ARGSELMASH SINGLE-DISC OPENER

User Manual

We sincerely appreciate your choice of our product, which is guaranteed for its high quality and efficiency.

To ensure optimal and safe use, it is essential that you carefully read the user and maintenance manual. This manual will familiarise you with its features and maintenance procedures, thus ensuring the best results.

Our product complies with all standards and regulations of direct seeding and conservation tillage, as it minimally alters the natural field coverage and guarantees minimal moisture loss due to soil disturbance. It is designed to respect and enhance sustainable agricultural practices, ensuring efficient and environmentally friendly management.

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ARGSELMASH SINGLE-DISC OPENER

Our uniquely designed and rigorously tested single-disc row unit is prepared to handle the most demanding seeding and fertilization tasks. Its versatility shines in *category-one* [1]terrains and marginal areas, making it a comprehensive solution for all your needs. An 18" flat and bevelled disc with a 7° inclination performs a cut through the stubble and ground, leaving a furrow with one firm and one disturbed side.

With our unit, you have full command over furrow depth. The semi-pneumatic 4 ½" X 15" levelling wheel, fortified with high-resistance elastomer polymers, ensures exact depth control while safeguarding against lacerations and wear. It also has a six-spoke aluminium wheel centre, providing enough permeability to allow the exit of dirt or mud that could jam the wheel's rotation, thus avoiding machine stops.

The seeding depth is easily adjusted through a plate with multiple perforations and an eccentric arm.

Our opener's cast shoe, working in tandem with the blade, ensures that seeds and fertilizer are deposited at the bottom of the furrow through independent down tubes. This process prioritizes seeding, even in potential fertilizer blockages, guaranteeing optimal conditions for seed growth.

A semi-pneumatic asymmetric band seed-press wheel, also injected with elastomer polymers, ensures the seed's placement at the bottom of the furrow on the disturbed side, achieving perfect seed-substrate contact and ensuring optimal emergence.

This seed-press wheel can be replaced with the "beaver tail" system to work on sticky or overly moist soils if necessary.

Finally, using a cast wheel, the covering arm closes the furrow and stirs the walls to cover the seeds and fertilizer, thus leaving them properly lodged and in close contact with the soil.

Our product ensures and respects all direct seeding and conservation tillage parameters. It minimally alters the existing field coverage and ensures the least moisture loss from soil disturbance.

[1] Category 1 soils are ideal for a wide range of crops and are usually the most valued for intensive agricultural production.

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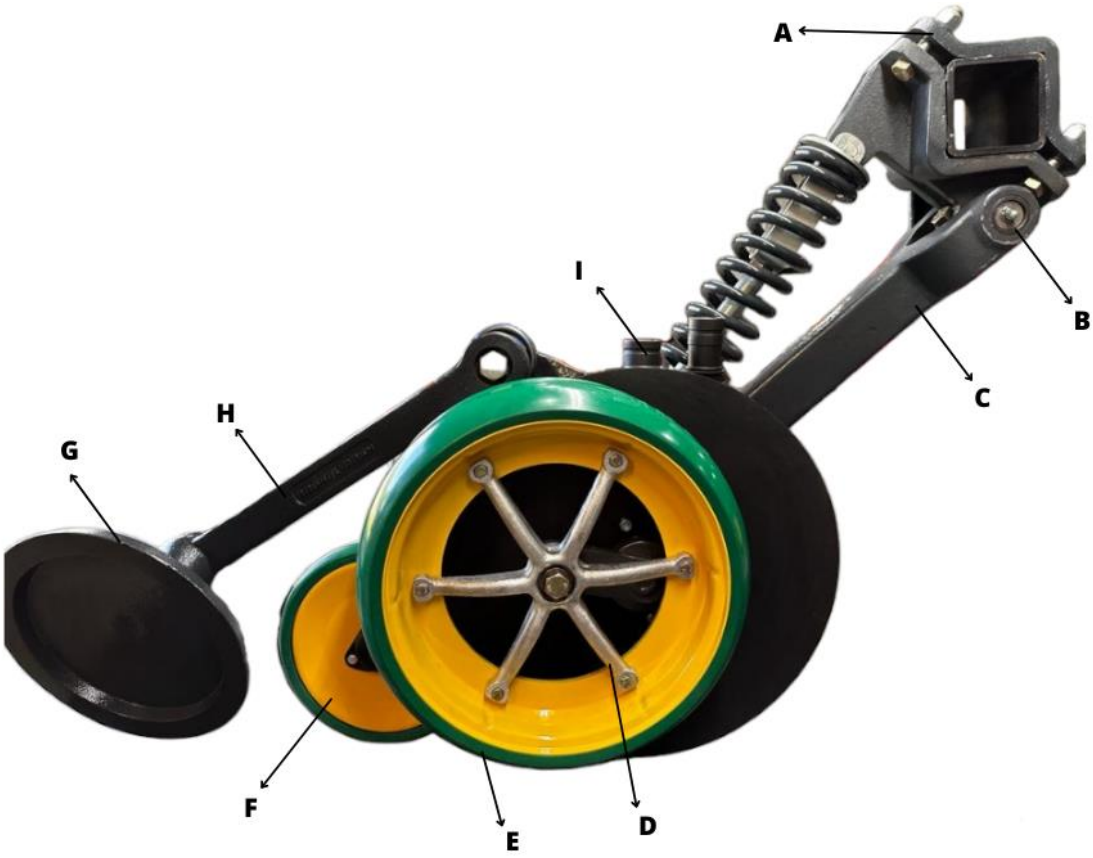
HIGHLIGHTS OF OUR PRODUCT



