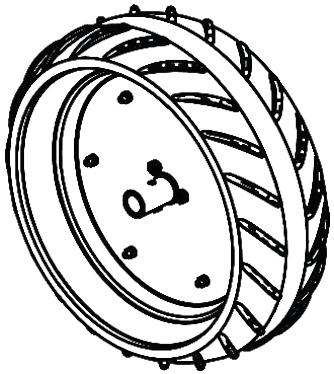
• Iron compactor wheel

The iron compactor wheel (1) has the purpose of pressing the soil around the seed, leaving it loose on it.



• Rubber compactor wheel

The rubber compactor wheel (1) is used in crops that do not require pressure on the seeds.

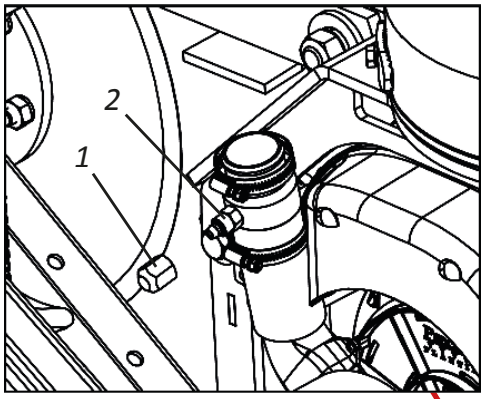


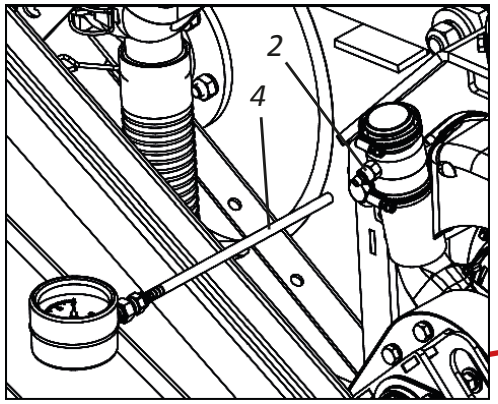
▪ Line adjustments

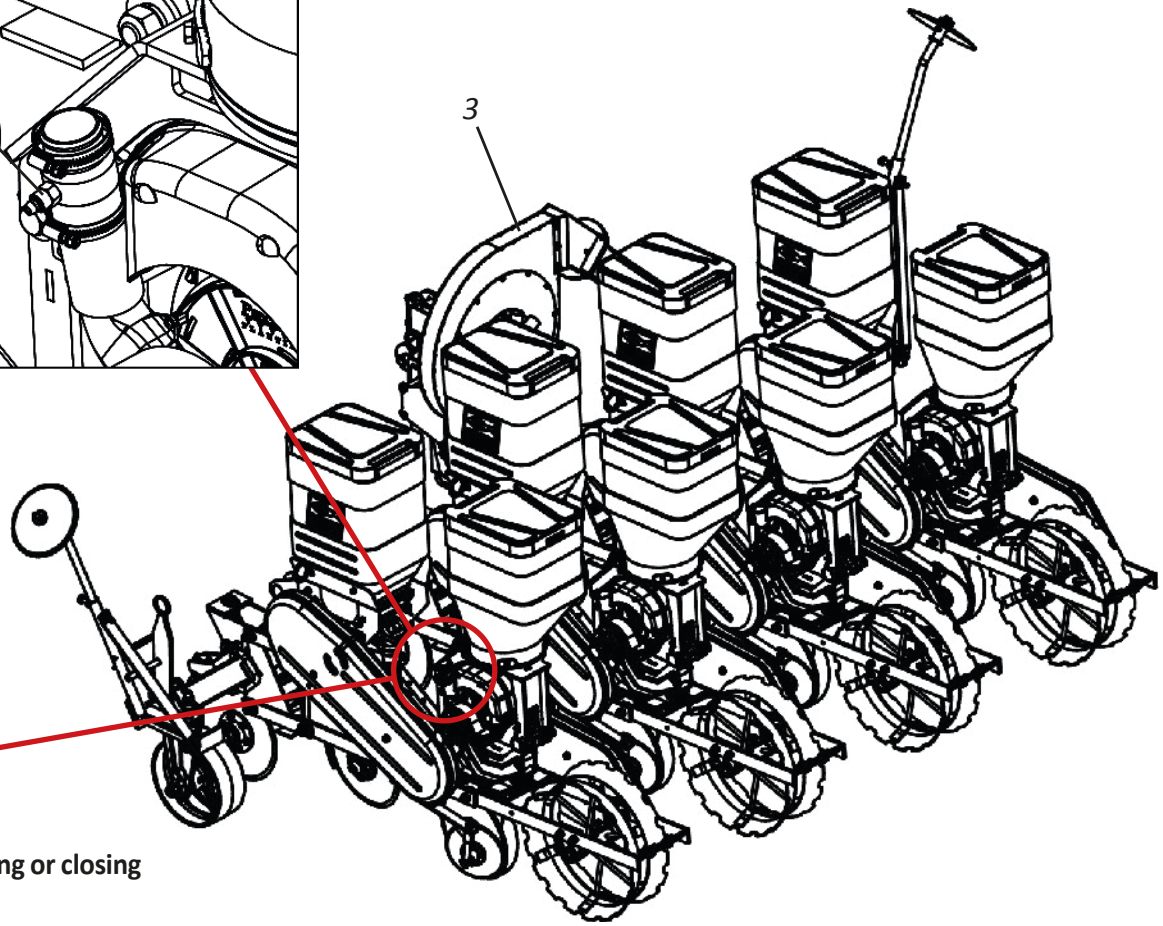
• Vacuum level in batchers

The **PLB DIRECTA AIR** has a nipple on the last line on the left side (looking behind the sower) to check the vacuum level in the batcher every 20 working hours. To check the vacuum level in the batcher, proceed as follows:

01 - Remove the cap (1) from the nipple (2).
02 - Then start the turbine (3) at work speed.
03 - Then take the vacuum gauge (4), attach the end of your hose to the nipple (2) and check the vacuum level that should be the same as the working one, and a slight variation may occur.
04 - After checking the vacuum level, reattach the cap (1) to the nipple (2).





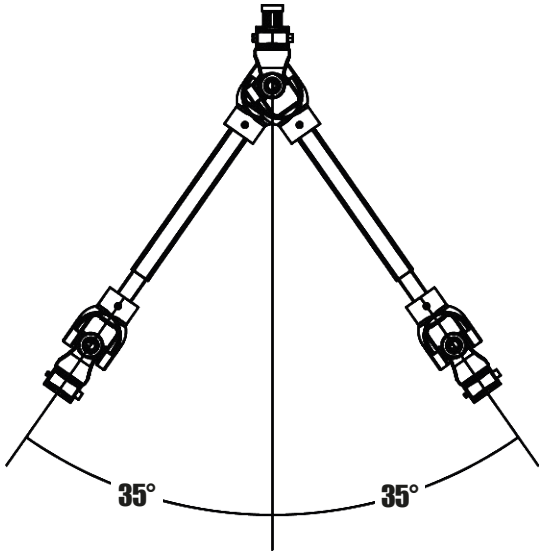


⚠ ATTENTION **If you need to adjust the vacuum level, adjust the opening or closing of the turbine gate (3) as instructed on page 36.**

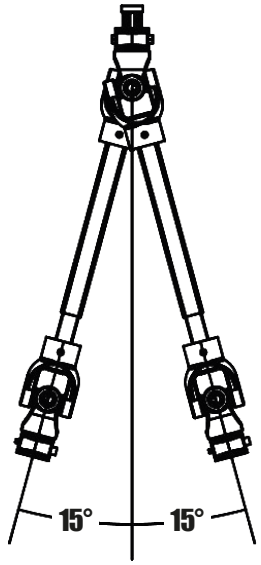
▪ Operationes

• Recommendationes for the cardan shaft

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

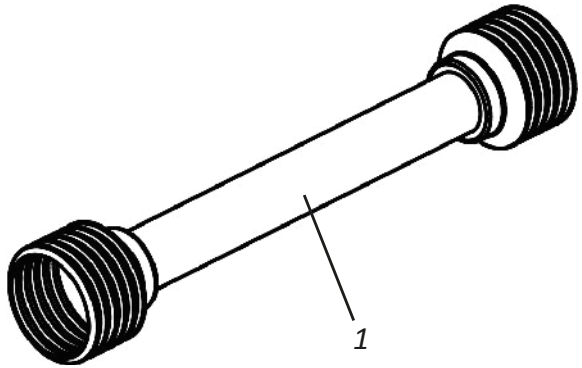


IN A SHORT PERIOD OF TIME



DURING ONGOING WORK

La protección de seguridad (1) es un componente clave para la seguridad personal del operador y para la vida útil del eje cardán.



