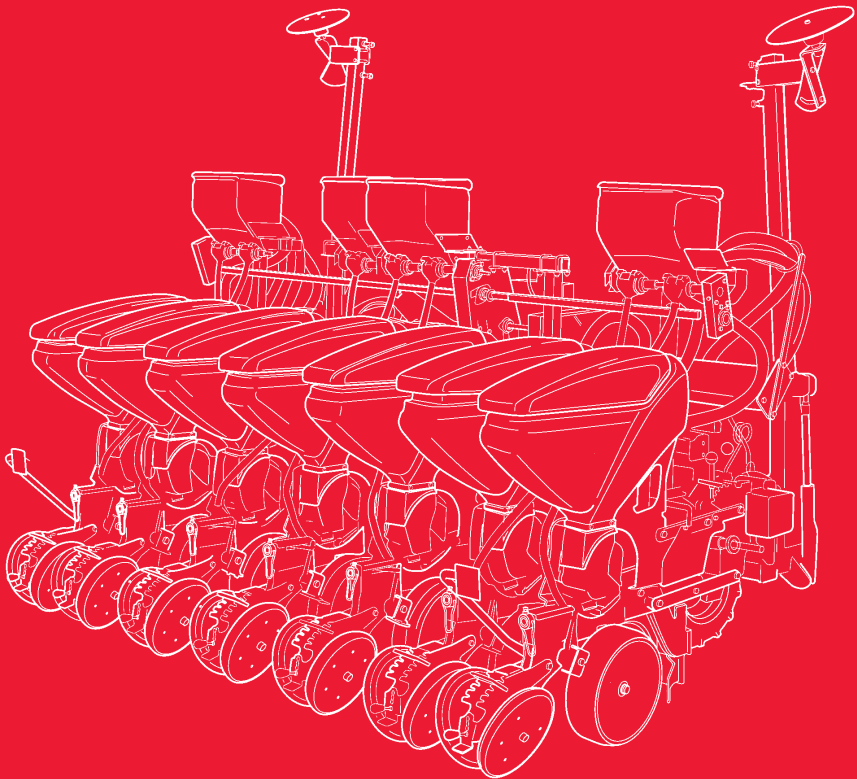




SOLA

MAQUINARIA AGRICOLA

PROSEM K PROSEM P



**OPERATING MANUAL
MAINTENANCE ADJUSTMENTS
DOSAGE**

Please read carefully prior to operation.

Seed Drills and Fertilizer Spreaders **SOLA** are produced in a factory particularly specialized in this kind of machines and they are guaranteed for the experience of the users.

The are machines based on state-of-the-art technology and are manufactured with recognized safety requirements for doing an excellent work with a minimal maintenance.

The purpose of this operating manual is to enable you to familiarise yourself with the working of your seed drill and to achieve your purposes.



Quality certificate

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It is forbidden the total and partial reproduction.

We can modify the specifications without prior notice.

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1.- INTRODUCTION

Before you proceed to operate the seed drill, please read and observe these instructions. In this way, you will avoid accidents, reduce repair costs and downtimes and increase the reliability and service life of your seed drill.

This operating manual must be read and used by all persons who are required to work with the machine (including preparatory work, troubleshooting during operation, care), maintenance (inspection and technical assistance) and transporting.

Pay particular attention to the safety instructions. SOLÀ can not assume any liability for damage or malfunctions caused by a failure to observe the instructions contained in this operating manual.

First of all, the manual will explain the Technical Specifications and the Safety Instructions. In the chapters launching, adjustments and maintenance, the manual will explain the basic instructions for working with the machine. This manual is finished with a Dosage tables with different seed types and a Spare Parts list.



SOLÀ RESERVES THE RIGHT TO MAKE CHANGES TO THE ILLUSTRATIONS, TECHNICAL SPECIFICATIONS AND WEIGHTS CONTAINED IN THIS OPERATING MANUAL IF SOLÀ MAKES ANY IMPROVEMENTS TO THE MACHINES AND CONSIDERS THE MODIFICATIONS CAN HELP TO IMPROVÉ THE MACHINES QUALITY.

2.- SAFETY INSTRUCTIONS

2.1 SAFETY SYMBOLS

You are going to find, in this operating manual, three types of safety and danger symbols:



To facilitate operation with the machine



To avoid damages on the machine or on the optional equipments



To avoid personal damages

On the machine, you are going to find the following symbols:



Please, read with care all safety instructions and use instructions contained in this operation manual.



Do not place under track markers.

Danger of serious lesions.



Stay away from the tractor back part during the coupling operation.

Danger of serious lesions.



Stop the tractor engine and avoid its start during the maintenance or repairing works in the seed drill.

2.2 GENERAL SAFETY ARRANGEMENTS

Before to start the machine, it is very important to read the instructions concerning operation safety and road safety.

Road traffic regulations must be observed when towing the machine on roads.

No persons may be allowed to ride on the machine during the work and during the transport.

Before to bring into operation the machine, it is very important to know the parts, the elements and the performances.

Be extremely careful when coupling and uncoupling the seed drill to tractor. This operation involves a high risk of injury.

The transmission of the power point must be fitted with a protective equipment and in good conditions. Avoid the turns of the protector tube securing it with the chain. The side of the clutch will be fit in the seed drill.

The transmission of the power point must be fitted when engine is stopped.

Before connecting the power point, make sure that nobody is standing in dangerous proximity to the machine.

Do not never abandon the seat drive during the work.

Do not place strange elements inside the hopper.

Before carrying out care or maintenance work, always depressurize the hydraulic system and switch off the tractor engine.

The hydraulic system generates extremely high pressures. All piping, hoses and connections must therefore be checked regularly for leakage and visible external damage. Useful life for these elements is not more than six years. You must change them after this time.

To park the machine, to secure it with two stabilizers, one in the first row and the other in the last.

Before to start a movement with a folding machine, be sure the frame is completely folding.

2.3 DELIVERY

To load and unload machines PROSEM, use the two holes of the frame placed behind the fan.

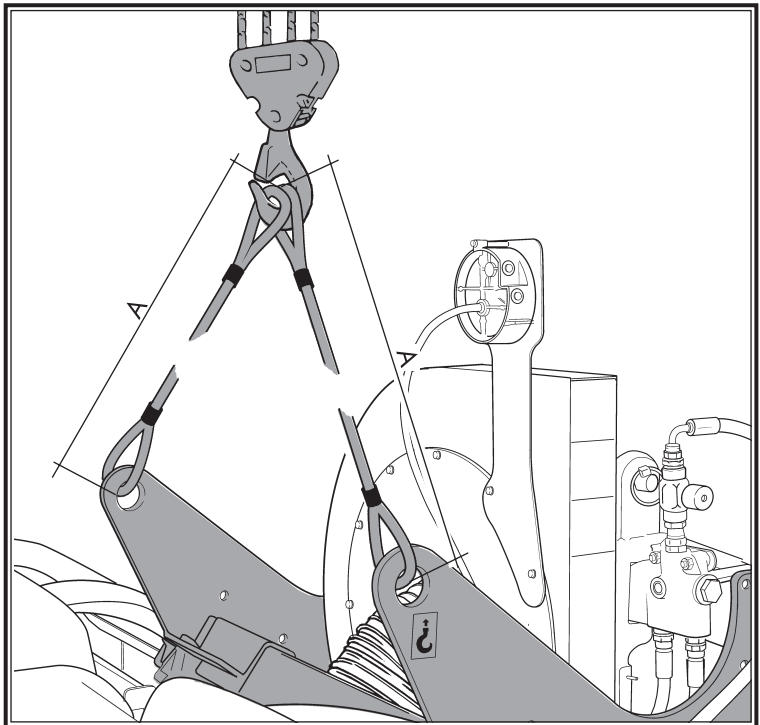


ATTENTION

RESPECT THE DISTANCE «A» (1,5M) TO AVOID DAMAGES TO THE MACHINE DURING DE RAISING PROCESS.