A. Clamping in ferritic nodular cast iron
B. Grease point
C. Main arm in ferritic nodular cast iron
D. Leveling wheel hub made of hollow-centered aluminum casting
E. Polyurethane tread
F. Armored grain press wheel with polyurethane tread
G. Ferritic nodular cast iron closing wheel
H. Ferritic nodular cast iron closing wheel arm
I. Dual fertilizer/seed drop system

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GUARANTEE

Warranty Statement:

Argselmash S.A. warrants that its products are free from defects in materials and workmanship under proper use, installation, and handling conditions. This warranty is valid for 12 months from the date ARGSELMASH S.A. made the sale.

The warranty is limited exclusively to the replacement of parts that prove to be defective.

Important: This warranty does not include freight or transportation costs for sending defective unit elements or components.

If you encounter any product failure or manufacturing defect, please inform ARGSELMASH S.A. immediately. We will then analyze the issue and respond in writing if we believe it qualifies as a warranty claim.

Warranty Exclusions

ARGSELMASH S.A.'s warranty does not apply in the following cases:

1. **Unauthorized Modifications and Repairs:** Any change or repair not expressly approved by ARGSELMASH S.A.
2. **Improper Use, Negligence or Incorrect Installation:** The warranty does not cover products or parts subjected to misuse, negligence, incorrect installation, or accidental breakage.
3. **Lack of Maintenance:** Failure to follow the maintenance instructions and recommendations provided by ARGSELMASH S.A.
4. **Normal Wear and Tear:** Normal degradation of the paint and appearance of the product due to regular wear and exposure to the environment.
5. **Normal Vibration and Noise:** Usual product vibration or noise levels are not considered manufacturing defects.
6. **Indirect Damages and External Circumstances:** The warranty does not cover indirect damages, losses, or expenses, nor failures or deterioration caused by:
7.
    - Accidents, theft, fire, or misuse.
    - Maintenance errors.
    - Use of non-original ARGSELMASH S.A. spare parts.
    - Environmental causes, force majeure events, or any other circumstance beyond the responsibility of ARGSELMASH S.A.

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SAFETY

The operation and use of the opener will be entirely safe if the equipment operator is aware of the size, weight, and maneuvering breadth required by a planter equipped with many units.

It is of utmost importance that no person or assistant should be present in the maneuvering area of machines with wing folding systems. This rule is non-negotiable for safety reasons. The operator should always travel in the tractor. Similarly, neither an operator nor an assistant should be on the machine for equipment transportation.

For repairs, place the equipment on a flat and firm surface, block the tractor's transmission, stop the engine, and close the oil passages of the hydraulic system to avoid unexpected planter movements that could endanger the operator's safety.

TORSION VALUES

Diameter Bolt	Grade 2 No marks 		Grade 5 3 marks 		Grade 8 6 brands 	
	Thick	Thin	Thick	Thin	Thick	Thin
1/4	50	36	76	87	9	10
5/16	8	9	13	14	18	20
3/8	15	17	23	26	33	37
7/16	25	27	37	41	52	58
1/2	35	40	57	64	80	90
9/16	50	60	80	90	115	130
5/8	70	80	110	125	160	180
3/4	130	145	200	220	280	315
7/8	125	140	320	350	450	500
1	190	205	480	530	675	750
11/8	265	300	600	670	960	1075
11/4	375	415	840	930	1360	1500
13/8	490	560	110	1250	1780	2030
11/2	650	730	1450	1650	2307	2670

NOTE: The torque of the bulb and of the uncovered bolts with fixing nuts should be 1/3 higher than the values mentioned. The torque of the bolts lubricated before installation should be 70% of the value shown in this chart.

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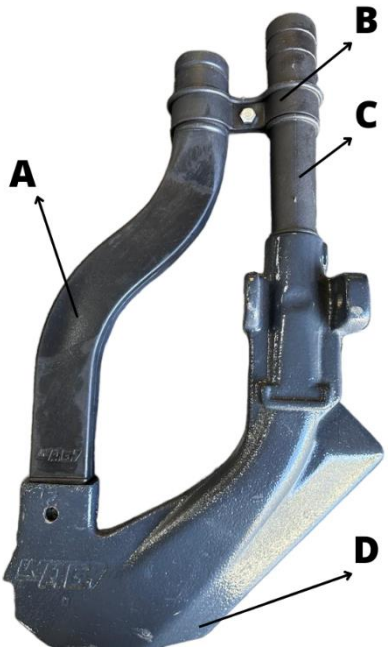
DUAL SHOE SOWING - FERTILIZATION