⚠ ATTENTION

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

❗ IMPORTANT

Do not work with PLB DIRECTA AIR if the cardan shaft is not protected (1). Ignoring this warning can cause cardan shaft damage or serious accidents.

▪ Operations

• Recommendations for operation

Preparing the **PLB DIRECTA AIR** and the tractor will save you time as well as provide better fieldwork results. The following suggestions may be helpful to you.

01 - After the first day of work with the sower, retighten all bolts and nuts. Check the condition of the pins and locks.
02 - Do not maneuver or reverse with the lines lowered to the ground.
03 - Observe lubrification intervals.
04 - When filling the tanks make sure that there are no objects inside them, such as nuts, bolts, etc. Always use seeds free of impurities.
05 - Always observe the functioning of seed distribution mechanisms and also the regulations established at the beginning of planting.
06 - Always keep the sower levelled, the tractor drawbar must remain fixed and the working speed should remain constant.
07 - Always check seed depth and press wheel pressure.
08 - Performing any checks or maintenance on the sower, lower it to the ground and switch off the tractor engine.
09 - Do not make sharp turns with the seed drill while working, especially in no-till farming. The components of the lines may be damaged.
10 - The sower has several adjustments but only local conditions can determine the best fit.
11 - Only fill the sower at the workplace.
12 - Do not transport or work with an overloaded sower.
13 - Right and left side indications are made by observing the sower from behind.
14 - **PLB DIRECTA AIR** operates most efficiently in the range of 5 to 7 km/h.
15 - Note the position of the fertilizer in relation to the seed in the soil.

If in doubt, never operate or handle PLB DIRECTA AIR, consult After Sales.
Telephone: 0800-152577 / E-mail: posvenda@baldan.com.br

▪ Maintenance

• Lubrication

Lubrication is essencial for good performance and a longer service life of the **PLB DIRECTA AIR**, contributing to maintenance cost savings.

Before starting the operation, carefully lubricate all grease fittings, always observing the greasing intervals on the following page. Make sure of the quality of the lubricant, its efficiency and purity, avoiding the use of products contaminated by water, soil and other agents.

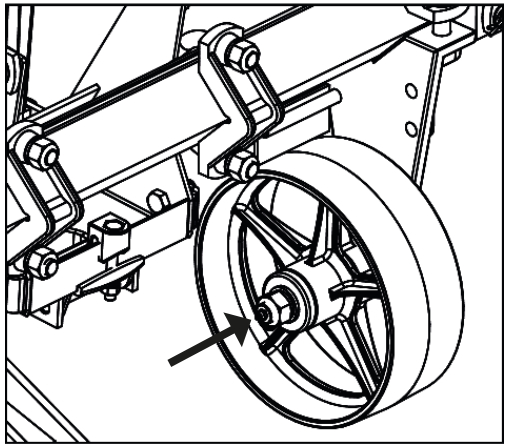
• Grease table and equivalents

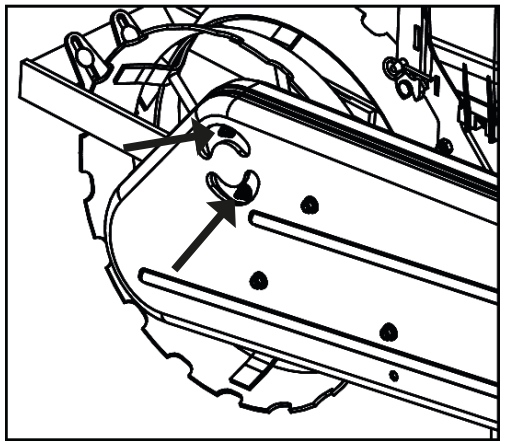
Manufacturer	Recommended grease types
Petrobrás	Lubrax GMA-2
Atlantic	Litholine MP 2
Ipiranga	Ipiflex 2
Castrol	LM 2
Mobil	Grease MP
Texaco	Marfak 2
Shell	Alvania EP 2
Esso	Multi H
Bardahl	Maxlub APG-2EP
Valvoline	Palladium MP-2
Petronas	Tutela Jota MP 2 EP
	Tutela Alfa 2K
	Tutela KP 2K

⚠ ATTENTION

For manufaturers and or equivalent brands nos listed in the table, see the manufaturer's technical manual.

• Lubrication every 24 hours of work - Part I

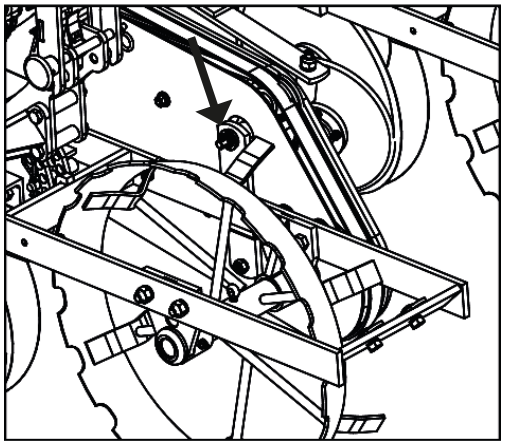


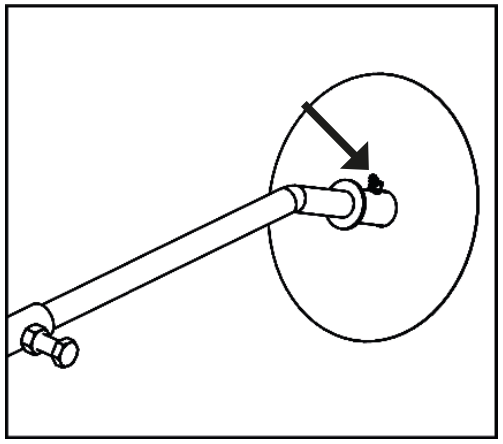


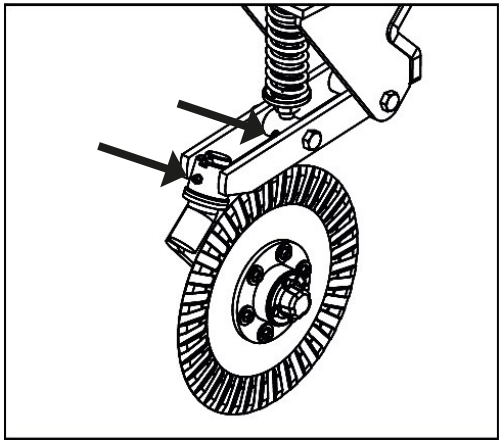
⚠ ATTENTION **When lubricating the PLB DIRECTA AIR, do not exceed the amount of new grease. Insert a sufficient amount.**

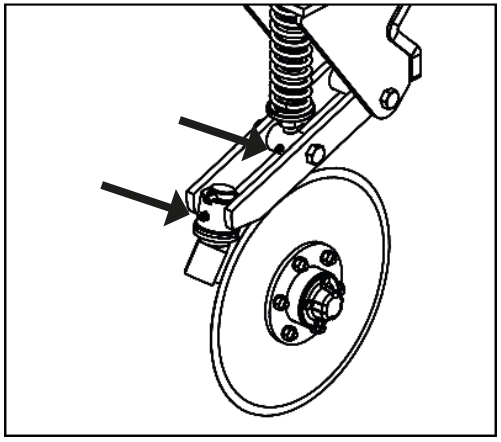
▪ Maintenance

• Lubrication every 24 hours of work - Part II

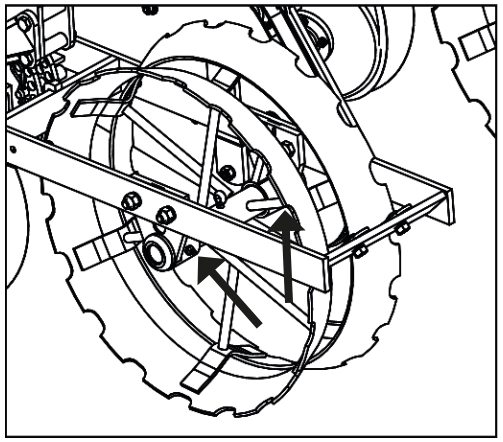


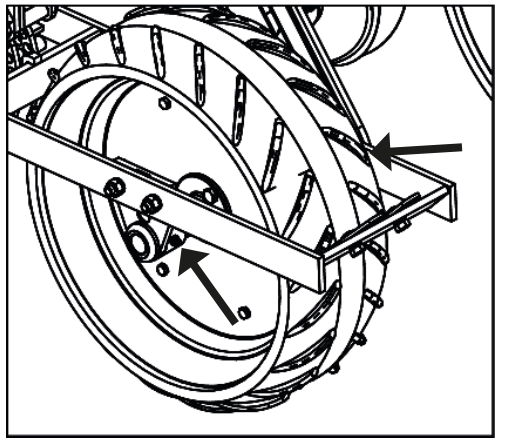






• Lubrication every 30 hours of work





⚠ ATTENTION | When lubricating the PLB DIRECTA AIR, do not exceed the amount of new grease. Insert a sufficient amount.