To receive the machine, check it, possible damages caused during the transport and verify all the parts.

Making an immediately complaint to the carrier you can obtain a replacement for damages.



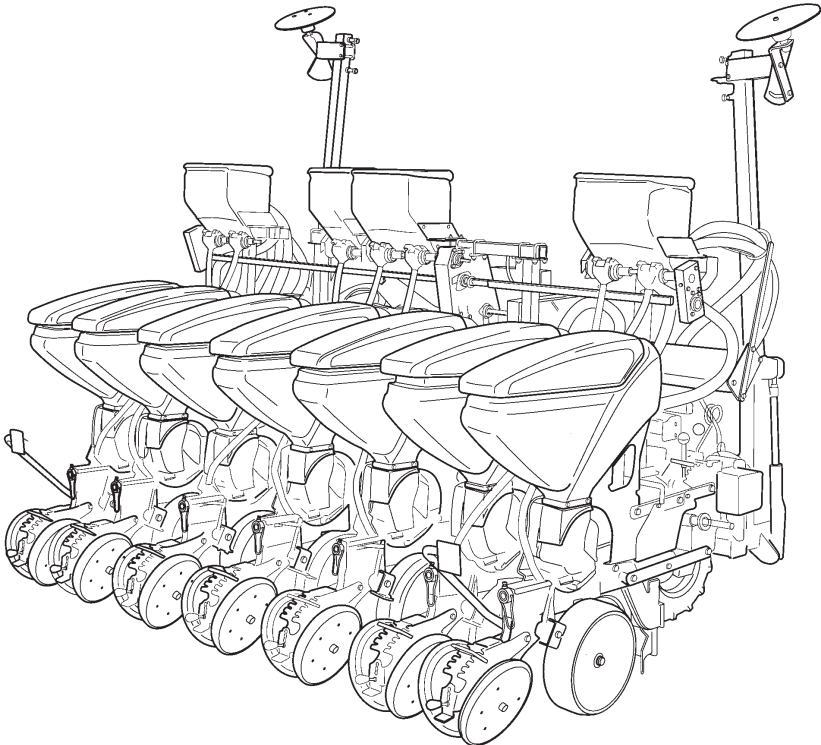
3.- GENERAL DESCRIPTION

Seed drills PROSEM has been produced for the agricultural works, specially for precision sowing.

SOLA cannot be held liable for any consequential damage resulting from incorrect use, metering or distribution.

All relevant accident prevention regulations, as well as other generally acknowledged safety and road traffic regulations, must be observed.

SOLA seed drills are intended for sowing. Any uses or modifications other than those will automatically exempt SOLA from its/his liability in respect on ensuing damages.



3.1.MACHINE IDENTIFICATION

On the identification plate we find the following points:

Model.

Building year.

Machine type.

Frame number.



3.2 STANDARD EQUIPMENT

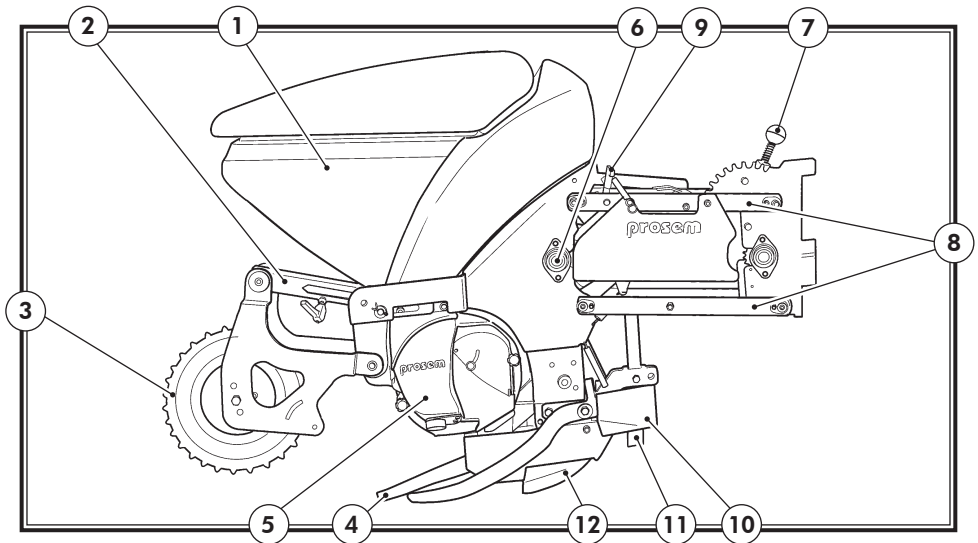
- Mud remover with opening-furrow coulter.
- Rows manual exclusion.
- Hydraulic disc markers.
- One distributor disc for row.
- Vacuum gage.
- Cardan transmission.
- Double traction wheels at the front part.
- Seed hopper (50 Lts/row).
- Back lights equipment for public thoroughfare.

3.3 OPTIONAL EQUIPMENT

- Opening turbo disc (Prosem K).
- Opening disc (Prosem K).
- Undulating opening disc (Prosem K).
- Remove stubble Stars (Prosem K).
- Intermediate wheel.
- Hectare counter.
- Automatic rows exclusion (electro-mechanical).
- Sowing electronic control.
- Fertilizer with discs.
- Fertilizer with coulters.
- Microgranulator.
- Antislugs.
- Long transport (F600/8).
- Sowing discs.