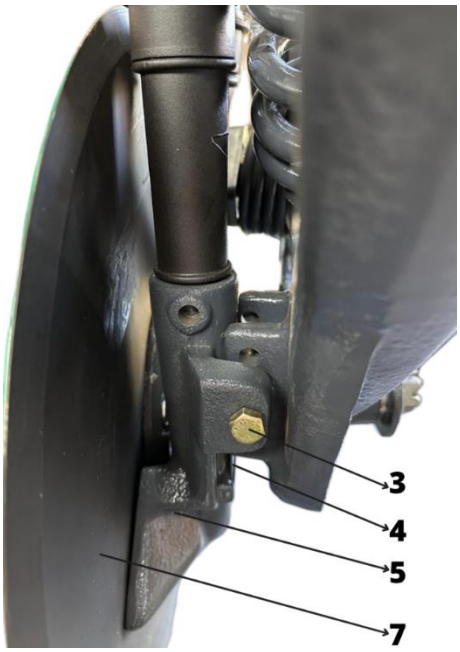


The seeding shoe (D) is made of nodular cast iron, reinforced with hard tungsten metal in the areas in contact with the soil, offering greater resistance and durability. This shoe has two separate downspouts: one for the seed (C) and the other for the fertilizer (A). Both conduits are made of a special plastic material that ensures a lower dew point, thus avoiding condensation in the ducts and preventing fertilizer hydration, which is crucial to avoid clogging.

The advantages of this system are particularly notable in conditions of low temperature and high humidity, where its design effectively prevents common problems of condensation and blockage.

The assembly includes a double clamp (B), also made of plastic material, that firmly holds all components together. After assembling these elements, it is essential to verify that the shoe can pivot freely around its fusible fixing screw, thus ensuring its correct functioning.

USE AND MAINTENANCE OF THE SINGLE-DISC SYSTEM

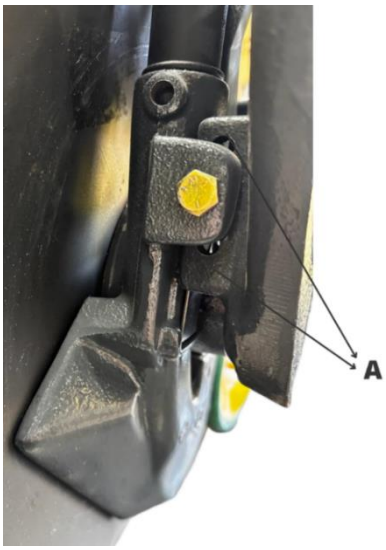


To ensure efficient operation and extend the life of the seeding assembly, it is crucial to follow these maintenance and care recommendations:

1. **Free Oscillation of Shoes:** The shoes should be able to oscillate freely around their fixing screw (3). Thanks to the spring (4), a firm contact is maintained between the disc (7) and the shoe (5). This oscillation allows the shoe to follow the bending movements of the blade, preventing the accumulation of soil and stubble in the contact area between the shoe and the blade, which in turn prevents jamming.
2. **Proper Pressure between Shoe and Disc**: If a lack of pressure between the shoe and the disc is observed, the leaf spring (4) must be replaced. It is essential to maintain firm and close contact between the shoe (5) and the disc (7).
3. **Consequences of Non-Compliance:** Failure to comply with these conditions can result in significant damage to the opener, including:

- Premature and uneven wear of the shoe (5).
- Premature wear of the main body's fixing holes.
- Premature wear of the shoe's (5) fixing holes.
- Breakage of the blade's fixing screws.
- Breakage of the shoe's (5) fusible screws (3).

Following these precautions ensures optimal performance and greater durability of the seeding assembly.



<u>REGULATION OF SHOE HEIGHT</u>

To optimize the operation of the seeding assembly and adapt it to different conditions, it is essential to consider the appropriate position of the shoe (5) in the fixing holes (A) of the main body, using the fusible screw (3).

The selection of the position depends on the seeding type and the disc's wear.

Fixing of the Shoe in the Upper Hole:

- *Objectives:*
  - Compensate for blade wear.
  - Reduce shoe wear when seeding at greater depths.

Note: This position is rarely used. If it is necessary to adjust for blade wear, replacing the blades with new ones is generally more effective. With wear, the furrow opener loses efficiency in stubble cutting, which diminishes its effectiveness. In addition, a very worn blade can expose the shoe more, accelerating its wear.

Fixing of the Shoe in the Lower Hole:

Objectives:

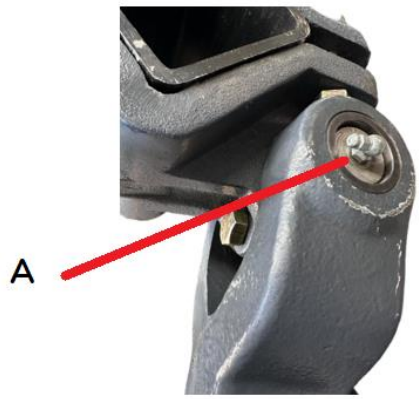
- Seed at depths of 30mm or less.
- Seed over very abundant stubble.
- Use a worn shoe with a new blade.
- Avoid irregularities in the seeding V caused by high seeding speeds.

Caution:

It is crucial to ensure that the blade is always about 20 mm below the seeding shoe. If this difference is not maintained, the risk of wear and breakage of the fusible or the main arm increases.

These considerations are essential for maintaining the efficiency and longevity of the seeding equipment, adapting it to the specific needs of the crop and the soil conditions.

MAIN BODY



This component is a prime example of engineering and precision manufacturing, designed to deliver optimal performance with minimal power demand and high mechanical reliability:

1. Robust and Precise Construction:

The piece is moulded and manufactured in nodular cast iron, which is known for its incredible strength and minimal flexing.