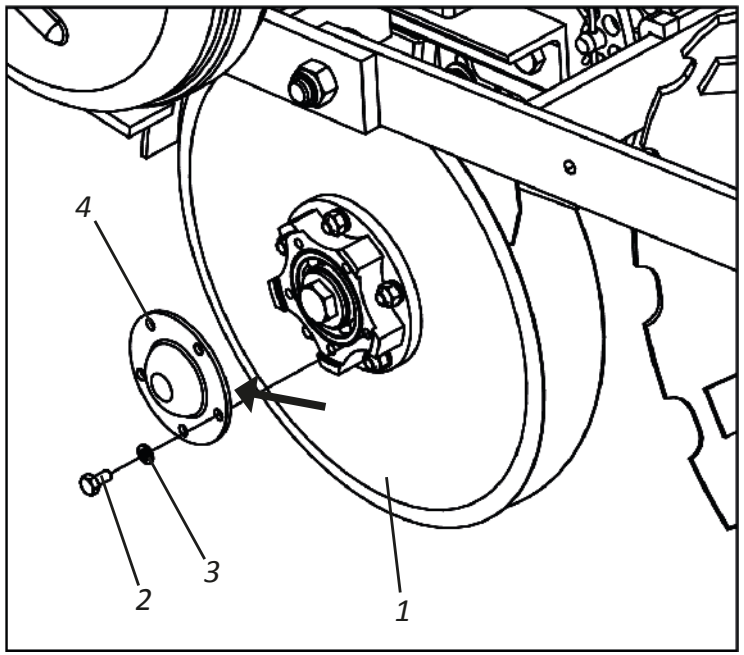
▪ Maintenance

• Lubrication every 200 hours of work

Periodically lubricate the double disc hubs (1) approximately every 200 hours and at the end of the harvest, to do this proceed as follows:

01 - Loosen the bolts (2) and lock washers (3), remove the cap (4) and insert new grease.

02 - Then replace the cap (4) and secure it with the screws (3) and lock washers (3).



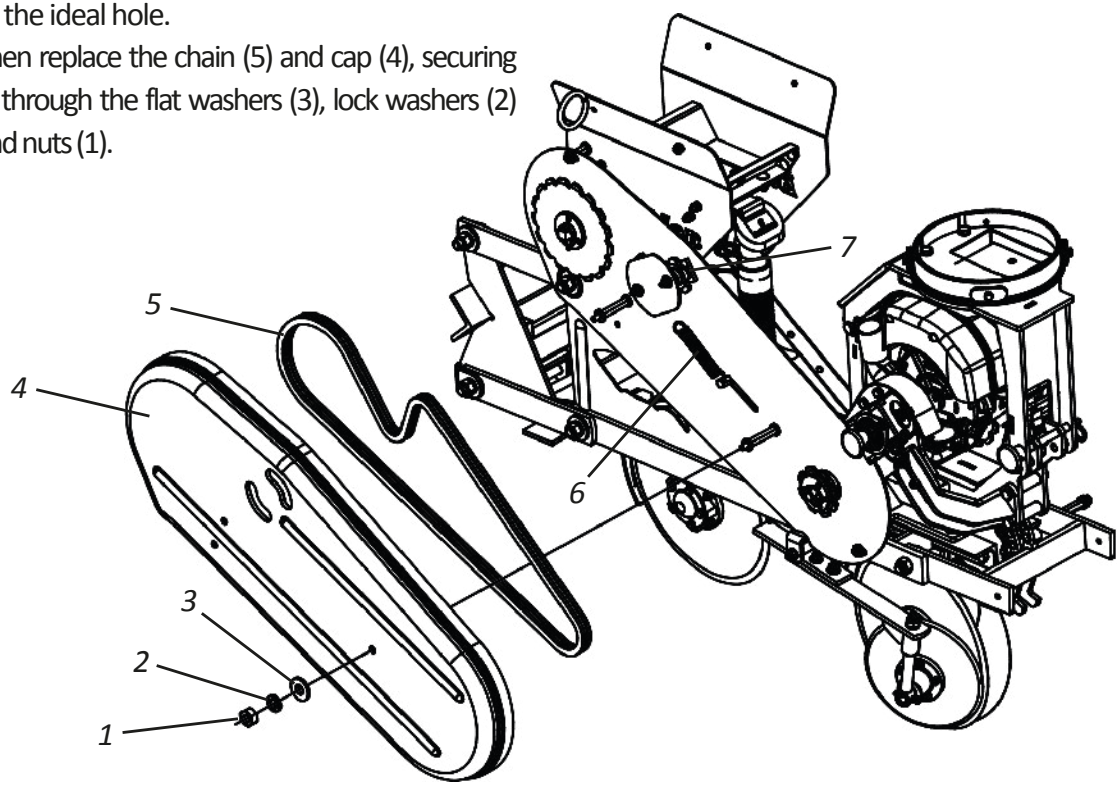
• Chain tension

To tension the chain, proceed as follows:

01 - Loosen the nuts (1) lock washers (2), flat washers (3), remove the cover (4) and chain (5).

02 - Then release the spring (6) adjust the tumbuckle (7) to the desired tension, securing the spring (6) to the ideal hole.

03 - Then replace the chain (5) and cap (4), securing in through the flat washers (3), lock washers (2) and nuts (1).



⚠ ATTENTION | **Check chain tension daily, normal clearance should be + - 1 cm in the center of the chains.**

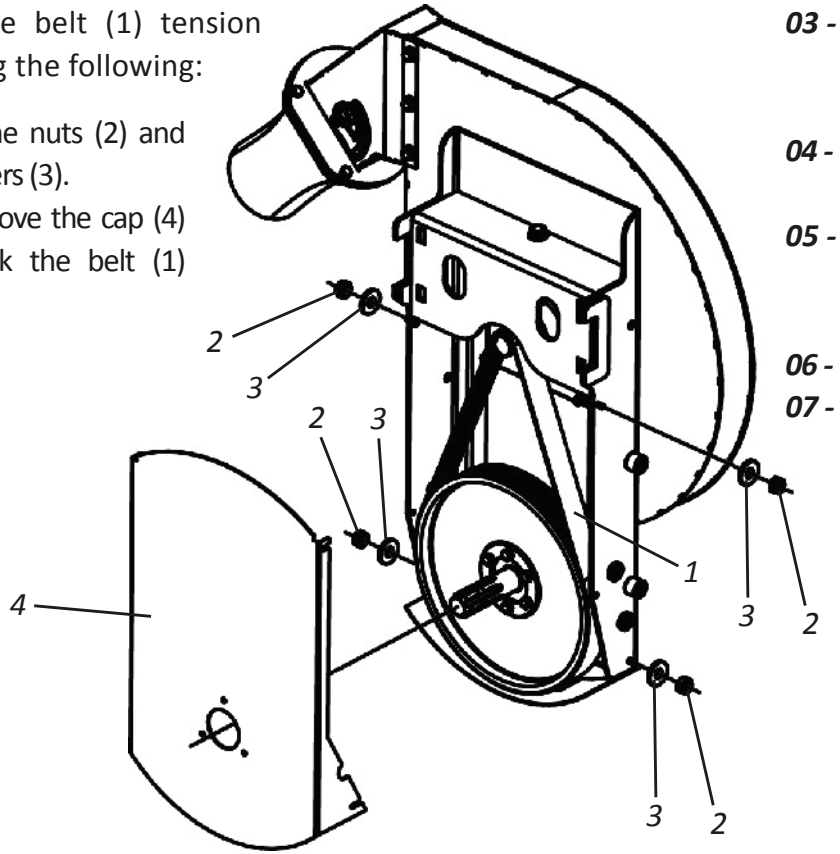
▪ Maintenance

• Turbine drive belt

Check the belt (1) tension daily by doing the following:

01 - Loosen the nuts (2) and flat washers (3).

02 - Then remove the cap (4) and check the belt (1) tension.