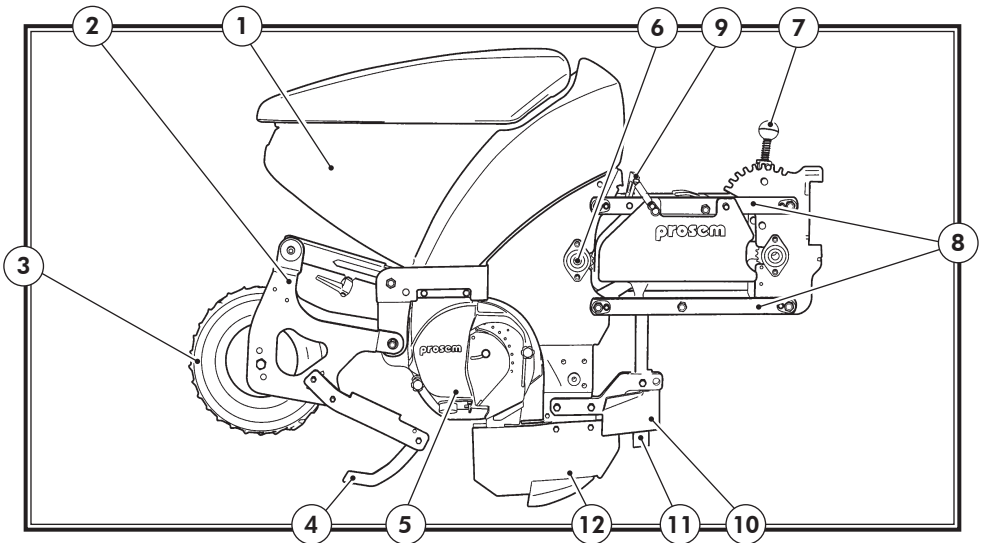
3.4 SOWING ROW PROSEM P

1. Seeds tank.
2. Sowing depth adjustment.
3. Compression wheel: soil compressor and sowing depth control.
4. Furrow closing device.
5. Distributor: with a selector to adjust seed distribution.
6. Transmission group: move the action from the main axle to the distributor for the sowing disc rotation.
7. Row pressure adjustment lever: adjust the load pressure exercised for the sowing row on the soil.
8. Parallel motion: connect the sowing row to the machine frame.
9. Coupling mechanism.
10. Mud remover: avoid big mud coinciding with sowing furrow.
11. Coulter: for breaking the soil superficial bed .
12. Coulter: make the furrow on the soil where the seed will be placed.



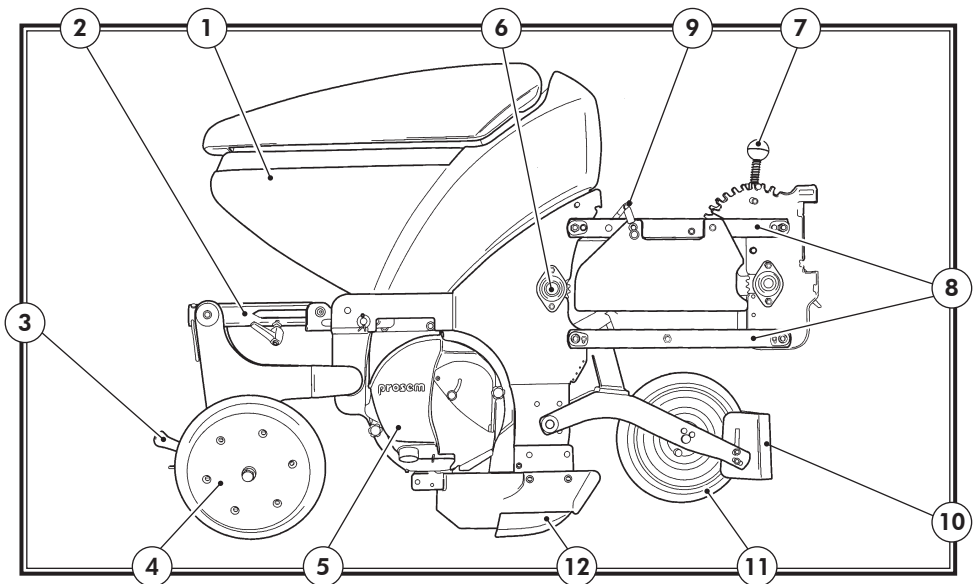
3.5 SOWING ROW PROSEM P HIGHT COULTER

1. Seeds tank.
2. Sowing depth adjustment.
3. Compression wheel: soil compressor and sowing depth control.
4. Furrow closing device.
5. Distributor: with a selector device to adjust seed distribution.
6. Transmission group: move the action from the main axle to the distributor for the sowing disc rotation.
7. Row pressure adjustment lever: adjust the load pressure exercised by sowing row on the soil.
8. Parallel motion: connect the sowing row to the machine frame.
9. Coupling mechanism.
10. Mud remover: avoid big mud coinciding with sowing furrow.
11. Tooth furrow: make the furrow on the soil where the seed has to be placed.
12. Tooth furrow: make the furrow on the soil where the seed has to be placed.



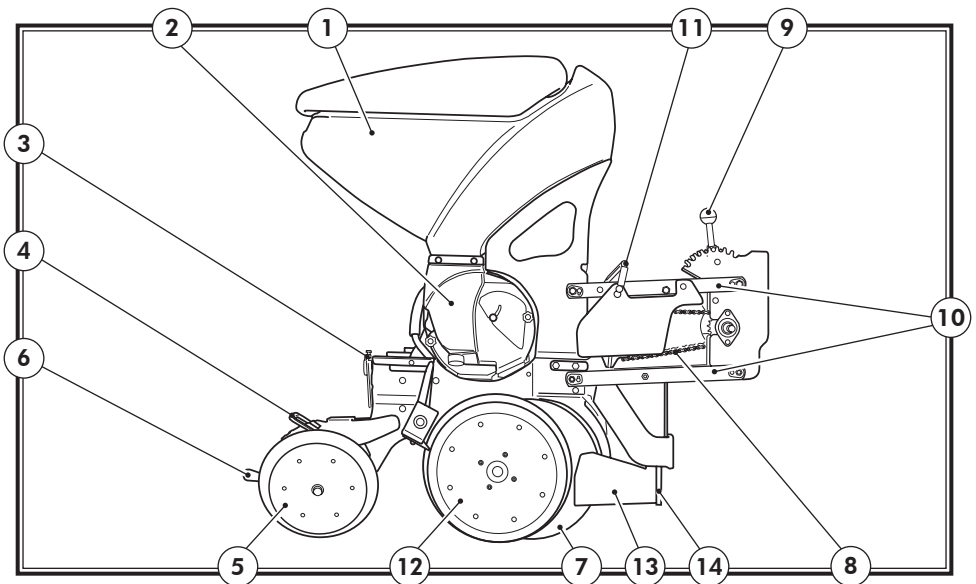
3.6 SOWING ROW PROSEM P BEAM

1. Seeds tank.
2. Sowing depth adjustment.
3. Pressure adjustment lever for the seed compressor wheels.
4. Seed compressor wheels: close the furrow where the seed has been placed.
5. Distributor: with a selector device to adjust seed distribution.
6. Transmission group: move the action from the main axle to the distributor for the sowing disc rotation.
7. Lever to adjust row pressure: adjust load pressure exercised by sowing row on the soil.
8. Parallel motion: connect the sowing row to the machine frame.
9. Coupling mechanism.
10. Mud remover: avoid big mud coinciding with sowing furrow.
11. Front wheel for depth control.
12. Tooth furrow: make the furrow on the soil where the seed has to be placed.