It is then fully machined using CNC (Computer Numerical Control) systems, which ensure exact repeatability in dimensions and critical geometric precision, thereby contributing to the product's optimal performance.

2. Enhanced Durability:

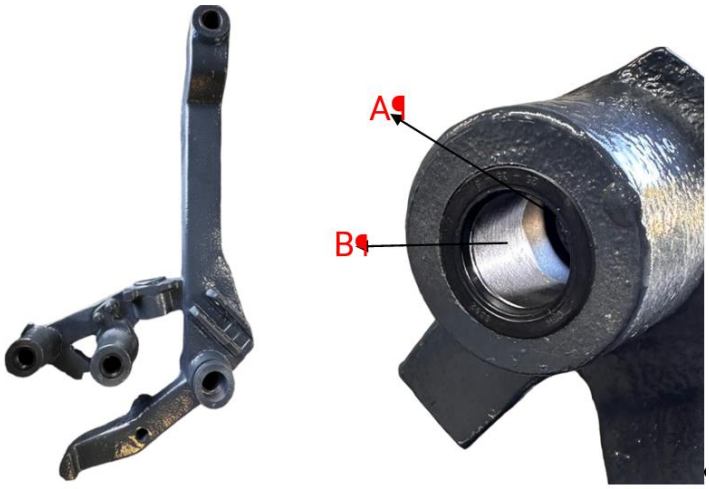
All wear-prone points are equipped with replaceable bushings (A), made of hardened and ground material, to ensure exceptional product longevity.

In this version, seals (B) have been incorporated to prevent the entry of dirt and water into the joints, thereby improving durability and maintenance.

Efficient Maintenance and Protection:

he part includes grease fittings (C), essential for regular and effective maintenance. These fittings facilitate the lubrication of critical joints, thus protecting meaningful pivot and rolling points with grease.

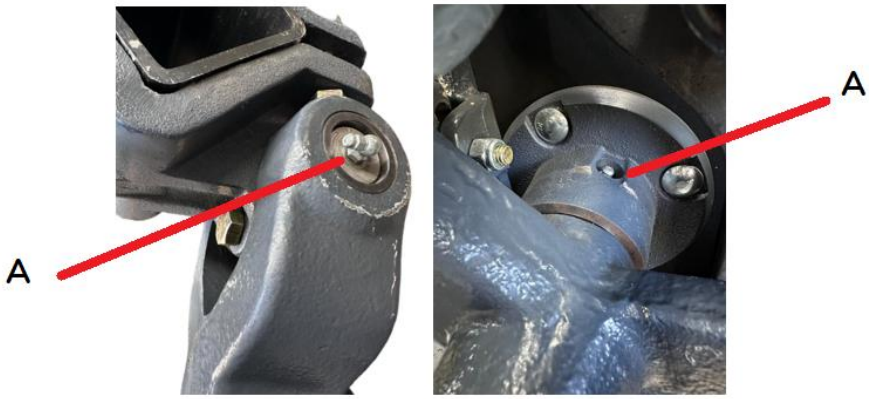
This combination of high-quality materials, advanced manufacturing processes, and well-thought-out design features results in a high-performance product that not only meets but exceeds expectations in terms of durability and operational efficiency.



NOTE:

It is essential that after the equipment has remained unused for an extended period, such as between campaigns, all points should be greased before use to prevent jamming between moving parts and avoid breakages.

First, check the condition of the grease fittings, and if necessary, replace them with new ones.



DISC HUB

This component is crucial for the adequate performance of the unit and is designed to withstand significant stresses over its lifespan:

1. **Design Focused on Durability and Efficiency:** The element's construction has been optimized to maximize sealing over the bearings while providing maximum response to the torque generated by the blade's angular indexing.

2. **Innovative Seal System:**

Two types of seals are incorporated into the assembly, each contributing to its high performance: one with internal lips (for sealing on the shaft) and another with external lips (for sealing on the track). This combination ensures effective protection against contamination and wear, enhancing the overall performance of the assembly.