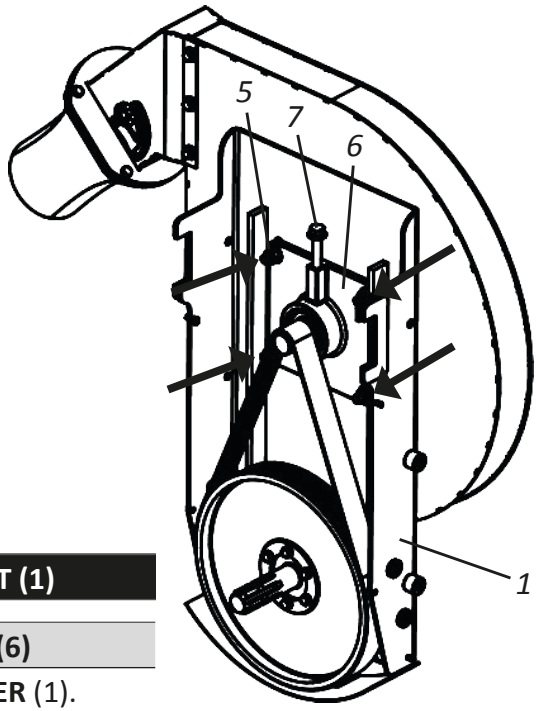
03 - Check belt tension (1) which should have a normal clearance of + - 1 cm in center of it.

04 - To tension it, first loosen the bearing (6) securing nuts (5).

05 - Then tighten or loosen the screw (7), increasing or decreasing the belt (1) tension.

06 - Then retighten the nuts (4).

07 - Finish by replacing the cap (4), securing through the flat washers (3) and nuts (2).



BELT VOLTAGE ADJUSTMENT (1)
TIGHTENING THE SCREW (6)
The belt tension will be **HIGHER** (1).
LOOSENING THE SCREW (6)
The belt tension will be **LOWER** (1).

⚠ ATTENTION

Never operate the turbine with the cap (4) open, aoviding equipment damage and risk of accident.

❗ IMPORTANT

After the first hour of working with PLB DIRECTA AIR, check the belt tension.

❗ IMPORTANT

When it is no longer possible to tension the belt (1), replace it as it has already reached the limit of wear

🔍 NOTE

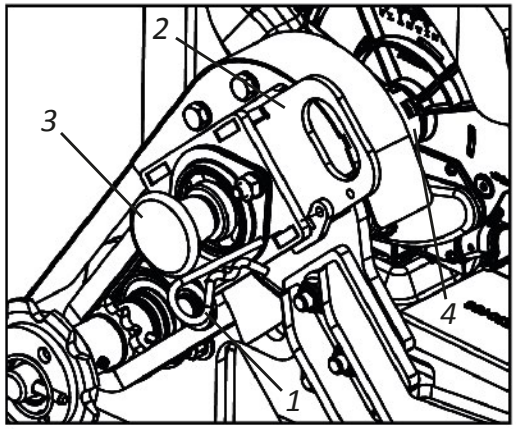
The turbine leaves the factory assembled and tuned to operate at the standard 540 rpm.

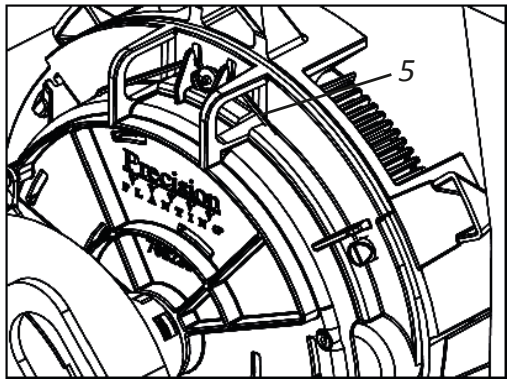
▪ Maintenance

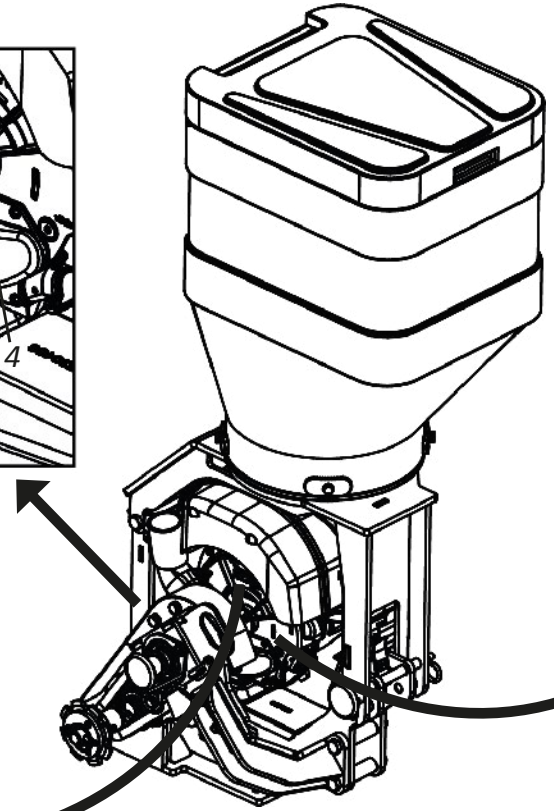
• Batcher disc replacement

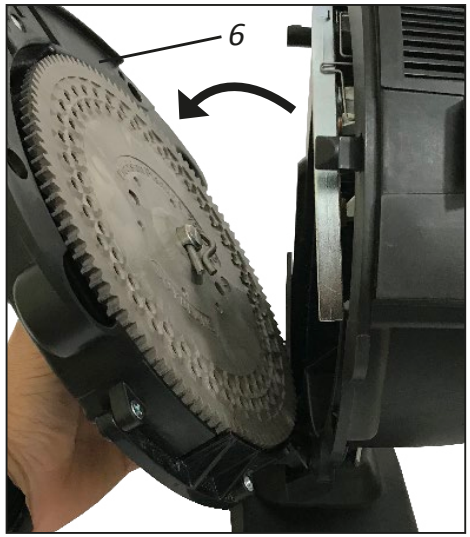
To change the VSET 2 disc, proceed as follows:

01 - Remove the lock (1) and pull the lock plate (2) upwards.
02 - Then pull the handle (3) to uncouple the transmission shaft (4).
03 - Then release the lock spring (5) from the batcher cap.
04 - Then remove the batcher cover (6) and replace the disc.
05 - When you have finished changing the disc, reassemble the batcher.









⚠ ATTENTION | **To change the batcher disc, follow the manufacturer's instructions on pages 39 and 40.**

▪ Maintenance

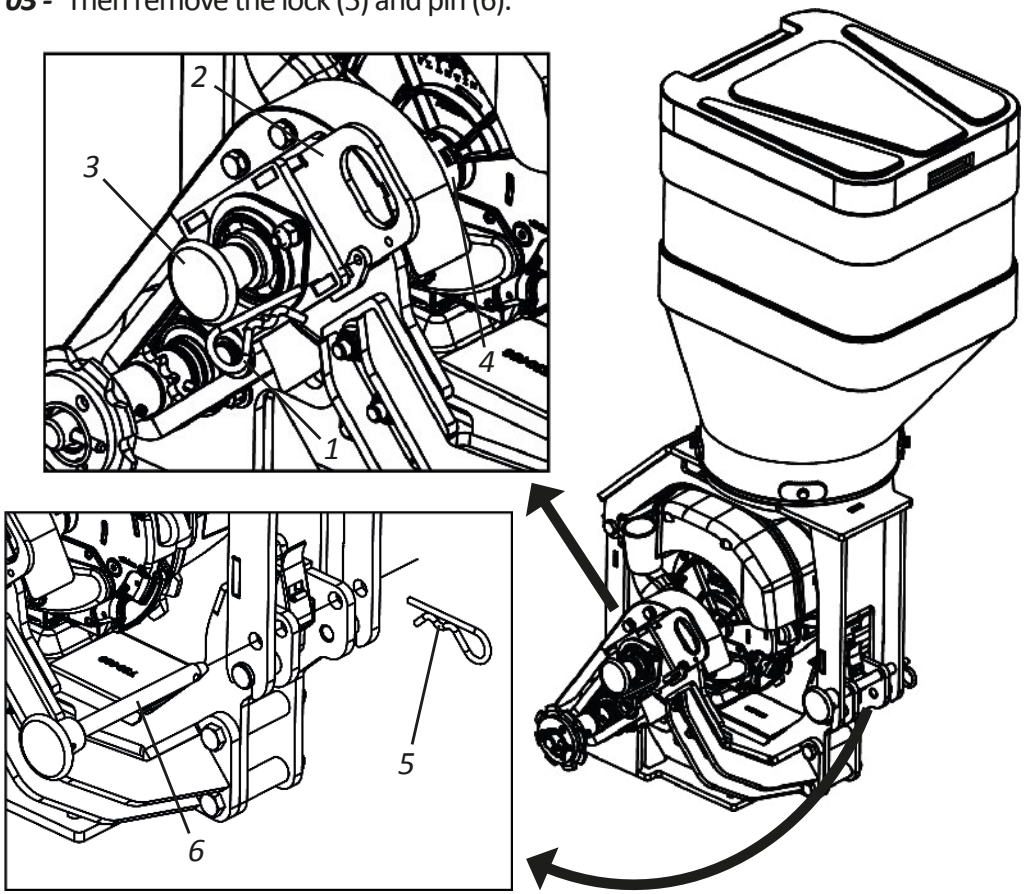
• Batcher maintenance or replacement - Part I

