

SINGLE DISC ROW UNIT ADJUSTMENT AND MAINTENANCE GUIDE.



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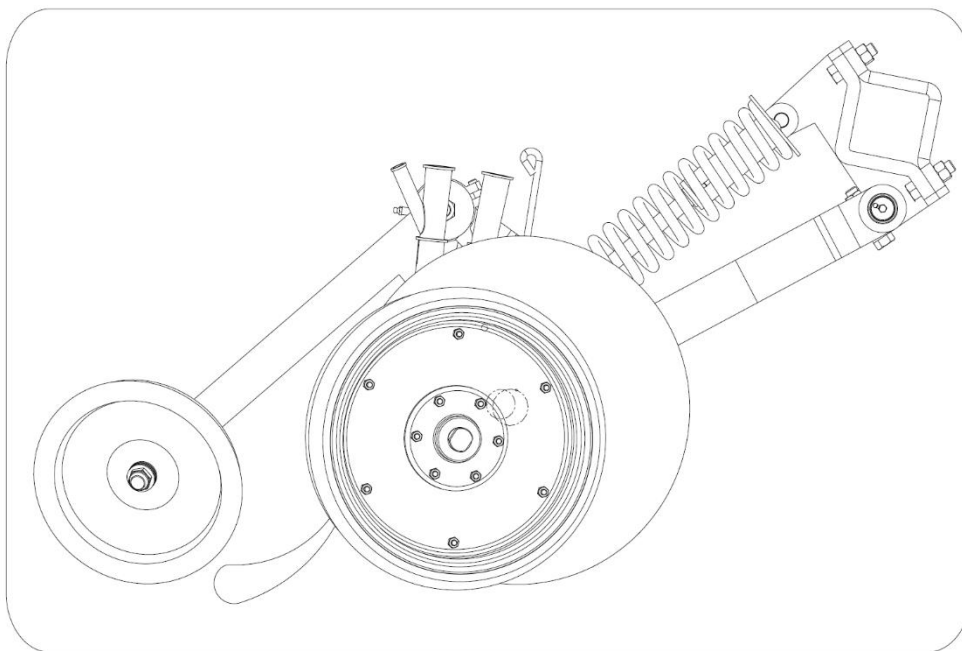
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SINGLE DISC SEEDING UNIT.

Single Disc Seeding Unit has been manufactured to face heavy duty seeding and fertilizing tasks. The 18" plain disc at a 7° angle opens a furrow leaving the soil firmly pressed on one side but stirred on the other.

A 4 ½ x 15" levelling wheel determines furrow depth while a cast shoe working jointly with the blade places seed and fertilizer in the furrow through independent downright tubes.

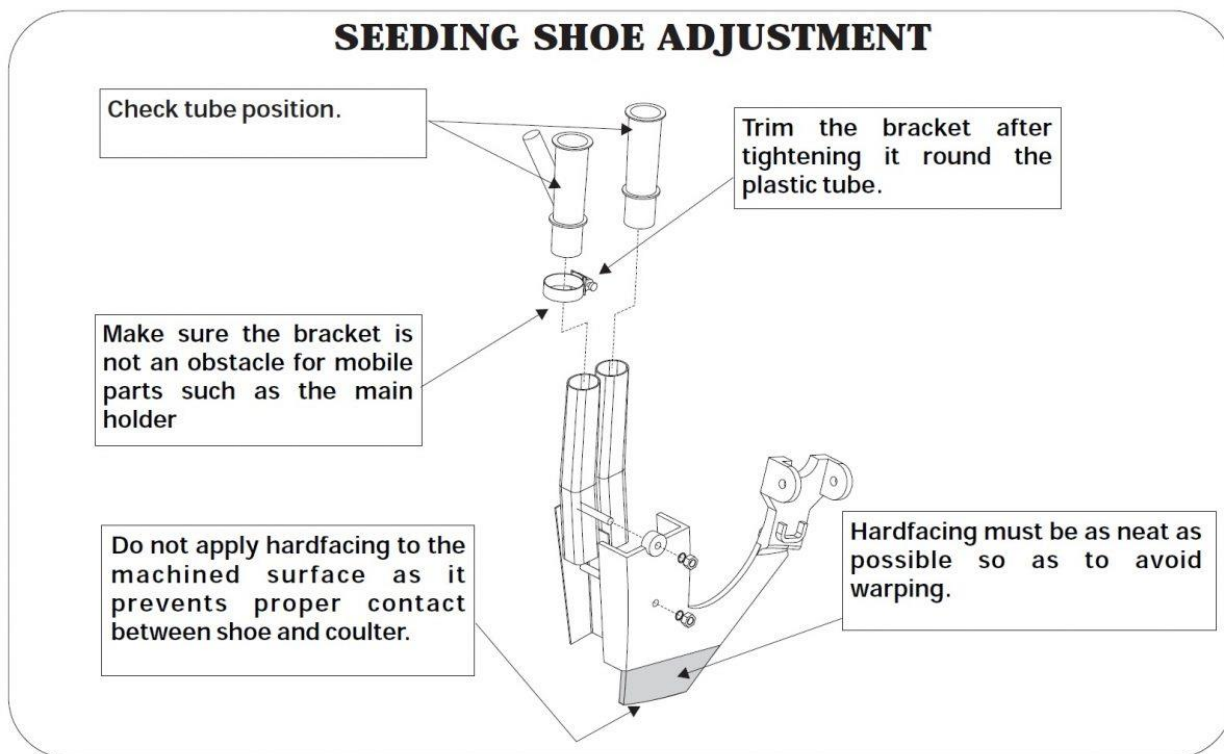
A press wheel guarantees accurate seed placement at the bottom of the furrow for improved emergence.