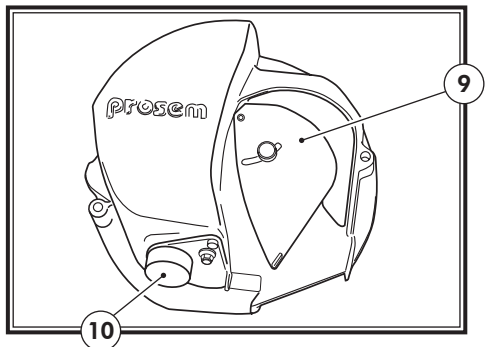
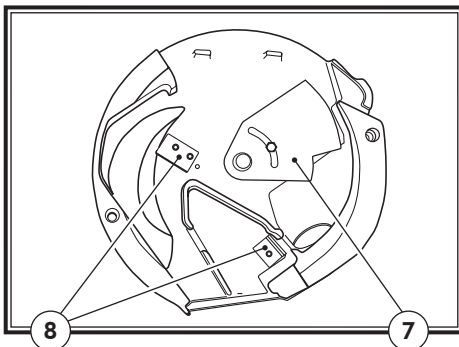
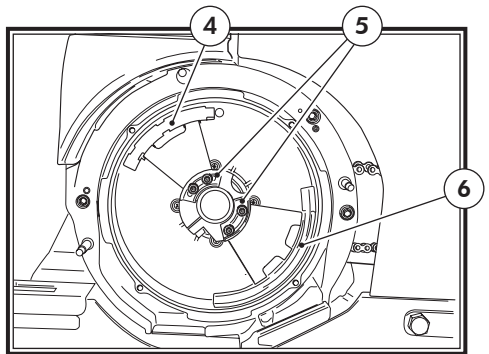
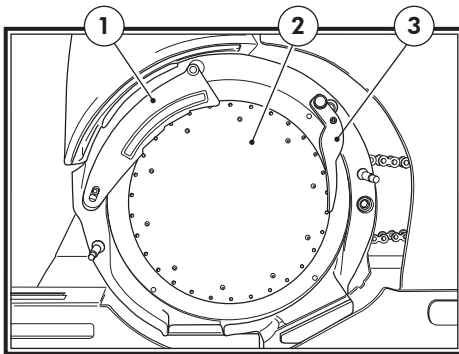
3.7 SOWING ELEMENT PROSEM K

1. Seeds tank.
2. Distributor: with a selector device to adjust seed distribution.
3. Crank to adjust sowing depth.
4. Pressure adjustment lever for the seed compressor wheels.
5. Seed compressor wheels: close the furrow where the seed has been placed.
6. Adjustment lever for the compression wheels incidence angle.
7. Opener double disc: made the furrow where the seed has be placed.
8. Transmission group: move the action from the main axle to the distributor for the sowing disc rotation.
9. Lever to adjust row pressure: adjust load pressure exercised by sowing row on the soil.
10. Parallel motion: connect the sowing row to the machine frame.
11. Coupling mechanism.
12. Sowing depth control wheels.
13. Mud remover: avoid big mud coinciding with sowing furrow.
14. Coulter: bread the soil superficial bed.



3.8 SEED DISTRIBUTOR

1. Seeds selector: select one seed by hole.
2. Sowing disc: seeds distributor disc.
3. Seeds knockout: seed falls in the correct point.
4. Contra-selector follower: avoid selector can break some seeds
5. Central followers
6. Follower of seed falls: close the aspiration when the seed has to detach to the disc.
7. Distributor seed door: adjust the distributor seed entry.
8. Brush: disc cleaner
9. Inspection door: allow see one seed per hole.
10. Empty door: to empty out the hopper.



3.8.1 SOWING DISCS (optional)

- Corn: 30 or 20 or 40 holes Ø 4.5 mm.
- Little corn: 30 or 40 holes Ø 3.5 mm and 30 or 20 holes Ø 4 mm
- Sunflower: 20 or 10 or 30 holes Ø 2.5 mm (Ø 1,5 or Ø 2 mm for little sunflower).
- Sugarbeets: 30 holes Ø 2 mm for monogerm sugarbeet (with or without pill) (also with 20 or 40 holes).
- Cotton: 100 or 70 holes Ø 3.5 and Ø 3 mm
- Chickpea: 50 or 60 holes Ø 5,5 and Ø 4,5 mm (or 70 holes Ø 5 mm)
- Beans: 50 or 60 holes Ø 3,5 and Ø 4,5 mm (o Ø 2,5 for little beans).
- Soybeans-peas: 70 holes Ø 4 and Ø 4,5 mm.
- Sorghum: 70 or 100 holes Ø 2 mm.
- Rape: 70 or 120 holes Ø 1,1 mm.
- Broad beans: 30 holes Ø 6,5 mm

Also we have discs for garlic, leek, cauliflower, peanut, melon, cucumber, lupin, onions, millet, tomato, wheat, fennel, asparagus, spinach, radish, carrot...

3.9 FERTILIZER EQUIPMENT (optional)

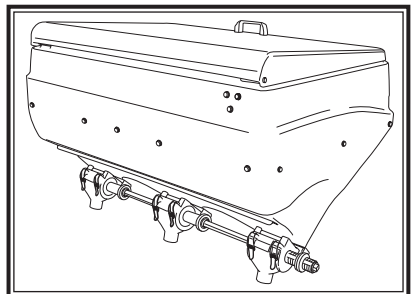
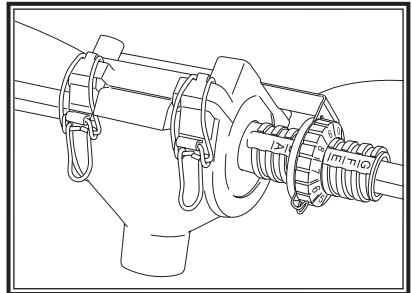
The fertilizer group has the function to distribute on the soil the fertilizer products, during the sowing.

We are doing the fertilizer dosage by the fertilizer distributors adjustment placed under the fertilizer hoppers.

Each machine is fitted with an even number of hoppers depending on the rows number.

Each hopper could have 2 or 3 exits. P.e. one machine of 6 rows has 2 hoppers of 3 exits.

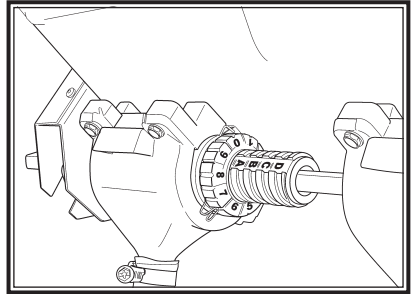
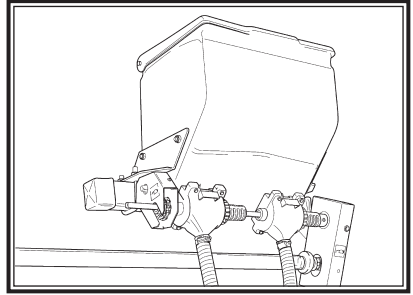
The fertilizer equipment is fitted with a coulters and discs that allow to bury the fertilizer by the side of sowing row.



3.10 MICRO DISTRIBUTOR EQUIPMENT (optional)

The micro distributor equipment has de function to distribute during the sowing some anti parasites as insecticides and or anti-slugs. Also it can apply some fertilizer micro granulated at the beginning.

Insecticides and beginning fertilizers are distributed in the sowing furrow joint to the seed. Anti-slugs products are distributed over the sowing row.