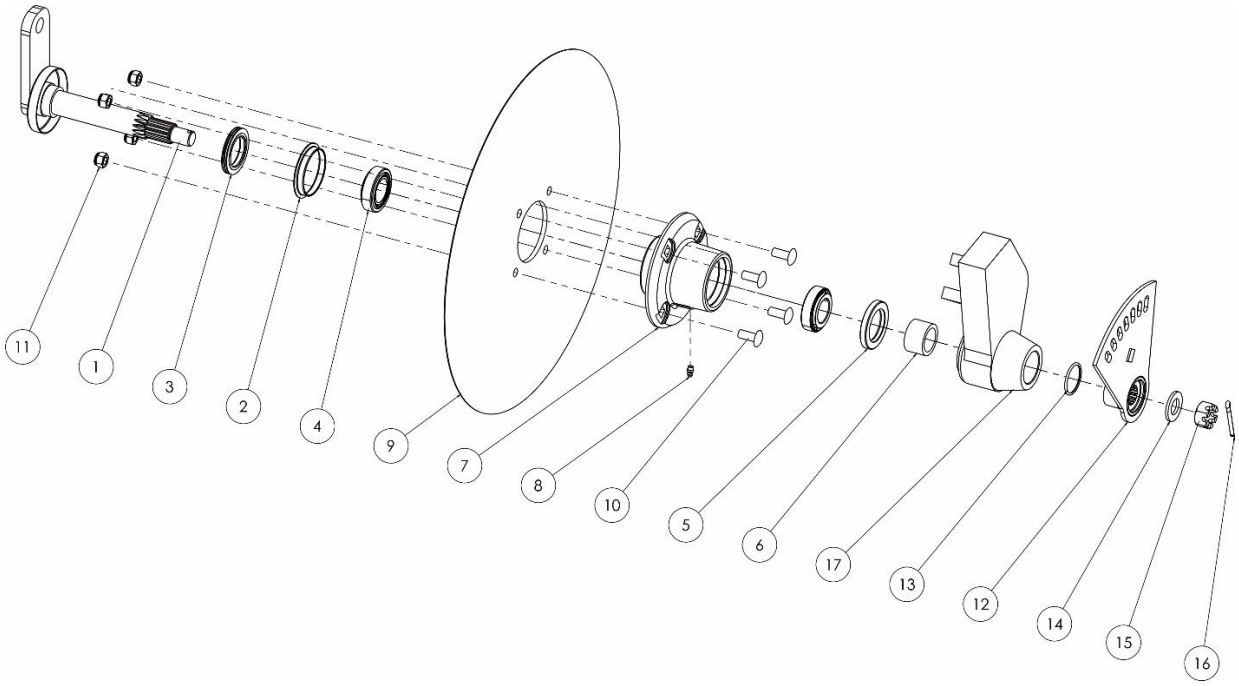
During the greasing process, the increased internal pressure in the hub allows the first seal to seal the lubricant exit completely. At the same time, the second seal partially yields, allowing the expulsion of old and contaminated lubricant. This facilitates the partial renewal of the lubricant with each greasing session, prolonging the life of the bearing assembly.

3. **Optimal Bearing Housing:**

The hub design accommodates tapered bearings 32006 with the greatest possible distance between them. This strategic design increases the assembly's static and dynamic load coefficient, enabling it to comfortably withstand the torsional moment generated by the blade.

This focus on detailed engineering and careful component selection ensures that the unit assembly operates optimally, withstanding operational challenges and maintaining its efficiency over time.

FINAL ADJUSTMENT AND VERIFICATION OF THE SUBASSEMBLY



Proper adjustment of the hub is crucial for the efficient operation of the unit. Here is the standard procedure for adjusting a tapered roller hub, with some specific particularities:

1. **Initial Verification:**

Ensure the blade can rotate freely and not touch the shoe or the levelling wheel. This preliminary check is essential for proper adjustment.

2. **Castle Nut Adjustment:**

Begin by tightening the castle nut until significant resistance is felt when turning the blade. This step is crucial, especially if the bearings have been recently replaced, as it helps to position the bearings correctly.

While manually turning the blade, gradually loosen the castle nut until it stops offering resistance. Then, tighten the nut slightly until the safety pin can be securely inserted into the hole of the castle nut.

3. **Important Note:**

Once the safety pin is in place, it plays a crucial role. You should feel a slight resistance when turning the blade. If the blade turns too freely, adjust the castle nut to the next hole and replace the pin.

The final goal is to rotate the blade with slight resistance, indicating proper adjustment.

This procedure ensures precise adjustment, which is crucial for the unit's performance and longevity. Proper adjustment prevents premature wear and ensures the machinery's efficient operation.

CAUTION

It is essential to note that bearings should **NEVER** be washed with **KEROSENE**. The use of kerosene can be harmful for the following reasons:

Kerosene leaves a film on the bearing surfaces, preventing proper lubricant adhesion to the rollers.

This lack of lubricant adherence leads to premature wear of the bearings, as they are not sufficiently protected during operation. Therefore, for bearing maintenance and cleaning, it is essential to choose the appropriate methods and products that do not compromise their integrity or performance. The correct use of lubricants and proper cleaning procedures are crucial for preserving the bearings' life and efficiency.

GENERAL RECOMMENDATIONS

Proper maintenance of the opener is essential for its performance and durability. Below are the recommendations for the care and maintenance of the unit:

1. **Initial Greasing:**

Although the opener comes pre-greased from the factory, it is advisable to grease the blade holder hub and other nipples before first use.

2. **Importance of Proper Greasing:**

The lack of grease in the hub drastically reduces the life of the bearings.

Avoid excessive greasing. Instead, reducing the intervals between each greasing or lubrication is better.

3. **Adjustment of Tapered Bearings:**

Verify that the bearing adjustment is not too loose, which can be noticed if the blade has axial play or rotates very freely. A loose adjustment can cause premature bearing failure.

Also, ensure that the adjustment is not too tight, as this can increase internal friction and cut the lubrication film. The blade should rotate without play but with slight resistance.

4. **Greasing Frequency:**

Grease the blade holder hub every two days of work. The retention units' design allows for self-regulation of internal pressure and prevents seal displacement due to excess lubrication.

It has been determined that lubricating the hub every two days of work favours lubricant exchange and partial renewal.

Other greasing points of the unit should be lubricated every 500 hectares or after prolonged inactivity.