A cover wheel system covers the furrow.

The Single Disc Seeding Unit is ideal for minimizing trash removal and soil stirring. Highly recommended for clayish, sticky soils and for salty soils where non-stirring is appreciated.

SEEDING SHOE



The cast seeding shoe is hard-faced on the area where wear is the greatest and features two downright, independent anti-blockage tubes for fertilizer and seed.

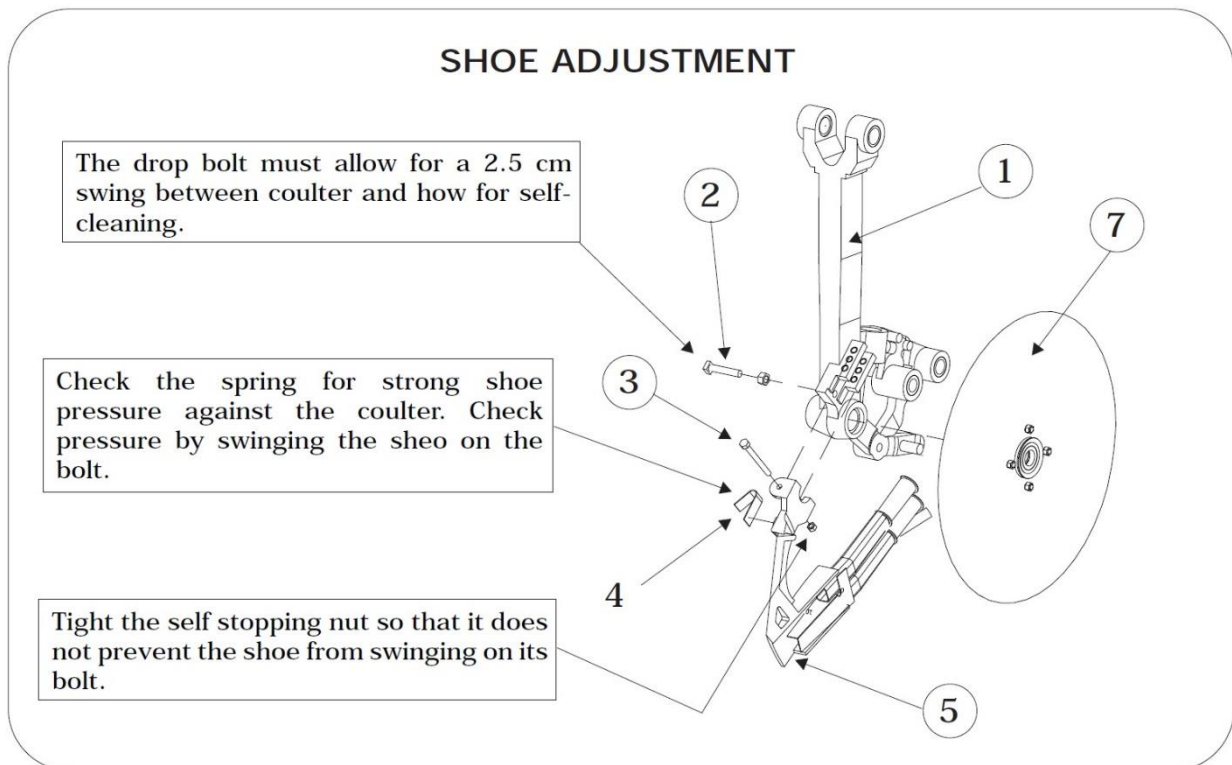
The seed tube includes another smaller tube for fodder seeding.

Make sure the down tubes are placed just in between the clearance left by the coulter and the seed press device.

Hard facing on the lower area of the shoe must be very neat to ensure good shoe-coulter contact.

CHECK THE SHOE CAN SWING FREELY ON THE FIXING BOLT.

SEEDING SHOE OPERATION AND SERVICE.

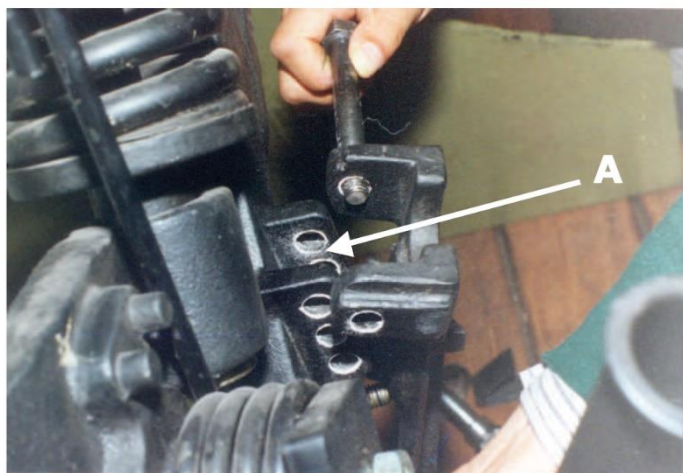


Follow the instructions for proper operation and longer set life.