4.- TECHNICAL SPECIFICATIONS

4.1 TECHNICAL SPECIFICATIONS PROSEM P

PROSEM P FIXED

MODEL	F255/4	F255/6	F300/4	F300/5	F300/6
MACHINE WIDTH (cm)	255	255	300	300	300
ROWS DISTANCE MÁX. (cm)	75	45	90	67,5	54
HOPPER CAPACITY 1 ROW (L)	50	50	50	50	50
HOPPER CAPACITY FERTILIZER (L)	400	400	400	-	560
HOPPER CAPACITY MICRO 2 ROWS (L)	30	30	30	-	30
WEIGHT (Kg)	725	855	740	805	870
ROW WEIGHT (Kg)	75	75	75	75	75
MICRO WEIGHT (Kg)	40	45	45	48	50
FERTILIZER WITH DISCS WEIGHT (Kg)				-	
COULTER FERTILIZER WEIGHT (Kg)				-	
MINIMAL POWER (CV)	40	50	40	50	55
COUPLING CAT.	II	II	II	II	II
WHEELS	6,5/80-12	6,5/80-12	23x8,5-12	23x8,5-12	23x8,5-12

MODEL	F350/6	F410/6	F450/7	F600/8	F600/12	F300/4MEX
MACHINE WIDTH (cm)	350	410	450	600	600	300
ROWS DISTANCE MÁX. (cm)	64	75	60	71	51	90
HOPPER CAPACITY 1 ROW (L)	50	50	50	50	50	50
HOPPER CAPACITY FERTILIZER (L)	560	560	-	-	-	400
HOPPER CAPACITY MICRO 2 ROWS (L)	30	30	-	-	-	30
WEIGHT (Kg)	881	895	971	1050	1315	740
ROW WEIGHT (Kg)	75	75	75	75	75	75
MICRO WEIGHT (Kg)	50	50	55	65	80	45
FERTILIZER WITH DISCS WEIGHT (Kg)			-	-	-	
COULTER FERTILIZER WEIGHT (Kg)			-	-	-	
MINIMAL POWER (CV)	55	55	65	75	95	40
COUPLING CAT.	II	II	II	II	II	II
WHEELS	23x8,5-12	23x8,5-12	23x8,5-12	23x8,5-12	23x8,5-12	5,00-15"

PROSEM P TELESCOPIC

<i>MODEL</i>	T250S/6	T300/6	T300S/7	T330/6	T330/7	T330/7HIBR
<i>MACHINE WIDTH (FOLDING) (cm)</i>	250	300	300	330	330	330
<i>MÁX. MÁCHINE WIDTH (cm)</i>	410	432	454	432	422	432
<i>ROWS DISTANCE (cm)</i>	75	70, 75 y 80	70	70, 75 y 80	55, 60 y 65	6F80 7F60
<i>HOPPER CAPACITY 1 ROW (L)</i>	50	50	50	50	50	50
<i>HOPPER CAPACITY FERTILIZER (L)</i>	600	600	-	600	-	600
<i>HOPPER CAPACITY MICRO 2 ROWS (L)</i>	30	30	30	30	30	30
<i>WEIGHT (Kg)</i>	1050	1050	1165	1030	1105	1135
<i>ROW WEIGHT (Kg)</i>	75	75	75	75	75	75
<i>MICRO WEIGHT (Kg)</i>	75	75	80	50	55	55
<i>FERTILIZER WITH DISCS WEIGHT (Kg)</i>			-		-	-
<i>COULTER FERTILIZER WEIGHT (Kg)</i>			-		-	-
<i>MINIMAL POWER (CV)</i>	65	75	75	75	75	75
<i>DRAW BAR CAT.</i>	II	II	II	II	II	II
<i>WHEELS</i>	23x8,5-12	23x8,5-12	23x8,5-12	23x8,5-12	23x8,5-12	23x8,5-12

PROSEM P VARIANT

<i>MODEL</i>	V300/6 45-75	V300/6 50-80	V300 4F95 6F50-75	V300 7F45-60 6F75-80	V300/7 DCH 50-80
<i>MACHINE WIDTH (FOLDING) (cm)</i>	300	300	300	300	300
<i>MÁX. MÁCHINE WIDTH (cm)</i>	410	432	410	432	512
<i>ROWS DISTANCE (cm)</i>	45-75	50-80	4F95 6F50-75	7F45-60 6F75-80	50-80
<i>HOPPER CAPACITY 1 ROW (L)</i>	50	50	50	50	50
<i>HOPPER CAPACITY FERTILIZER (L)</i>	-	-	-	-	-
<i>HOPPER CAPACITY MICRO 2 ROWS (L)</i>	28	28	28	28	28
<i>WEIGHT (Kg)</i>	1080	1080	1080	1160	1430
<i>ROW WEIGHT (Kg)</i>	75	75	75	75	75
<i>MICRO WEIGHT (Kg)</i>	75	75	75	80	80
<i>FERTILIZER WITH DISCS WEIGHT (Kg)</i>	-	-	-	-	-
<i>COULTER FERTILIZER WEIGHT (Kg)</i>	-	-	-	-	-
<i>MINIMAL POWER (CV)</i>	80	80	80	90	110
<i>WHEELS</i>	23x8,5-12	23x8,5-12	23x8,5-12	23x8,5-12	23x10,5-12

<i>MODEL</i>	V300/8 45-75	V330/8 43-80	V330/9 40-60	V300M/4	V300M/6
<i>MACHINE WIDTH (FOLDING) (cm)</i>	300	330	330	310	310
<i>MÁX. MÁCHINE WIDTH (cm)</i>	559	559	559	310	310
<i>ROWS DISTANCE (cm)</i>	40-75	40-75	40-75	40-95	40-54
<i>HOPPER CAPACITY 1 ROW (L)</i>	50	50	50	50	50
<i>HOPPER CAPACITY FERTILIZER (L)</i>	-	-	-	600	600
<i>HOPPER CAPACITY MICRO 2 ROWS (L)</i>	28	28	28	28	28
<i>WEIGHT (Kg)</i>	1560	1590	1665	800	930
<i>ROW WEIGHT (Kg)</i>	75	75	75	75	75
<i>MICRO WEIGHT (Kg)</i>	85	85	88	45	50
<i>FERTILIZER WITH DISCS WEIGHT (Kg)</i>	-	-	-		
<i>COULTER FERTILIZER WEIGHT (Kg)</i>	-	-	-		
<i>MINIMAL POWER (CV)</i>	120	130	140	60	70
<i>WHEELS</i>	23x10,5-12	23x10,5-12	23x10,5-12	23x8,5-12	23x8,5-12