To service the batcher or nozzle, proceed as follows:

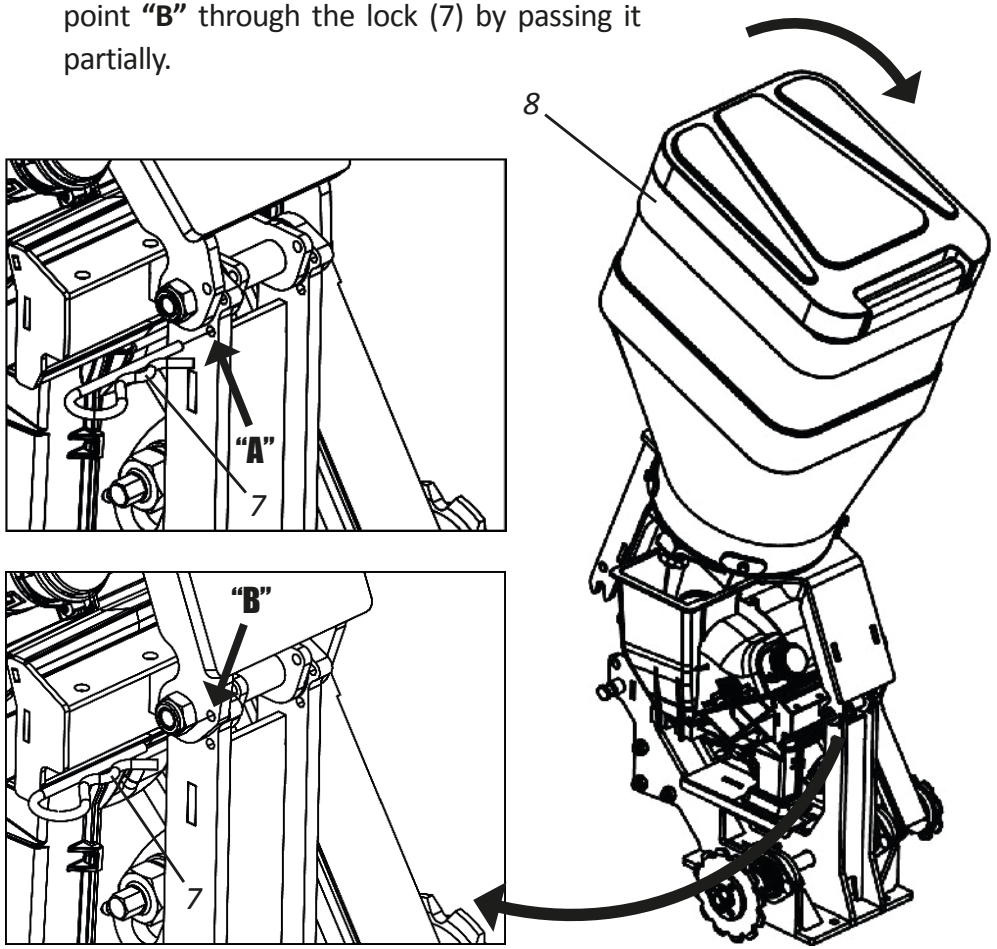
01 - Remove the lock (1) and pull the lock plate (2) upwards.

02 - Then pull the handle (3) to uncouple the transmission shaft (4).

03 - Then remove the lock (5) and pin (6).



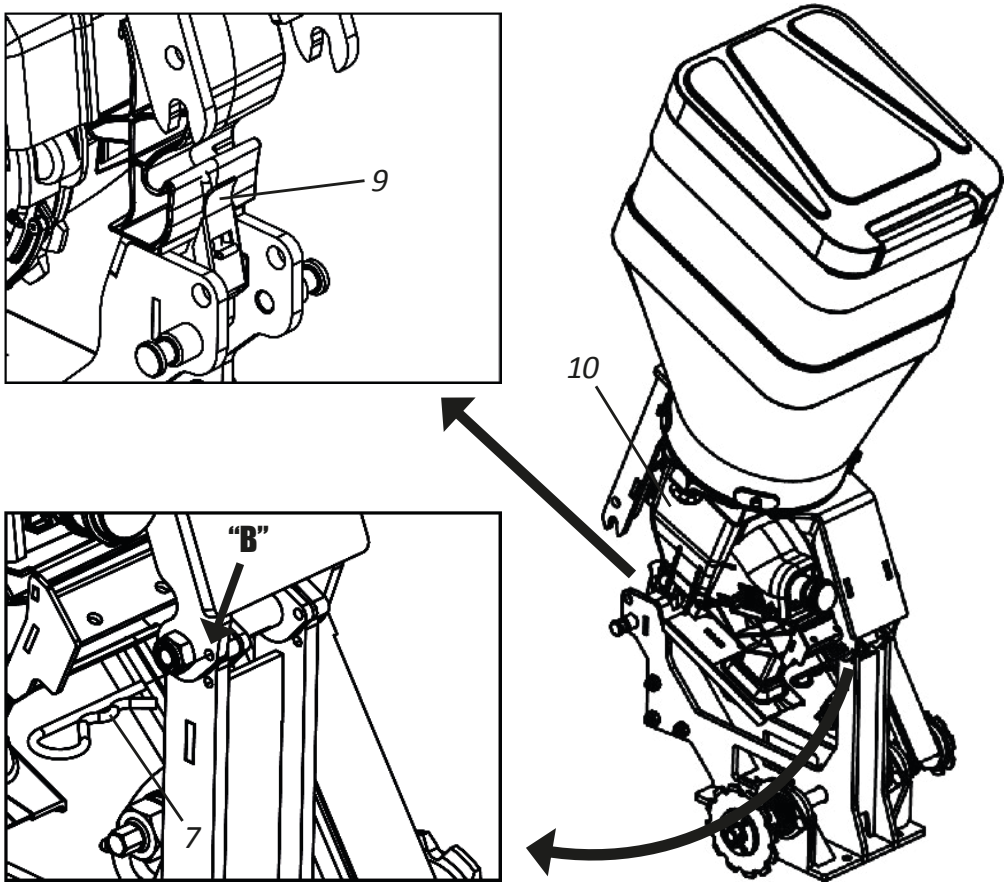
04 - Then remove the lock (7) from point **"A"**, pivot the tank (8) securing it at point **"B"** through the lock (7) by passing it partially.



▪ Maintenance

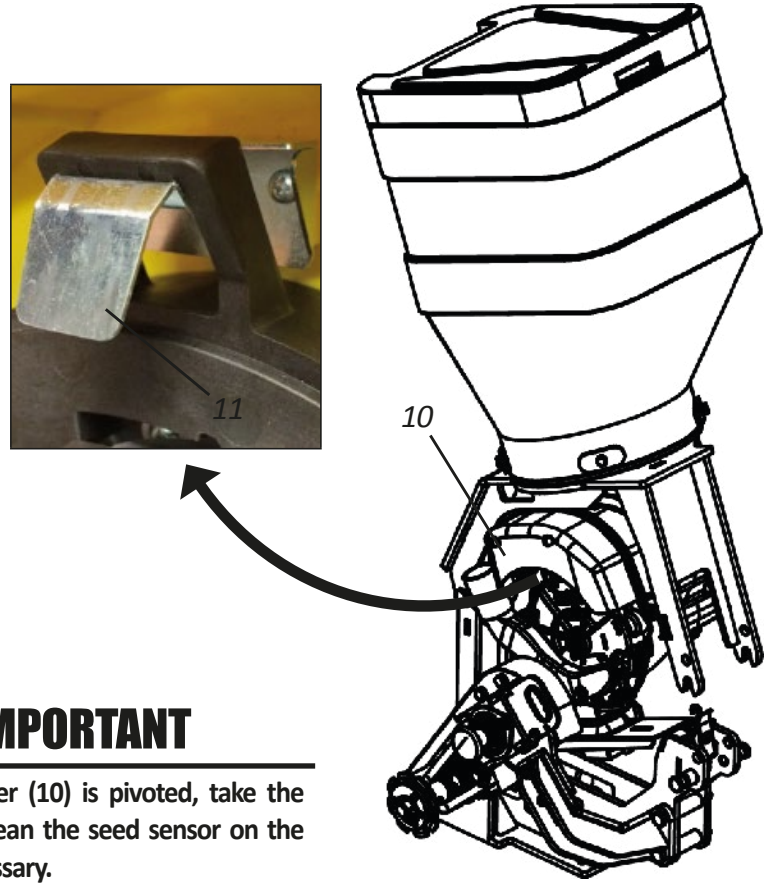
• Batcher maintenance or replacement - Part II

05 - Then, release the lock (9), articulate the batcher (10) securing it at point **"B"** through the lock (7) passing it all the away.