- The shoe (5) must swing freely on the fixing bolt (3). Spring (4) ensures good contact between disc blade (7) and shoe (5). Swinging allows for shoe self-cleaning during seeding. If the soil were too wet, some manual cleaning would be needed.
- If there's no pressure between the shoe and the disc blade, spring(4) will have to be changed.
- The drop bolt (2) must not cancel the spring (4) action since it would prevent self-cleaning and maintenance with eventual damage to the system.
- 2.5cm in the lower area should be the minimum clearance between disc and shoe.
- Check there is a constant contact between shoe (5) and disc (7).

If the instructions were ignored the system may be damaged and the following problems may occur:

- Quick and uneven shoe wear (5).
- Quick wear of bolt holes in the main unit (1).
- Quick wear of shoe bolt hole (5).
- Breakage of disc holder hub bolts (7).
- Breakage of shoe bolts (5).



The shoe (5) must be bolted to the main holder fixing holes (A); right bolting position will depend on soil condition and on disc wear.

The shoe can be bolted to the upper hole in order to:

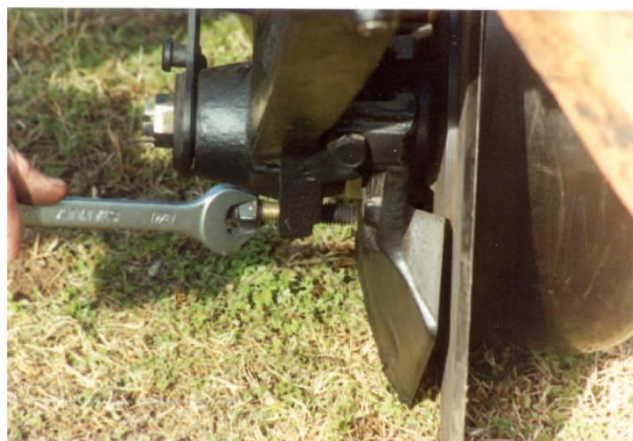
- Compensate coulter wear.
- Reduce shoe wear with deep seeding practices.
- Reduce trash storing between shoe and coulter.

The shoe can be bolted to the lower hole in order to:

- Seed at 30mm deep or even shallower.
- Seed over heavy trash.
- Use a wear shoe together with a new coulter.
- Get even seeding depths when sowing at high speed.

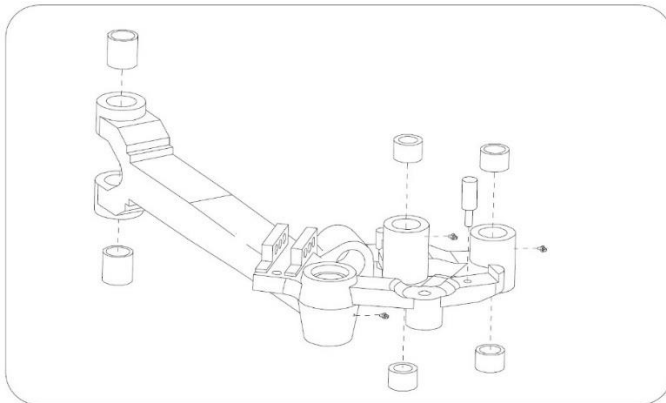
Caution:

Always ensure a minimum of 5-10mm of disc below the seeding shoe otherwise damage may occur to the main arm of the unit. At this point of disc wear you have the option to move the shoe into the next hole position above or replace the coulter disc.-

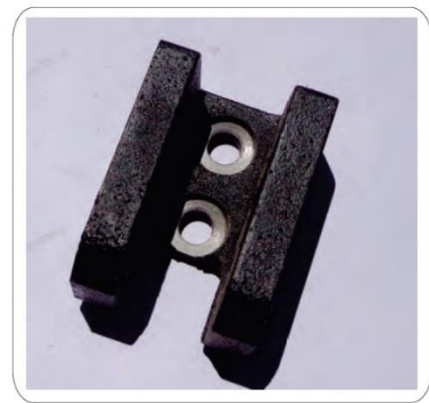


The drop bolt (2) must let the shoe swing freely (2.5cm) so that a self-cleaning action can take place. If it is too tight against the shoe the spring will not work and the set will wear faster or break as blockage will be produced. An advantage of tight fitting is the possibility of working on damp soils.

MAIN HOLDER



It is made up by a strong nodular cast reinforced holder which features heat treated bushings and zerks for a longer component life.



The new main units have an interchangeable insert for the seeding shoe anchor holes.

Advantages of proper greasing:

1. Prevents friction between two metallic surfaces
2. Prevents rusting
3. Protects bushings and bearings from dust and dirt

Proper greasing ensures satisfactory performance. Make sure the zerks are not clogged and in good working condition. Change them if necessary.



DISC HOLDER HUB. 32006 PRE-LOAD BUSHING HUB.

ASSEMBLY:

It is assembled with a spacer pre-load bushing and three steel nuts.

The 32006 hub set wears better and ensures more accurate seeding. It can be re-adjusted when slack appears by taking some of the nuts away.