4.2 TECHNICAL SPECIFICATIONS PROSEM K

PROSEM K FIXED

<i>MODEL</i>	F255/4	F255/6	F300/4	F300/5	F300/6
<i>MACHINE WIDTH (cm)</i>	255	255	300	300	300
<i>ROWS DISTANCE MÁX. (cm)</i>	75	45	90	67,5	54
<i>HOPPER CAPACITY 1 ROW (L)</i>	50	50	50	50	50
<i>HOPPER CAPACITY FERTILIZER (L)</i>	400	400	600	-	600
<i>HOPPER CAPACITY MICRO 2 ROWS (L)</i>	28	28	28	28	28
<i>WEIGHT (Kg)</i>	945	1185	960	1080	1200
<i>ROW WEIGHT (Kg)</i>	120	120	120	120	120
<i>MICRO WEIGHT (Kg)</i>	40	45	45	48	50
<i>FERTILIZER WITH DISCS WEIGHT (Kg)</i>				-	
<i>COULTER FERTILIZER WEIGHT (Kg)</i>				-	
<i>MINIMAL POWER (CV)</i>	50	60	50	60	70
<i>COUPLING CAT.</i>	II	II	II	II	II
<i>WHEELS</i>	23x8,5-12	23x8,5-12	23x8,5-12	23x8,5-12	23x8,5-12

PROSEM K FIXED

<i>MODEL</i>	F350/6	F410/6	F450/7	F600/8	F600/12
<i>MACHINE WIDTH (cm)</i>	350	410	450	600	600
<i>ROWS DISTANCE MÁX. (cm)</i>	64	75	60	71	51
<i>HOPPER CAPACITY 1 ROW (L)</i>	50	50	50	50	50
<i>HOPPER CAPACITY FERTILIZER (L)</i>	600	600	-	1200	1200
<i>HOPPER CAPACITY MICRO 2 ROWS (L)</i>	28	28	28	28	28
<i>WEIGHT (Kg)</i>	1211	1225	1356	1490	1975
<i>ROW WEIGHT (Kg)</i>	120	120	120	120	120
<i>MICRO WEIGHT (Kg)</i>	50	50	55	65	80
<i>FERTILIZER WITH DISCS WEIGHT (Kg)</i>			-	-	-
<i>COULTER FERTILIZER WEIGHT (Kg)</i>			-	-	-
<i>MINIMAL POWER (CV)</i>	70	70	80	90	120
<i>COUPLING CAT.</i>	II	II	II	II	II
<i>WHEELS</i>	23x8,5-12	23x8,5-12	23x8,5-12	23x8,5-12	23x8,5-12

PROSEM K TELESCOPIC

<i>MODEL</i>	T250S/6	T300/6	T300S/7	T330/6	T330/7	T330/7HIBR
<i>MACHINE WIDTH (FOLDING) (cm)</i>	250	300	300	330	330	330
<i>MÁX. MACHINE WIDTH (cm)</i>	410	432	454	432	422	432
<i>ROWS DISTANCE (cm)</i>	75	70,75 y 80	70	70,75 y 80	55, 60 y 65	6F80 7F60
<i>HOPPER CAPACITY 1 ROW (L)</i>	50	50	50	50	50	50
<i>HOPPER CAPACITY FERTILIZER (L)</i>	600	600	-	600	-	600
<i>HOPPER CAPACITY MICRO 2 ROWS (L)</i>	30	30	30	30	30	30
<i>WEIGHT (Kg)</i>	1320	1350	1480	1300	1420	1450
<i>ROW WEIGHT (Kg)</i>	120	120	120	120	120	120
<i>MICRO WEIGHT (Kg)</i>	75	75	80	50	55	55
<i>FERTILIZER WITH DISCS WEIGHT (Kg)</i>			-		-	-
<i>COULTER FERTILIZER WEIGHT (Kg)</i>			-		-	-
<i>MINIMAL POWER (CV)</i>	65	75	75	75	75	75
<i>COUPLING CAT.</i>	II	II	II	II	II	II
<i>WHEELS</i>	23x8,5-12	23x8,5-12	23x8,5-12	23x8,5-12	23x8,5-12	23x8,5-12

PROSEM K VARIANT

<i>MODEL</i>	V300/6 45-75	V300/6 50-80	V300 4F95 6F50-75	V300 7F45-60 6F75-80	V300/7 DCH 50-80
<i>MACHINE WIDTH (FOLDING) (cm)</i>	300	300	300	300	300
<i>MÁX. MÁCHINE WIDTH (cm)</i>	410	432	410	432	512
<i>ROWS DISTANCE (cm)</i>	45-75	50-80	4F95 6F50-75	7F45-60 6F75-80	50-80
<i>HOPPER CAPACITY 1 ROW (L)</i>	50	50	50	50	50
<i>HOPPER CAPACITY FERTILIZER (L)</i>	-	-	-	-	-
<i>HOPPER CAPACITY MICRO 2 ROWS (L)</i>	28	28	28	28	28
<i>WEIGHT (Kg)</i>	1350	1350	1350	1480	1750
<i>ROW WEIGHT (Kg)</i>	120	120	120	120	120
<i>MICRO WEIGHT (Kg)</i>	75	75	75	80	80
<i>FERTILIZER WITH DISCS WEIGHT (Kg)</i>	-	-	-	-	-
<i>COULTER FERTILIZER WEIGHT (Kg)</i>	-	-	-	-	-
<i>MINIMAL POWER (CV)</i>	90	90	90	100	120
<i>WHEELS</i>	23x8,5-12	23x8,5-12	23x8,5-12	23x8,5-12	23x10,5-12

<i>MODEL</i>	V300/8 45-75	V330/8 43-80	V330/9 40-60	V300M/4	V300M/6
<i>MACHINE WIDTH (FOLDING) (cm)</i>	300	330	330	310	310
<i>MÁX. MÁCHINE WIDTH (cm)</i>	559	559	559	310	310
<i>ROWS DISTANCE (cm)</i>	40-75	40-75	40-75	40-95	40-54
<i>HOPPER CAPACITY 1 ROW (L)</i>	50	50	50	50	50
<i>HOPPER CAPACITY FERTILIZER (L)</i>	-	-	-	600	600
<i>HOPPER CAPACITY MICRO 2 ROWS (L)</i>	28	28	28	28	28
<i>WEIGHT (Kg)</i>	1920	1950	2070	980	1200
<i>ROW WEIGHT (Kg)</i>	120	120	120	120	120
<i>MICRO WEIGHT (Kg)</i>	85	85	88	45	50
<i>FERTILIZER WITH DISCS WEIGHT (Kg)</i>	-	-	-		
<i>COULTER FERTILIZER WEIGHT (Kg)</i>	-	-	-		
<i>MINIMAL POWER (CV)</i>	130	140	150	70	80
<i>WHEELS</i>	23x10,5-12	23x10,5-12	23x10,5-12	23x8,5-12	23x8,5-12

5.- USE INTRUCTIONS

Before using the machine it is very important to consider the following points:

- Verify the machine is coupled to the tractor.
- Verify the machine greasing.
- Verify the wheels pressure.
- Verify safety elements.
- Prepare the machine to the seed using.
- Verify that tractor driving wheels do not coincide with rows sowing bed.
- Action the empty machine to release tubes of the condensation water or the other strange elements.
- Verify oil level from transmission box (only Telescopic models and Variant)

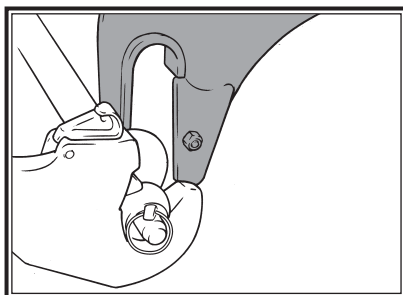
5.1 COUPLING THE MACHINE TO THE TRACTOR



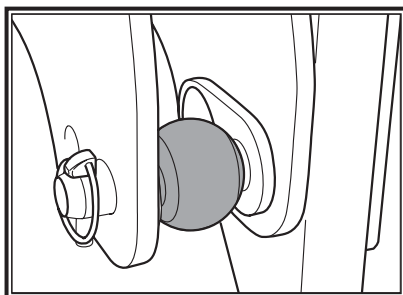
PREVENTIVE MEASURE

BE EXTREMELY CAREFUL. THESE OPERATIONS INVOLVES A HIGH RISK ON INJURY.