5. **Regular Inspection and Adjustment:**

Take advantage of each lubrication operation to check the blade's axial play. If any play is detected, adjust the bearings.

6. **Replacement of Worn Components:**

If the blade is very worn, avoid working in that condition as it decreases the effectiveness of the unit. Replace the blade, the hub seals, and the bearings. Always use original spare parts to maintain the original characteristics and benefits of the opener.

By following these recommendations, optimal performance is ensured, and the life of the opener is prolonged.

SEED FIRMING SYSTEM

Grain Press Wheel

Plastic Tongue/Beaver Tail

The unit we offer is equipped with two optional systems, each designed to adapt to different soil conditions and seeding needs:

1. **Grain Press Wheel:**

Composition: This option includes two stamped sheet metal discs housing a single row ball bearing with double shielding and an asymmetrical semi-pneumatic band.

Additional Protection: Features another external retention unit to prevent dirt entry.

Pivot Mechanism: Has a steel arm that pivots on cemented bushings in the central part of the body.

Pressure Adjustment: The compaction pressure between the soil and the seed is regulated by a spiral spring.

Usage Recommendations: This option is most recommended for most soil types and conditions, although it is not ideal for extremely wet conditions.

2. Plastic Tongue (Beaver Tail):

Material and Design: This consists of an elastic-plastic element with a geometry designed to prevent seed bounce against the bottom of the furrow. Unlike other designs, it is not screwed directly onto the shoe but is mounted on the same bushings used in the grain press wheel option.

Advantages: This design prevents the plastic tongue from affecting the shoe's free movement against the blade, which could cause jamming in case of blade flexion.

Usage Recommendations: This option is more suitable for extremely wet conditions. This flexibility in configuring the unit highlights its versatility and efficiency, adapting to the changing needs of the users:

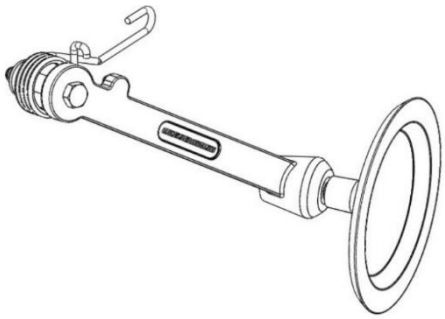
Adaptability and Customization: The unit's design allows for the installation of either option (the grain press wheel or the plastic tongue), giving users the flexibility to change their planter's configuration as required. The desired option can be purchased and installed anytime, adapting to different crop conditions and soil types.

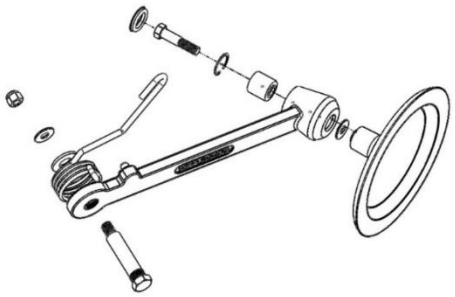
BENEFITS OF THE GRAIN PRESS WHEEL:

The grain press wheel operates by rolling instead of sliding, offering a significant advantage. By working this way, the wheel respects the machine's seeding ability more. In practical terms, this means there is less modification in the seed spacing than that offered by the dosing system, resulting in more precise and uniform seeding.

These features make the unit a highly efficient and adaptable tool for a wide range of agricultural applications, offering farmers greater capacity to optimize their seeding practices and adapt to the specific conditions of their environment.

CLOSING WHEEL SYSTEM





The single-disc system offers an efficient and adaptive approach to cutting and covering in the seeding process, characterized by its specific design and configuration:

1. **Unidirectional Cutting:**

The single-disc system performs a cut to one side, determined by the blade's angle. This feature is crucial for how the system handles soil and seeds during seeding.

2. **Closing Arm with Cast Wheel:**

The closing arm, with its unique design featuring a cast wheel indexed at an opposite angle to the blade, is a reliable tool that effectively returns the removed soil to the furrow, ensuring thorough seed coverage.

The wheel's weight helps generate the necessary compaction for proper germination.

3. **Adjustment According to Soil Type:**

By adding or removing spacer washers, the axial position of the closing wheel can be adjusted according to the specific needs of the soil.

As a rule, in clay soils, it is recommended to bring the wheel closer to the seed line to improve coverage, while in sandy soils, it is preferable to move it away to increase penetration.

4. **Bearing Design:**

In this system, the bearing is mounted on the arm rather than on the wheel. This configuration reduces the bearing's exposure to dirt and other terrain elements, thereby prolonging its life and maintaining the system's efficiency.

This carefully considered design of the single-disc system ensures that it effectively adapts to various seeding conditions, offering an optimized solution in terms of functionality and durability.

The closing system's pressure is exerted through a spiral spring with an ergonomic handle that has three different adjustment possibilities, depending on the soil characteristics and the wheel's bounce due to the speed of progress.

LEVELING WHEEL

The leveling wheel plays a key role in the seeding process, especially in regulating the seeding depth, which is essential to ensure uniform and healthy growth of the seeds:

1. Uniformity in Seeding Depth:

The primary purpose of this wheel is to maintain a constant seeding depth. This is vital because a uniform depth ensures that seeds are planted in optimal conditions for their germination and development.