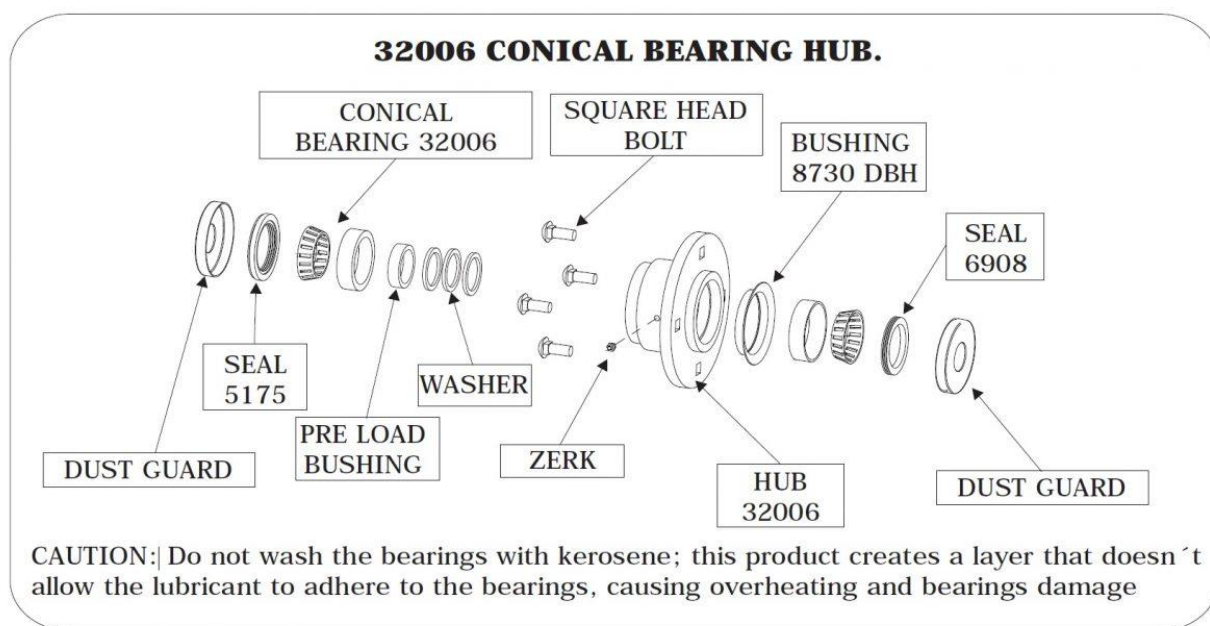
ADJUSTMENT:

Use a torquemeter at a pressure of 15 kg. Start by rotating the coulter until the torquemeter indicates adjustment is completed.

SET FINAL CHECK:

Check the coulter for free rotation by driving it forward by hand. Make sure there is no rubbing between shoe and coulter or between coulter and tyre.

Check the axle and the hub for slack. If no slack is noticed, the spacer is in the right position.-



RECOMMENDATIONS.

- The seeding unit comes pre-lubricated from factory, but it is recommended to lubricate the blade holder hub before starting the seeding procedure for the first time.
- If the blade holder hub has not enough grease, the conic bearing working life is drastically reduced.
- Do not grease in excess since it may lead to the breakage of the blade holder hub retainers.

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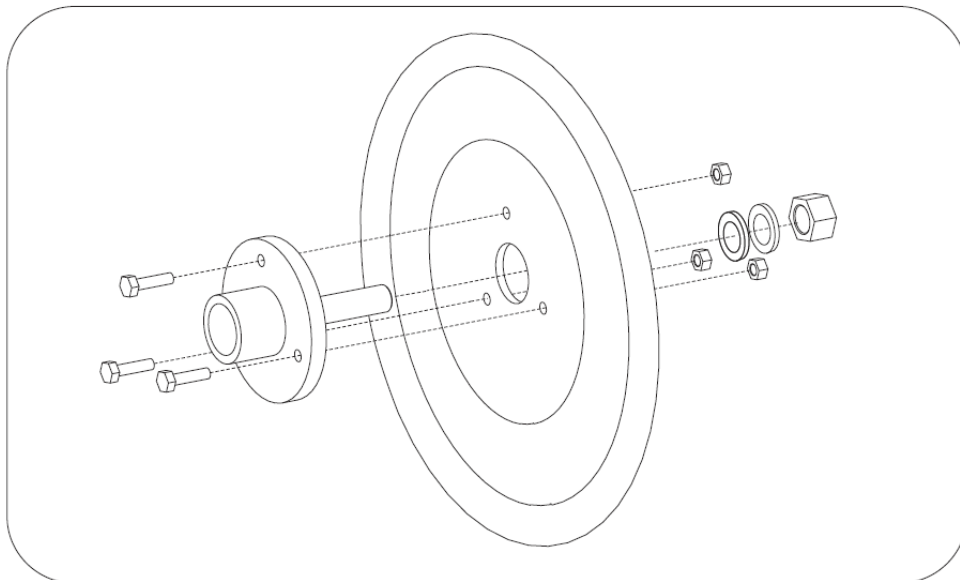
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- Check that the two conic bearings adjustment is not weak (this is noticeable if the blade produces a lateral backlash when manually moved). This defect can lead to the breakage of the bearing and reduce its working life, and possibly the breakage of the blade.
- Also, the excessive adjustment of the conic bearings can produce too much friction and overheating of the hub, causing bearing destruction (the blade should be manually moved, without a lateral backlash).
- Lubricate after the first 10 hectares per seeding unit; for example, if the seeder has 48 units, lubricate after 480 hectares and check that there is no bearing backlash. If the bearing produces a backlash, adjust according to the procedure.
- Lubricate again after 25 hectares per seeding unit; for example, if the seeder has 48 units, lubricate after 1200 hectares and check that there is no bearing backlash. If the bearing produces a backlash, adjust according to the procedure.
- After 50 hectares (if the seeder has 48 units, it equals to 2400 hectares), lubricate and adjust the conic bearing backlash. According to the ground type, the blade change is made in this stage.
- After 75 hectares (if the seeder has 48 units, it equals to 3600 hectares), lubricate and adjust the conic bearing backlash in case of lateral backlash of the blade.
- Between 75 and 100 hectares, according to the aggressive level of the ground, the conic bearings and the retainers should be changed. If the ground is very aggressive, it is recommended to lubricate and check for lateral backlash of the blade more frequently.