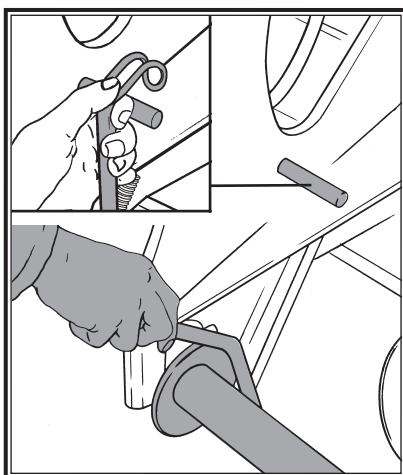
In the machines with coupling bar, fit the fast coupling to the tractor and then place with the tractor, the bar in the machine holes.



In the machines without coupling bar, fit the balls in the machine coupling bolts and then place the tractor arms in these balls.

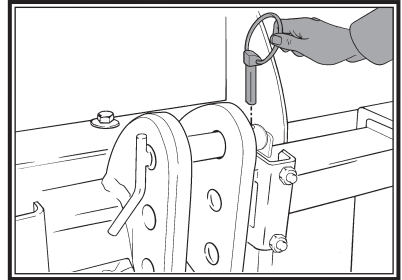


Uncoupling lever and tighten down.



Place the 3 point tie and insert the bolt.

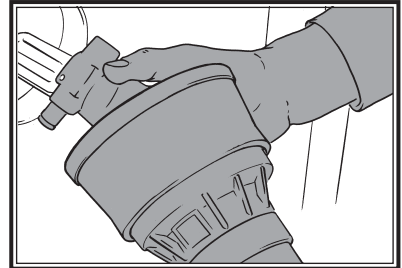
It is very important do not forget place the safety ring.



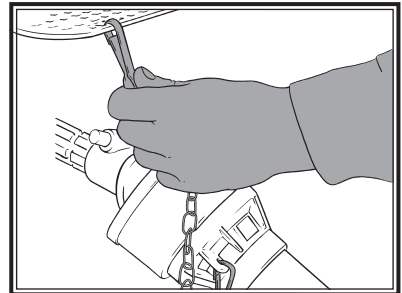
Adjust the tie length to obtain the machine remains parallel to the soil.



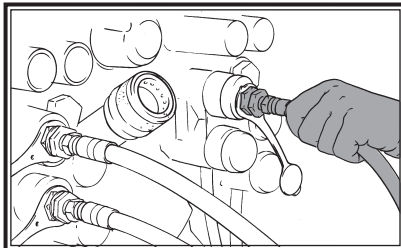
Connect the cardan to the tractor axle.



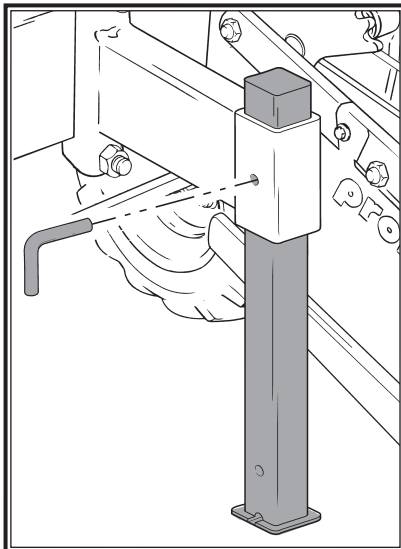
To secure the cardan to the tractor by the backstay.



Connect the machine hydraulic tubes to the tractor joints.

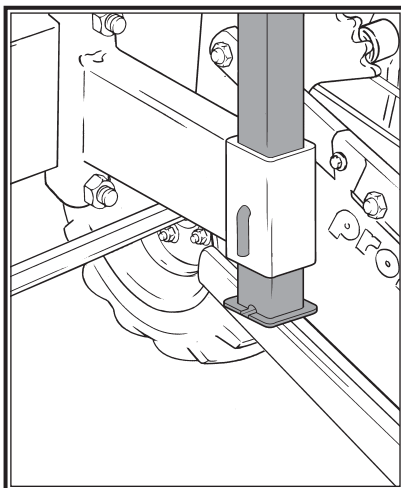


Raise the machine support foot.



VERY IMPORTANT

RAISE SUPPORT FOOT BEFORE TO START THE MACHINE AND DURING THE MACHINE IS WORKING TO AVOID SERIOUS DAMAGES.



5.2 TRANSMISSION ROW EXCLUSION

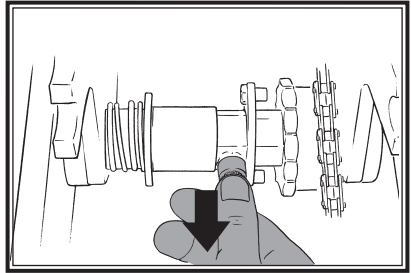
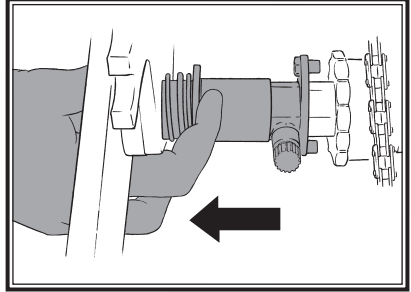


ATTENTION

THE OPERATIONS MUST BE DONE WHEN THE POWER POINT IS DISCONNECTED, TRACTOR ENGINE STOPPED AND THE KEYSWITCH DISCONNECTED.

Displace the clutch as we can see in the drawing.

To connect the transmission draw out the handle and the clutch returns at its place.

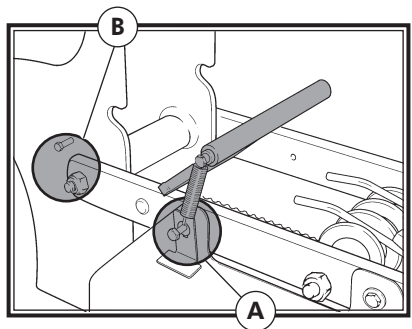


5.3 ELEMENT RAISING TO EXCLUDE IT

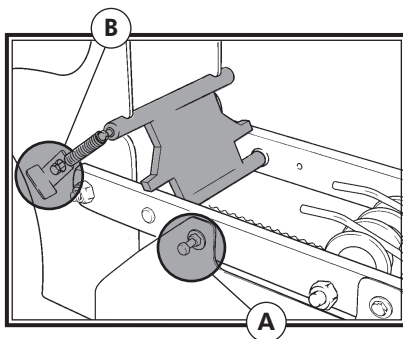
Place the spring in situation A for the row working.