2. Relationship between the Blade and the Leveling Wheel:

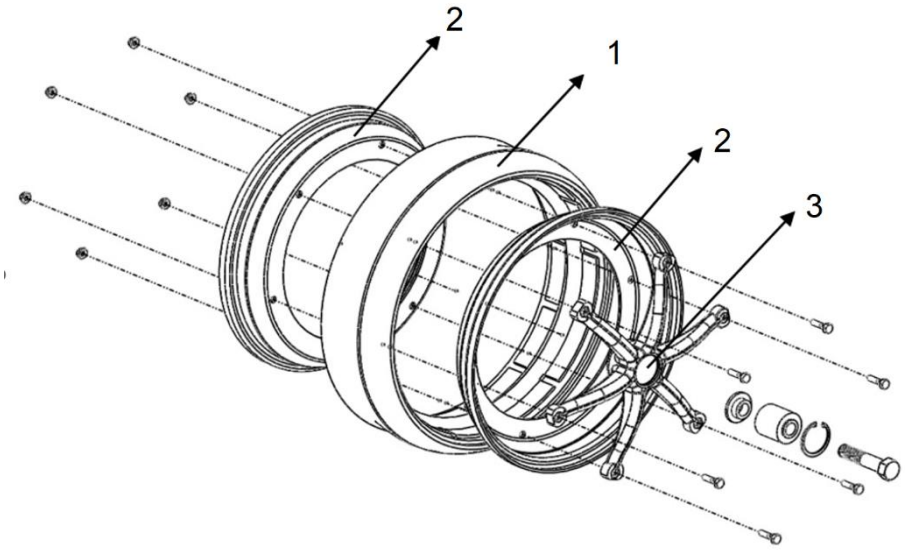
The depth difference between the blade's edge and the levelling wheel's contact point defines the cutting depth. This, in turn, determines the depth at which the seeds are sown.

Ideally, the seeding depth coincides with the zone where the necessary moisture is found for good germination and initial seed growth.

3. Advantages in Specific Terrains:

Our levelling wheel offers additional benefits in terms of safety and reliability, especially in challenging terrains such as heavy clay soils. Due to soil variability, maintaining a constant seeding depth in these terrains can be challenging.

Implementing a well-designed and functional levelling wheel is crucial for successful seeding. This system ensures that each seed is planted at the appropriate depth, fundamental for good germination and uniform crop growth.



The design of the levelling wheel frame is carefully thought out to offer efficiency, durability, and adaptability in various seeding conditions. Here are the key features and their functionality:

1. Elastomeric Polymer Tread:

This tread acts as a constant scraper-cleaner of the disc, keeping it clean for its next rotation. The choice of elastomeric polymers ensures excellent resistance to wear, and lacerations caused by stubble, like corn, soy, or sorghum stalks.

2. Construction of the Half Rims:

Two stamped half rims in hollow-centred steel firmly hold the semi-pneumatic band that contacts the ground, providing stability and strength.

3. Innovative Design of the Wheel Center:

The newly conceived wheel centre features 6 spokes constructed in aluminium casting and machined using CNC. It houses a double-row ball bearing with double shielding in its centre, completely maintenance-free.

Each end of the 6 spokes is firmly secured with 6 screws, ensuring the integrity of the system.

4. Advantages in Wet Terrains:

In very wet terrain conditions, mud mixed with stubble can escape between the spokes, avoiding blocking the wheel's rotation.

5. Assembly and Operation:

When mounted on the unit, this subassembly should rotate freely and maintain a small distance from the blade.

Contact between the polymer and the blade only occurs when the opener is in operation, as the 7° inclined axis of rotation generates an axial component that reduces this distance during advancement, facilitating the self-cleaning process. This design ensures that the leveling wheel efficiently performs its role in various soil conditions, contributing to the overall effectiveness and longevity of the seeding equipment.

6. Seeding Depth Adjustment:

The positioning of the levelling wheel is adjusted using a special wrench. The seeding depth can be quickly and easily selected by inserting and turning a fixing pin in the regulating fan.
The pin automatically locks the chosen position.
These features make the levelling wheel an advanced and effective unit component. It can adapt and responding appropriately to varied terrain conditions, improving the precision and efficiency of seeding.

COMPRESSION SYSTEM:

The compression system of our unit, which differs from the traditional parallelogram system, offers a unique and efficient operating mechanism:

1. **Compression Mechanism by Rotation:**

Instead of using a parallelogram system, our unit achieves compression by rotating the toolbar on the planter's frame.

With this system, the cast iron hand lever attached to the bar rotates as the unit descends. Upon contact with the soil, load begins to be generated on the spiral spring until the previously selected cutting depth is reached through the depth adjustment.

2. **Function of the Leveling Wheel:**

The levelling wheel plays a crucial role, as it is the one that stops the unit from penetrating the soil.
It's important to note that excessive pressure on the levelling wheel can unnecessarily shorten its lifespan.

3. **Pressure Adjustment:**

It is recommended to maintain a pressure level slightly higher than necessary to compensate for the cutting dynamics, which tend to unearth the equipment and affect the uniformity in the seeding depth.

4. **General Rule for Flat Terrains:**

Generally, when the machine operates on flat terrain, the head of the leading stud should maintain about 25 mm or 1 inch of distance against the top of the row-unit.