SEED TIGHT SYSTEMS

Presser wheel

It is manufactured with a forged hub with bearings and retainers, prepared for more demanding works.



The force on the wheel is transferred by a spring with three adjustment points, allowing the pressure to be adjusted as needed.



NOTE:

– The minimum pressure is used for flat sowing or to reduce the accumulation of sludge in the wheels working in wet conditions.

– Maximum pressure is used for deep seeding. Swing the press arm and checking that the plastic pipes of the seeding shoe has no contact with.

OPTION 1:

Vulcanized rubber wheel 1" x 10"

**OPTION 2**

1" x 10" wheel, metal with rubber edges

**OPTION 3**

1" x 10" Steel wheel



SEED PRESS SYSTEM ADJUSTMENT

The spring must not get in the way of the grease gun. The spring lock must be right in the middle of the slide. The seed pressing device must be flat with the holes at 90°.

Lubricate the pressing device through the zerk until grease is seen on the sides of the bushing. The zerk must be positioned so that the spring is not in the way. Use the grease gun tip to check for right zerk position.

The autostop nut must be adjusted so that 2 or 3 thread screws pass.

Swing the seed pressing device in order to check spring action and to make sure the device swings freely.

2.5 mm maximum warp is advisable for the press wheel which is assembled following seed delivery sense.

Swing the arm and check that it has no contact with the plastic pipes of the seeding shoe.

SEED PRESSING DEVICE (K)



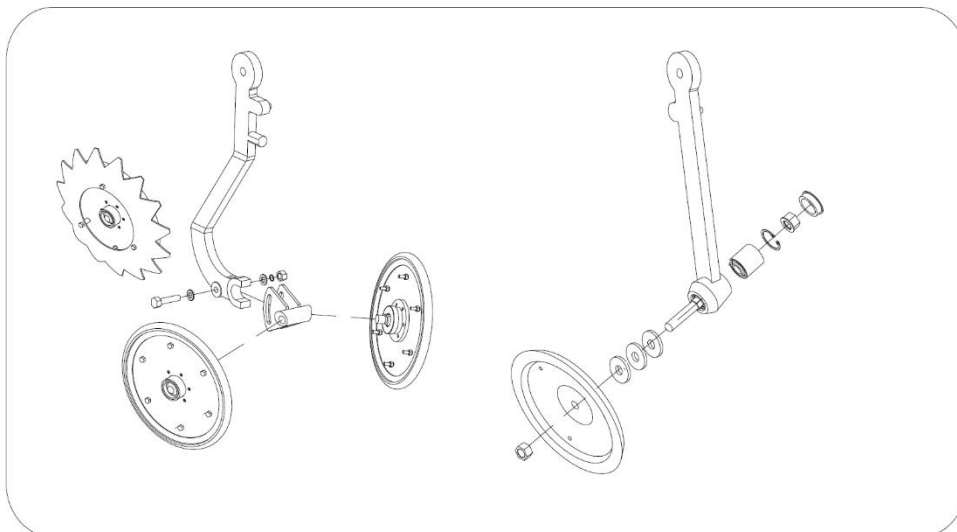
It's a system consisting of an adjustable plastic spring plus two fixing bolts.

It is assembled on the seeding hoe being its main advantage to prevent seed.

Bouncing and/or blockage and to assure superb seed placement at the bottom of the furrow.

LOCKING WHEEL

RUEDA SIMPLE DE FUNCIÓN



The Locking Wheel System consists of a cast locking wheel whose function is to tighten the soil and to lock the furrow on the side where the shoe works.

On clayish soils the wheel has to be placed closer to the seeding line while in the case of

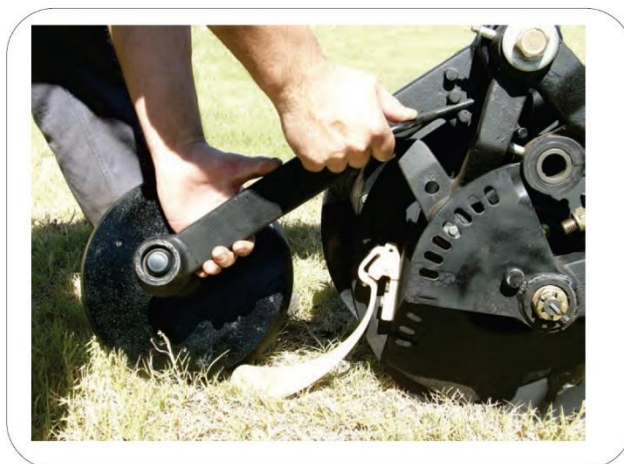
sandy soils the wheel has to be placed further.