06 - Then tighten the lock (11) to release the batcher set (10) and service or replace it.

07 - When servicing or replacing the batcher set (10) is complete, reassemble it.



IMPORTANT

When the batcher (10) is pivoted, take the opportunity to clean the seed sensor on the conductor if necessary.

▪ Maintennance

• Operational maintenance

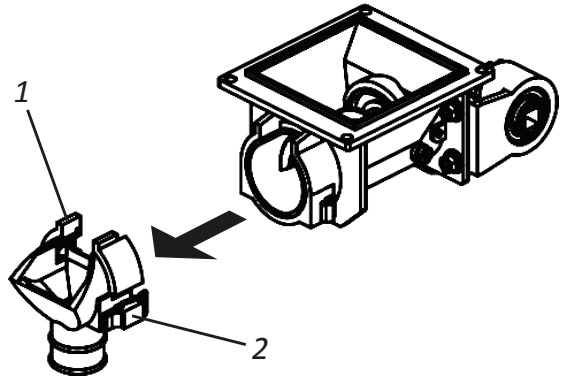
PROBLEMS	PROBABLE CAUSES	SOLUTIONS
During planting, fertilizer begins to leak from the safety outlets.	Clogged hoses or pieces of plastic in the fertilizer conducing spirals.	Unclog the hose or remove the upper channel that gives access to the spiral, rotate the shaft in the opposite direction until the foreign body that is stuck loosens.
Fertilizer hub shaft does not rotate.	Spiral blocked by wet fertilizer or excess fertilizer in the closed line.	Unclog the spirals, check if you have if you have a loose gutter and the fertilizer may be entering by their sides.
A planting line is less deep than the other.	Different pressure settings on the depth limiting wheels or in the springs of the line.	Set all wheels to equal depth and regulate the pressure of the line springs.
The ridge is too open during planting.	Sticky soil that sticks to the discs or excessive speed of work.	Decreases work speed.
Strange noise when operating or walking with the loaded sower.	Loose wheels or wheel hub.	Re-tighten the wheel nuts. Adjust the wheel hub bearings.
The sower leaves the planting line, sometimes to one side, sometimes to the other, sideways.	Tracto drawbar loose.	Use the pin that comes with the sower. Secure the tractor drawbar in the center hole.
It is not covering the ridge.	Poorly adjusted covering wheels or damp grounds.	Adjust the covering wheel by moving it sideways in relation to the ridge.
The hydraulic cylinders stop operating, lifting the sower and then doesn’t lower or vice versa.	Different quick coupler, sphere male type and female needle type or vice versa.	Proceed by changing the quick coupler, placing two of the same type.
Broken seeds.	High planting seed.	Decrease work speed.
	Inadequate disc thickness.	Use suitable disc (hole thickness and diameter).
	Poorly placed disc. The seed sieve is not suitable for the disc used.	Insert the disc properly (note the sentence: **THIS SIDE DOWN**).
	Using moist seeds.	Use dry seeds.

▪ Maintenance

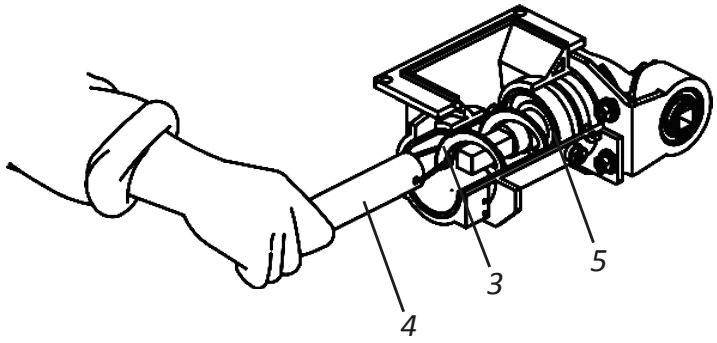
• Fertisystem conductor cleaning

After planting, do not leave fertilizer in the tank. To clean, proceed as follows:

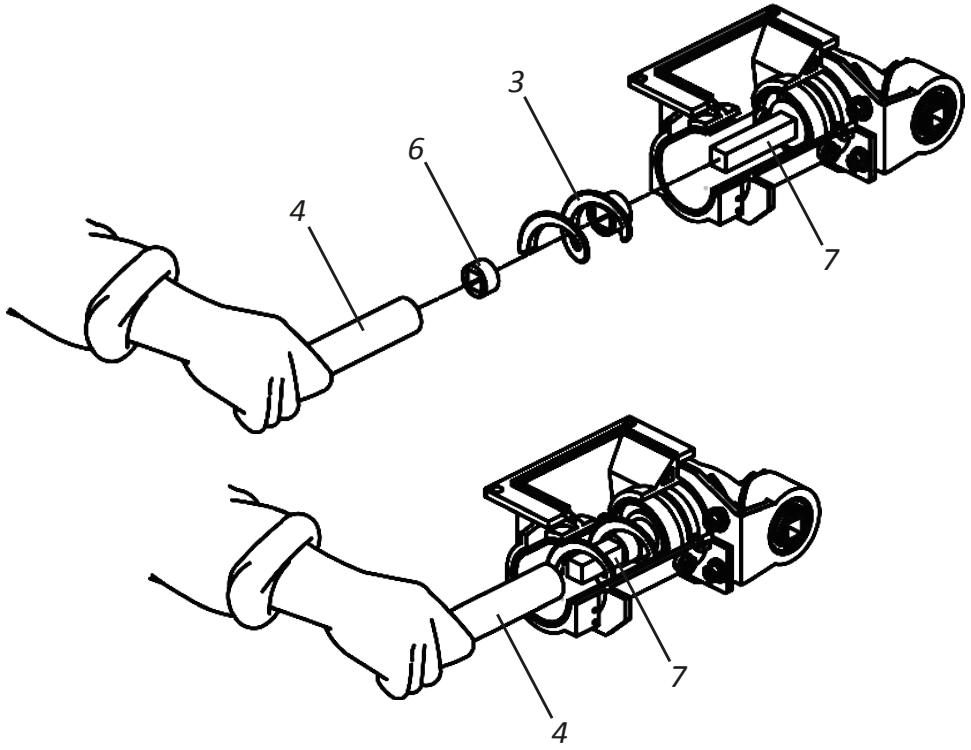
01 - Remove the nozzle (1) through the quick coupler (2).



02 - Remove the worm spring (3) by pulling it through the retaining tube ring (4) and removing the locking ring (5).



03 - After cleaning, replace the worm spring (3), together with the locking ring (6), through the fixing tube (4), making sure that the worm spring (3) and the locking ring (6) are well positioned at the base of the drive shaft (7).

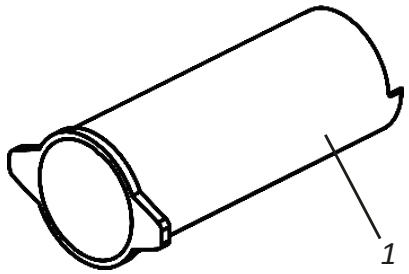


⚠ ATTENTION **Keep the worm spring in place with the locking ring. This procedure will prevent damage to the transverse lid when not using the batcher with fertilizer or when transporting the sower. Failure of the locking ring can lead to damage of the fertilizer distribution and/or transmission of the sower.**

▪ Maintenance

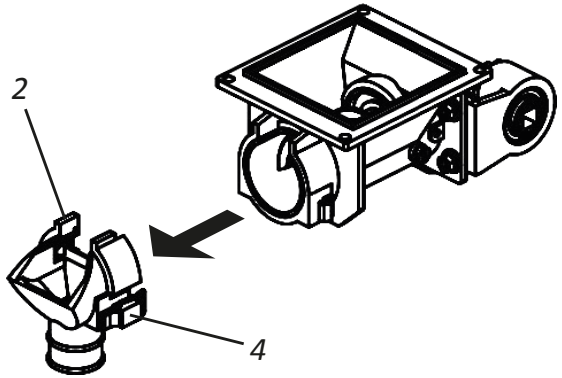
• Fertisystem conductor maintenance tube

PLB DIRECTA AIR comes with a maintenance tube (1) to perform worm spring maintenance or replacement without removing fertilizer from the box.