This system provides precise control over the seeding depth and ensures efficient operation. It dynamically adjusts to terrain conditions and maintains uniform seeding, which is crucial for the crop's optimal performance.

FIELD ADJUSTMENT

To efficiently tune the planter unit, follow these detailed steps. It's important to choose a unit as a reference for the initial configuration:

1. **Seeding Depth Adjustment:**

Use the special wrench to adjust the seeding depth by acting on the multi-perforated fan. Change the setting one point at a time until the desired depth is reached.

2. **Adjustment of the Main Spring Compression:**

Adjust the compression of the body's main spring by acting on the machine's hydraulic system cut-off valve.

3. **Verification at Seeding Speed:**

Set the planter to seeding speed and observe that the unit's body maintains firm contact with the ground. Ensure that the levelling wheel absorbs excess pressure to guarantee uniform seeding depth.

4. **Avoid Excessive Pressure:**

Do not apply excessive pressure, as this will primarily affect the levelling wheel, significantly reducing its lifespan.

5. **Adjustment on Dry Terrains:**

On medium-textured dry terrains, follow the recommendation of Figure “G”: at seeding speed, the head of the compression group stud should maintain a distance of 25 mm or 1 inch from its support.

6. **Adjustment of the Grain Press Wheel or Beaver Tail:**

If your equipment has a grain press wheel, adjust its pressure until the seed is in contact with the bottom of the furrow.

7. **Adjustment of the Closing Wheel:**

Regulate the pressure of the closing wheel to cover the furrow.

8. **Soil Embedment over the Furrow:**

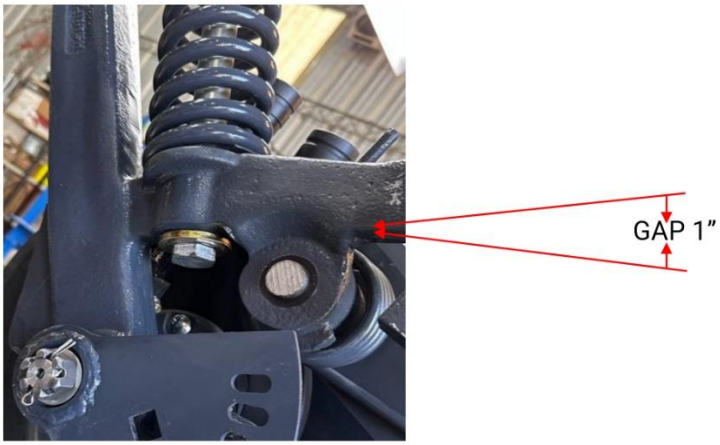
If you need to adjust the soil embedment over the furrow, try adding or removing washers from the axle of the cast wheel. This operation is generally not necessary.

9. **Adjustment of the Other Units:**

Adjust all the units of the planter in the same way as the reference unit.

10. Observation During Work:

Operate the planter at working speed and observe the overall behaviour. For all units, it may be necessary to readjust the cut-off valve to achieve the condition indicated in the following figure.



Following these steps will ensure that each part of the planter is appropriately adjusted, leading to efficient and effective seeding.

These steps will ensure that your planter is correctly adjusted for optimal and uniform performance across the field.

GENERAL CONSIDERATIONS:

1. Checking the Blade Holder Hub:

Regularly check that the blade holder hub is always filled with grease.

Periodically verify the adjustment of the blade holder hub. It should not rotate with too much play or be too tight, as proper adjustment will prolong the life of the tapered rollers. (Refer to the maintenance section of the blade holder hub.)

2. Caution When Changing Trajectories:

Avoid abruptly changing directions while the machine is in full operation. The axial forces on an embedded blade are very high and can cause breakages in the system.

3. Adjustments in Excessively Wet Conditions:

In excessively moist terrains, it is generally recommended to reduce the pressure on the main spring by acting on the hydraulic cut-off valve. Additionally, reduce the pressure on the grain press wheel and the closing wheel. The pressures will need to be adjusted depending on the specific conditions of the terrain to achieve the best possible results.

4. **Checking Blade Wear:**

Review and adjust the shoe's position according to the blade's wear.

By adhering to these considerations, you can maintain the planter in prime condition, ensuring efficient operation and minimizing potential damage or undue wear on the equipment. Regular maintenance and careful operation are key to achieving consistent and effective seeding results.

Differentiation of Right and Left Spare Parts:

To distinguish between a right or left spare part, always observe the planter from the rear. The position of the leveling wheel (whether on the right "R" or left "L") will determine the side of the spare part. This orientation is key to ensuring you order and receive the correct spare part.

These additional instructions ensure that spare parts orders are handled efficiently, guaranteeing that you receive the appropriate components in a timely manner, which is essential for the maintenance and continuous operation of your planter.

To keep the unit in optimal condition and ensure its efficiency and durability, it is crucial to follow these general considerations and recommendations when ordering spare parts:

Recommendations for Ordering Spare Parts:

Use of Original Spare Parts:

To maintain the integrity and performance of the product, always use original spare parts.

How to Place an Order:

When requesting spare parts, make sure to include:

- The part code.
- A detailed description of the part.
- The required quantity.

It is crucial to remember these additional notes to ensure correct identification and ordering of spare parts, as well as to properly manage the shipping logistics.