Washers are used to adjust wheel position which will be determined by the number of washers used.

In this system the bearings are placed on the arm instead of being placed on the wheel to avoid dirt from coming in.

Caution: Do not wash the bearings with kerosene, this product forms a film that prevents the lubricant from adhering to the rollers, producing overheating and damage to the bearings.

In this system the bearings are placed on the arm instead of being placed on the wheel to avoid dirt from coming in.



COVER WHEEL ADJUSTMENT.

Lubricate the assembly through the zerk until grease can be seen on the sides of the bushing.

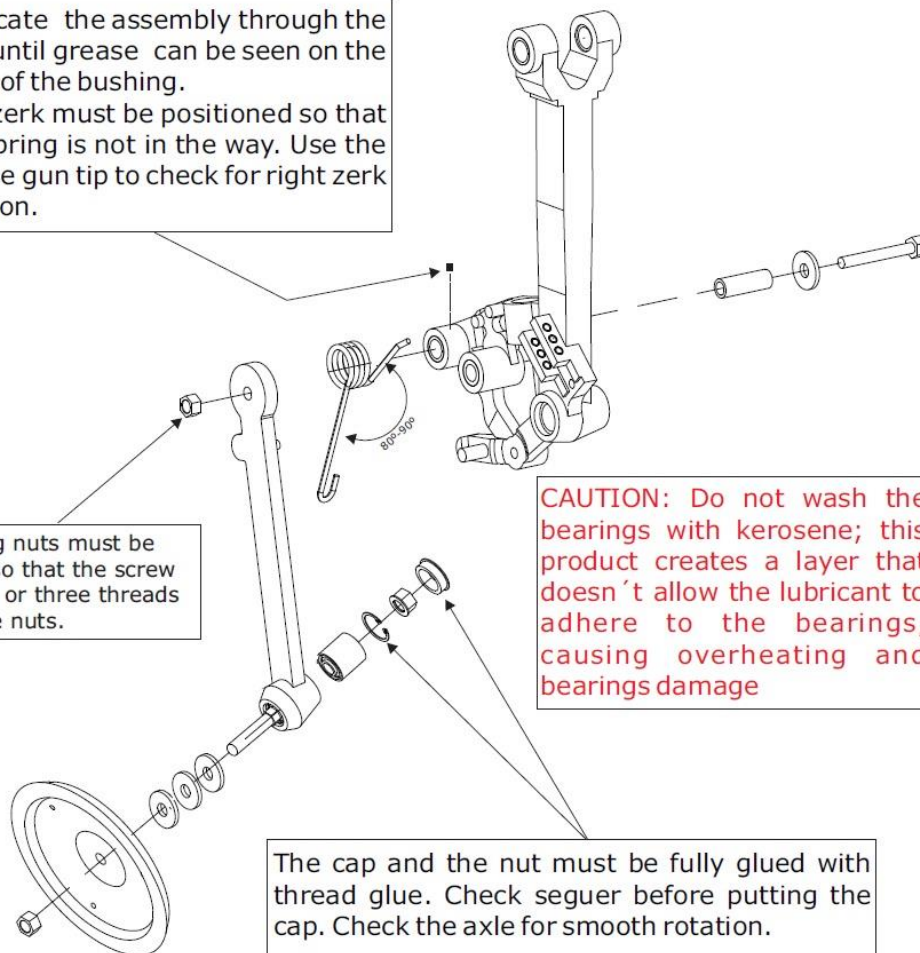
The zerk must be positioned so that the spring is not in the way. Use the grease gun tip to check for right zerk position.

Selflocking nuts must be adjusted so that the screw passes two or three threads through the nuts.

CAUTION: Do not wash the bearings with kerosene; this product creates a layer that doesn't allow the lubricant to adhere to the bearings, causing overheating and bearings damage

The cap and the nut must be fully glued with thread glue. Check sequer before putting the cap. Check the axle for smooth rotation.

IMPORTANT: Strong pressure is needed for proper furrow covering. Make sure the spring fittings are at 80° /90°.



LOCKING SYSTEM WITH DOUBLE WHEELS



The system consists of two wheels located on both sides of the furrow, which produces a good covering.