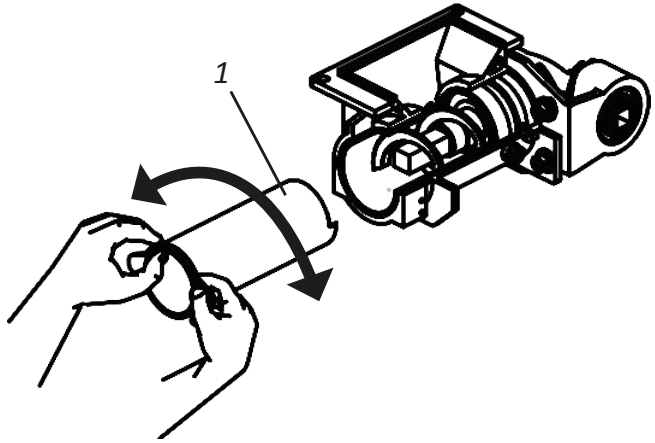
To service the Fertisystem conductor, proceed as follows:

01 - Remove the discharge nozzle (2) from the Fertisystem conductor (3) by releasing the quick latches (4).



NOTE | **The maintenance tube (1) has an end cut angle to facilitate this operation.**

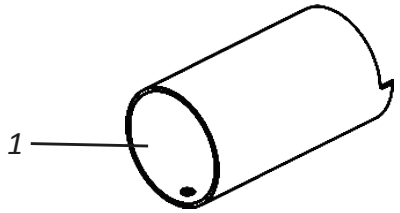
02 - Then, introduce the maintenance tube (1) in rotating movements, promoting the displacement of the fertilizer to the bottom of the batcher. Then perform the necessary maintenance.



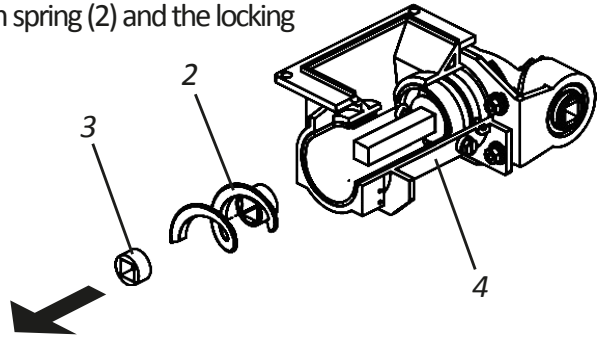
▪ Maintenance

• Fertisystem conductor blocking tube

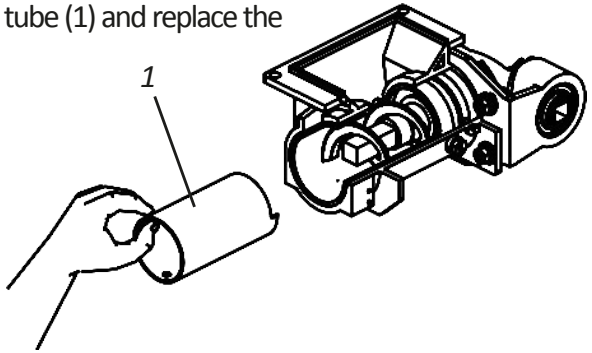
PLB DIRECTA AIR comes with a blocking tube (1) so that when you need to isolate some planting lines, fertilizer distribution does not occur.



Then, remove the worm spring (2) and the locking ring (3) from the Fertisystem.

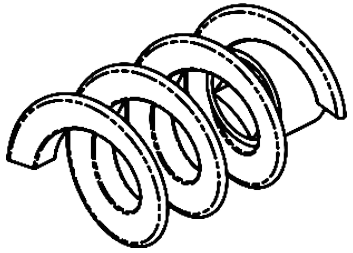


Then insert the blocking tube (1) and replace the discharge nozzle (2).

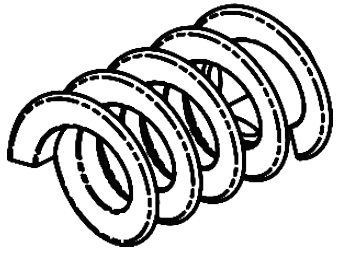


• Springs and caps (optional) - Fertisystem Conductor

PLB DIRECTA AIR comes standard with a 2” worm spring **(standard),** however, the seeder can be supplied with two other worm spring (**optional)** models.

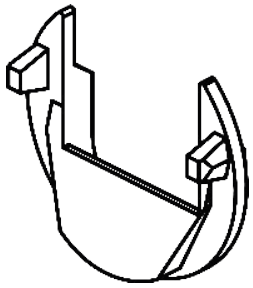


WORM SPRING (STEP 3/4”)

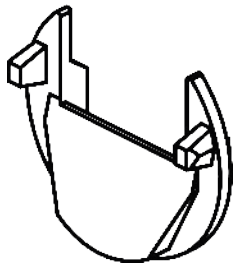


WORM SPRING (STEP 1”)

PLB DIRECTA AIR comes standard with the transverse flow cap **(standard)** but the seeder can be supplied with two other flow cap models **(optional)**.



FERTIPÓ COVER



HIGH FLOW COVER

NOTE

Always fill the fertilizer tank at work location.
Avoid any kind of impurity in the fertilizer tank.
Carry out a measurement of dosage daily.

▪ Maintenance

• Care

01 - Before each work, check the condition of all hoses, pins, screws, bearings, discs and sections. When necessary, retighten or replace.

02 - The speed of movement must be carefully controlled according to the terrain conditions.

03 - The **PLB DIRECTA AIR** is used in several applications, requiring knowledge and attention during its handling.

04 - Only local conditions can determine the best working form of the **PLB DIRECTA AIR**.

05 - When assembling or dismantling any part of the **PLB DIRECTA AIR**, use appropriate methods and tools.

06 - Carefully observe the lubrication intervals at the various lubrication points of the **PLB DIRECTA AIR**.

07 - Always check the parts, for wear. If replacement is required, always require original Baldan parts.

08 - Keep **PLB DIRECTA AIR** discs sharp at all times.

• General cleaning

01 - When storing the **PLB DIRECTA AIR**, clean it throughly and wash it throughly with water only. Make sure the paint is not worn, if that has happened, give it a full coating of paint, use protective oil and fully lubricate the **PLB DIRECTA AIR**. Do not use burnt oil or other abrasive.

02 - Fully lubricate the **PLB DIRECTA AIR**. Check all moving parts of the **PLB DIRECTA AIR**, if they present wear or loosening, make the necessary adjustment or replacement of the parts, leaving the sower ready for the next job.

03 - After all maintenance work, store the sower in a covered, dry place, properly supported.

Avoid: - That the discs directly contact the ground.
- The compression of the springs.

04 - When connecting of disconnecting hydraulic hoses, do not let the ends touch the ground. Before connecting the hydraulic hoses, clean the connections with a clean cloth without loose threads. **Do not use rags!**

05 - Replace all stickers that are damaged or missing, especially warnings. Make everyone aware of their importance and the dangers of accidents when instructions are not followed.

06 - After all maintenance care, store your **PLB DIRECTA AIR** on a flat, covered, dry surface, away from animals and children.

07 - We recommend washing the **PLB DIRECTA AIR** only with water at the beginning of work.

IMPORTANT

Proper and periodic maintenance is necessary to ensure the long life of the PLB DIRECTA AIR.

ATTENTION **Do not use chemicals or abrasives to wash the PLB DIRECTA AIR, as this way damage the paint and its adhesives**

▪ Maintenance

• Seeder conservation - Part I

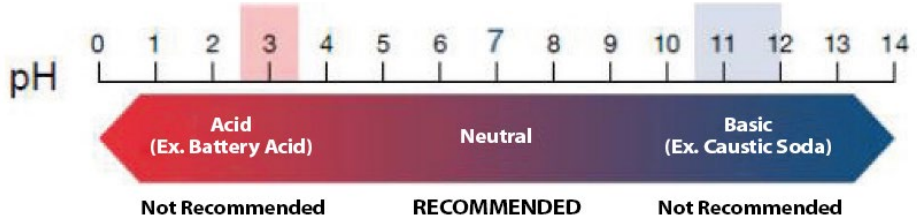
To prolong the life and appearance of the **PLB DIRECTA AIR** for longer, follow the instructions below:

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

• Seeder conservation - Part II

The practices and care below if adopted by the owner or operator make a difference to the conservation of the **PLB DIRECTA AIR.**

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



07 - Allow the machine to dry in the shade so that it does not accumulate water in its components. Very fast drying can cause stains on your paint.
08 - After drying, lubricate all chains and greases according to the recommendations in the operator's manual.