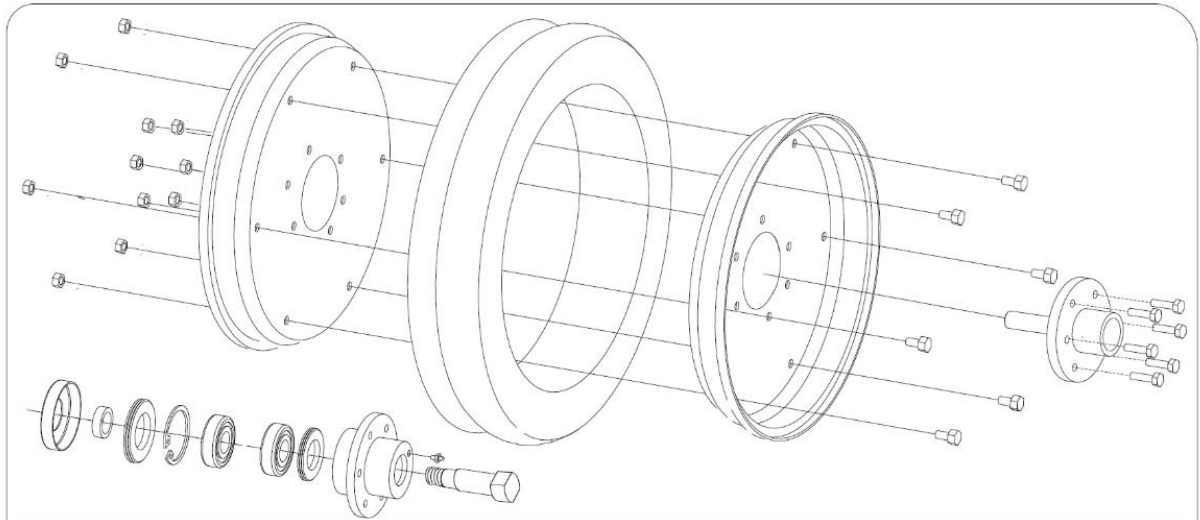
These wheels can be used with 14" (1143-E3) toothed discs that make more aggressive covering, allowing to disarm the lateral walls of the groove.

The pressure is carried out with a torsion spring, with three adjustment points according to the needs of the ground.

The double-wheel system has a regulation that allows the angle to be adjusted on both sides of the groove.



LEVELLING WHEEL



PRECAUCIÓN: No lave los rodamientos en kerosene, este producto produce una película que impide al lubricante adherirse a los rodillos, produciendo recalentamiento y daños a los rodamientos.



To increase wheel life under severe working conditions some extra non-ribbed bolts have been added.

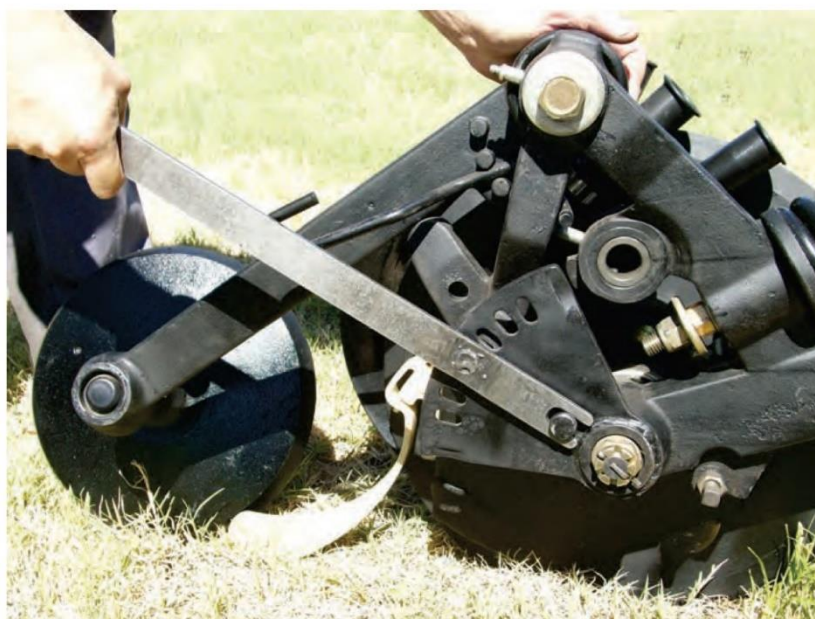
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The 3mm opening between the lip of the tyre and the coulter is aimed at reducing tyre wear. It is adjusted by means of steel washers and it allows the wheel to come into slight contact with the disc when the drill is at work



A special tool for displacing a punched plaque in one way or the other is used to adjust levelling wheel position.

OPTION 1

4 ½ " x 15 " wheel with three-radius rim.

Depth control wheel with large holes consisting of two half reinforced rims with a 4 ½ " x 15" tyre.

This type of wheels is applied to wet soils

**OPTION 2**

3 ¾ "15" wheel with a normal half rim and a half conical extension rim in steel to the boron to clean the seeding disc.

It has a 3 ¾ "x 15" tire, this type of wheels do minimal pressure on the ground and can be applied on all types of soils.

**OPTION 3**

3 ¾ "x 15" wheel with three-ray tires and conical extension in steel to the boron for cleaning the seeding disc.

It has a 3 ¾ "x 15" tire, this type of wheels do the minimal pressure on the ground and can be applied on all types of soils.

**OPTION 4**

3 ½ " x 15 " wheel with standard hub and special half wheels for narrow tyre.

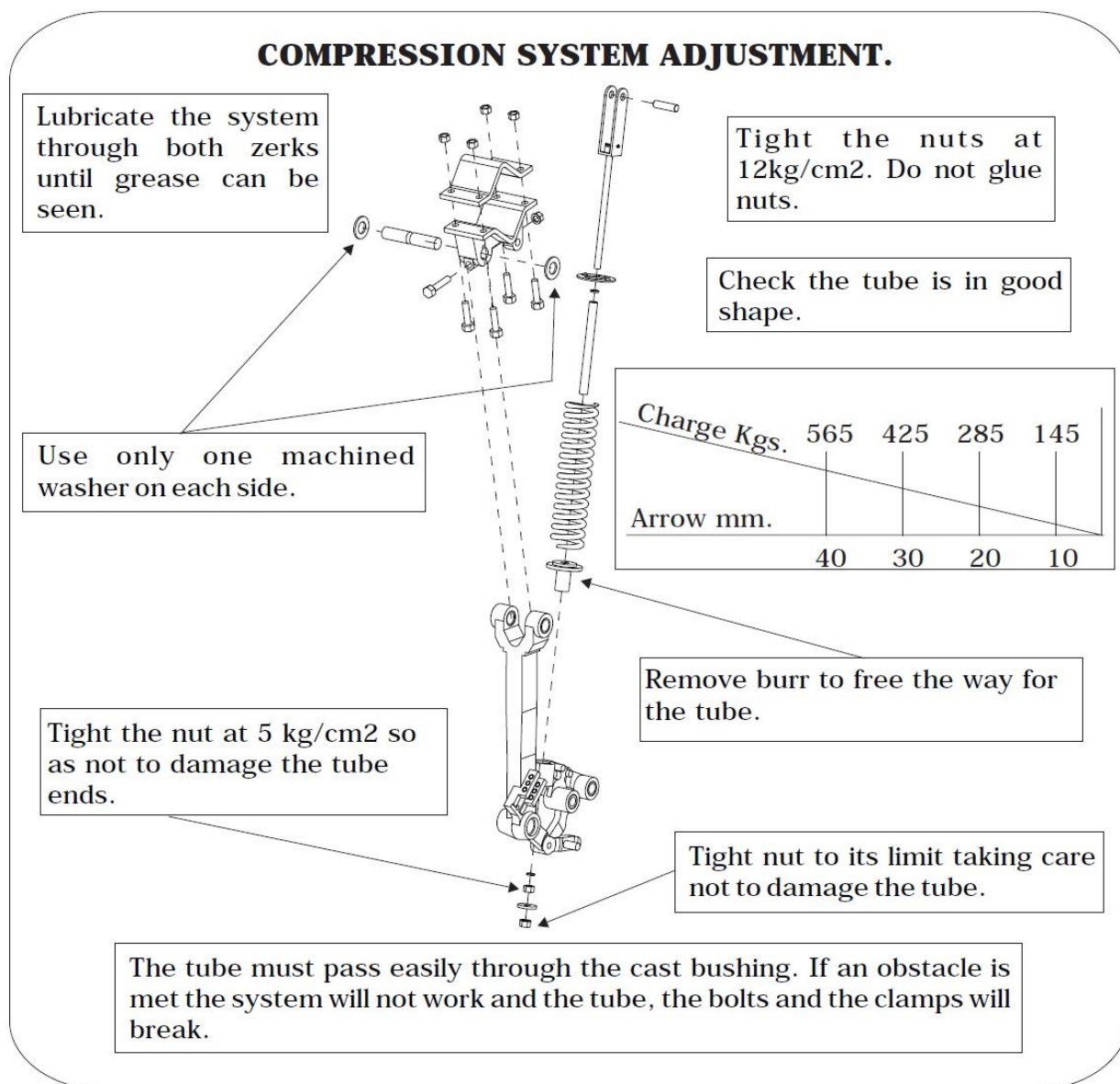
The depth control wheel has a small contact with the ground thanks to the width of the tyre. Exerts less pressure on the ground.



COMPRESSION SYSTEM

It is made up by a first quality, highly resistant helicoidal spring which can resist heavy loads during the seeding process.

Check the separator tube is well shaped to ensure free circulation through the cast bushing. After changing a consumable, assembly the system carefully and check nut pressure to prevent them from becoming loose and the tube from getting out of shape.



FIELD ADJUSTMENT

FOLLOW THE INSTRUCTIONS FOR PROPER ADJUSTMENT:

Adjust seeding unit thoroughly.

1. Adjust seeding depth. Reduce pressure on the cover wheels and on the press wheel. Use the handle to adjust seeding depth on the punched plaque going up or down one hole at a time. When you get to the desired depth adjust unit spring compression to prevent the wheel from leaving a deep track on the ground or the body from being lifted. Depth must be checked with the drill travelling at working speed. The seeding unit **MUST NEITHER** work "over" the ground **NOR** press it so hard as to leave a deep track.
2. Adjust press wheel pressure until there is good contact between seed- furrow bottom.
3. Adjust cover wheels until getting the desired seed coverage. In order to bring soil into the furrow adjust the wheels and exert torsion on the spring. Reduced stirring is achieved by assembling the notched devices on the inner side. Replace them when working on high stalk trash.
4. Adjust the remaining units the same way.
5. Try the drill at seeding speed in order to check general performance. You may need to adjust the cycle of the cylinder commanding the seeding units.
6. **IMPORTANT:** Check that the blade holder hub is properly assembled.

A loose blade reduces the bearing working life. Poor adjustment of the 2 conic bearings won't allow rotation and will cause the blade to break the bearing. Excessive adjustment of the 2 conic bearings will cause frictional heating and the bearing working life will be reduced. Check that the blade holder hub is properly lubricated when starting your work. (See blade holder hub maintenance). Avoid seeder turns if the units are not elevated, since it may lead to several breakages. In grounds with excessive humidity and stubble use the different options of depth controllers' wheels.

Check the blade wear and the shoe position to avoid breakage. The new main units are equipped with an interchangeable support to adjust the shoe position. The disc cleaning set can be used for all depth controller wheels options.