▪ Maintenance

• Seeder conservation - Part III

09 - Spray all the machine, especially the zinc parts, with protective oil, following the manufacturer's application guidelines. The protective also prevents dirt from adhering to the machine, facilitating subsequent wasthings.

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

⚠ ATTENTION

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

IMPORTANT

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

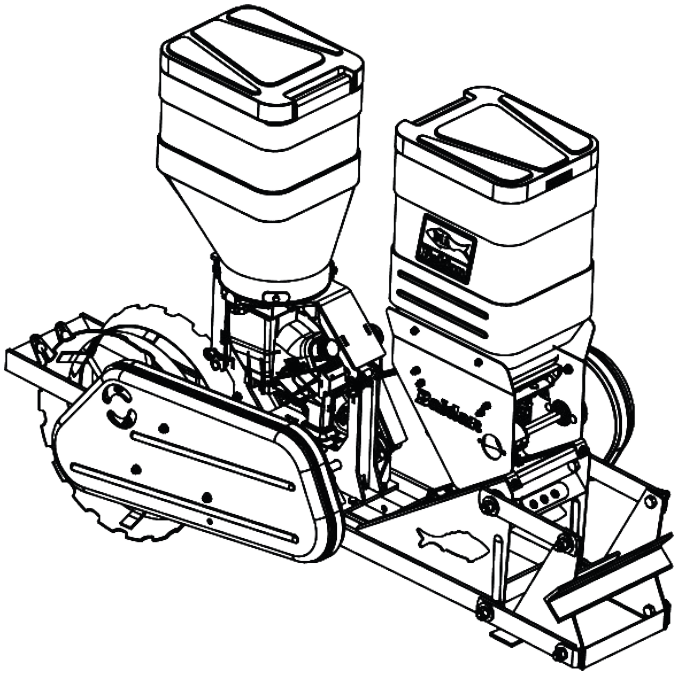
NOTE

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

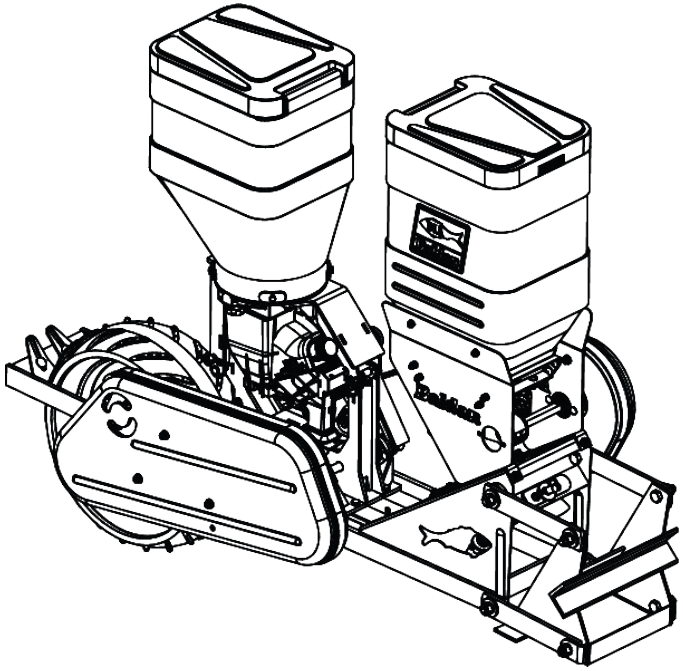
▪ Optional

• Optional accessories - Part I

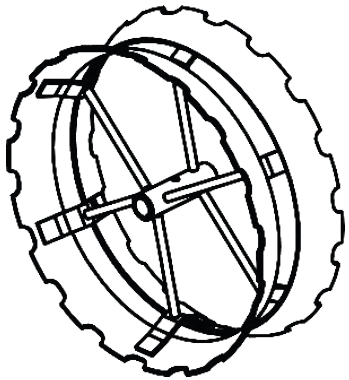
PLB DIRECTA AIR has options that can be purchased according to the need of work.



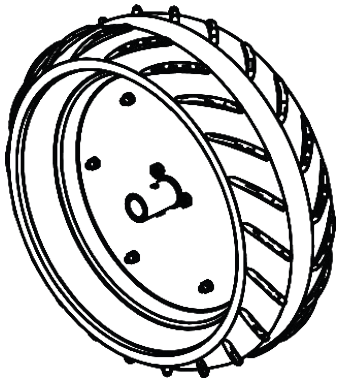
IRON COMPACTOR WHEEL CART



RUBBER COMPACTOR WHEEL CART



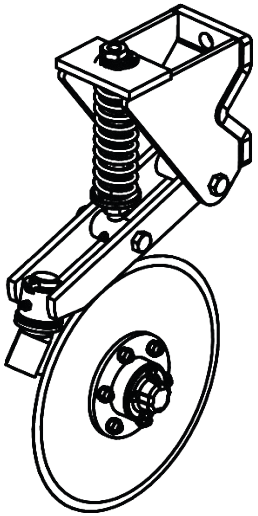
IRON COMPACTOR WHEEL



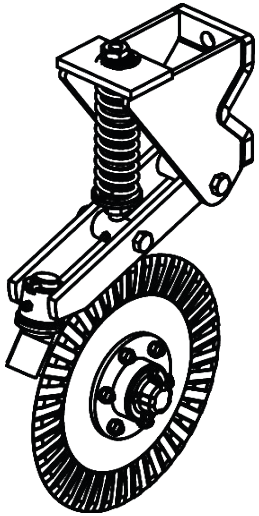
RUBBER COMPACTOR WHEEL

▪ Optional

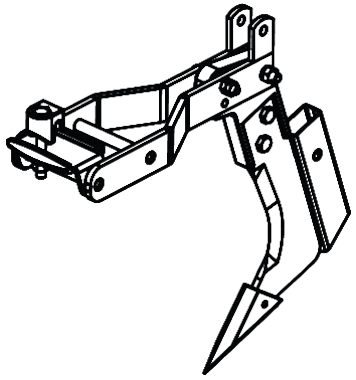
• Optional accessories - Part II



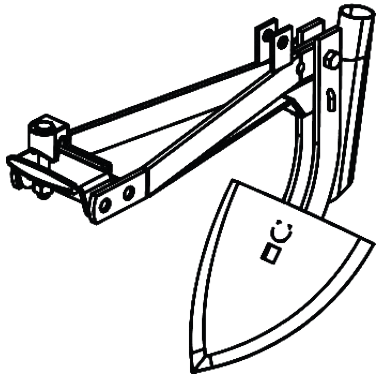
FLAT AND PLAIN CUTTING DISC CART



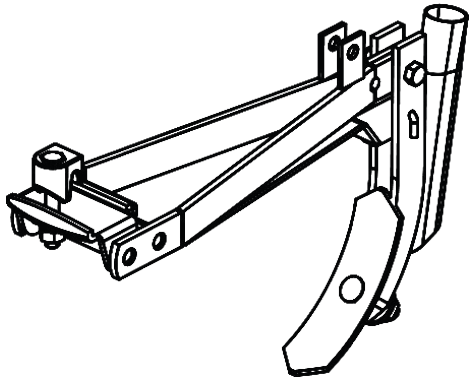
STRETCHED FLAT DISC CUTTING CART



ROD RIDGER WITH SUPPORT



RIDGER NOZZLE SUPPORT FOR CORN PLANTING



CUTTING NOZZLE SUPPORT FOR DEEP FERTILIZATION

▪ 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 **PLB DIRECTA AIR** nameplate.

⚠ ATTENTION

The drawings in this Instruction Manual are merely illustrative.

CONTACT

In case of doubts, never operate or handle your equipment without referring to Post-Sales.
Telephone: 0800-152577
e-mail: posvenda@baldan.com.br

PUBLICATIONS

Code: 60550108758 | CPT: PLBC13419A

• 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:

Notes:

▪ Certificate of Warranty

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

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

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

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

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

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

▪ Inspection and Delivery Certificate

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

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

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

Implement: _____ Serial Number: _____

Date: _____ Tax Number: _____

Dealer: _____

Telephone: _____ CEP: _____

City: _____ State: _____

Owner: _____

Telephone: _____

Address: _____ Number: _____

City: _____ State: _____

E-mail: _____

Sale date: _____

Signature / Dealer Stamp _____

1st copy - Owner

▪ Inspection and Delivery Certificate

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

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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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