To exclude the row raise the machine to avoid the contact with the soil and coupling the spring in the point B.

Descend the machine until the soil and hold up the row to exclude on a wooden peg of aprox 20 cms.



To uncoupling the row, place the spring in the point A. Place the machine on the soil, supporting the row we want uncouple on a wooden peg.



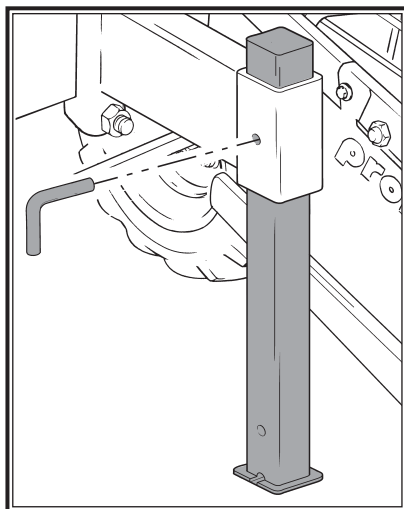
5.4 WORKING END

- Empty out the machine tanks to avoid distributors blockage.
- Clean the machine with water, specially the tanks containing chemical products.
- Verify the machine components condition. Replace them it is necessary.
- Eliminate the particles presence to avoid damages. Paint these zones with anticorrosive products if it is necessary.
- Realise the pieces greasing as shown on anterior drawing.
- Grease transmission chains and gears.

5.5 MACHINE UNCOUPLING

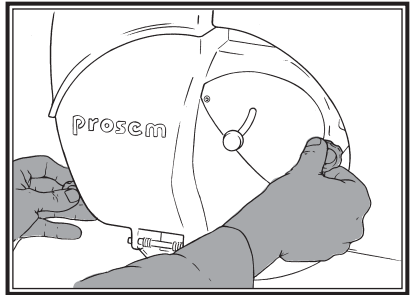
Place the machine support foot.

Change over the steps given in the drawing 5.1.

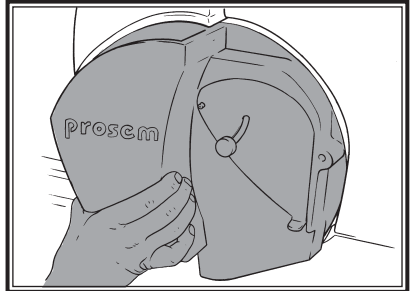


5.6 SOWING DISC REPLACEMENT

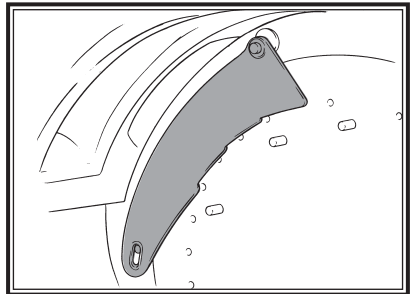
Unscrew the 2 fixation wing nuts.



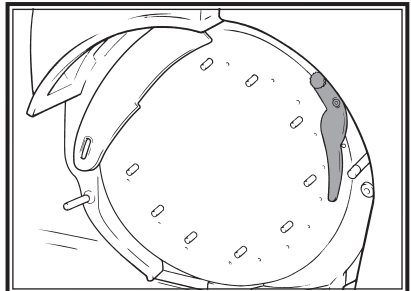
Take out the cover from its position.



Take out the selector from the fastening groove.

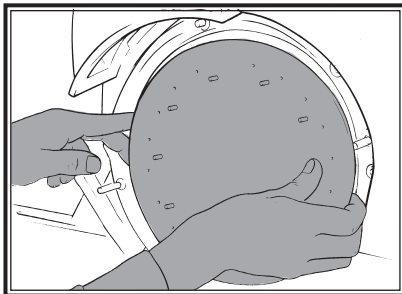


Take out the seeds knot.

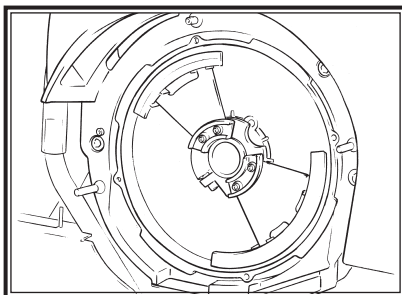


Take hold the disc with the hands and pull for taking out it.

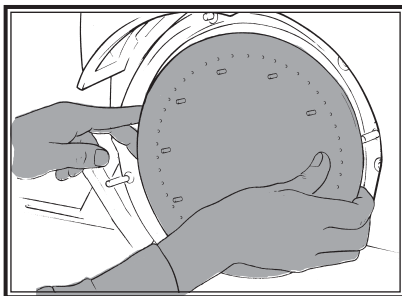
The disc is magnetically fastening.



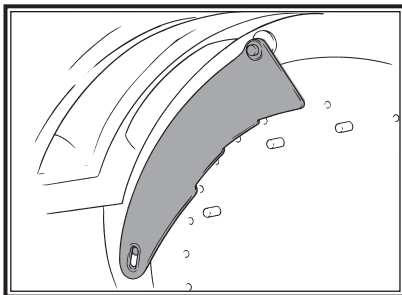
When the sowing disc is out of its place, we can see the distributor vacuum bell.



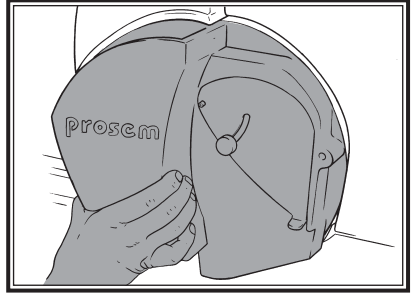
Place the correct sowing disc.



Place the sowing selector and the seed knockout.



Place the cover and tighten it by the 2 wing nuts.



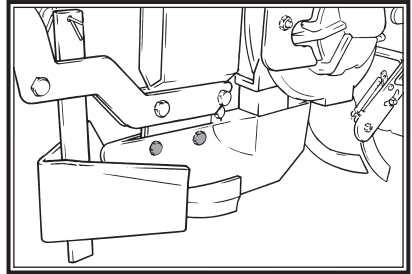
5.7 SOWING BOOTS REPLACEMENT (Prosem P)

Hold the boot.

Slack the 2 screws and the 2 bolts.

Pull and replace it.

Fix it with the same screws and bolts.



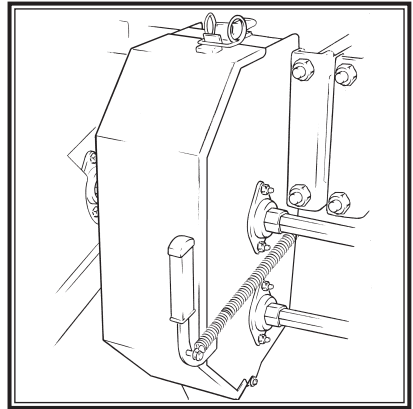
6.- ADJUSTMENTS

6.1 SOWING DISTANCE ADJUSTMENT

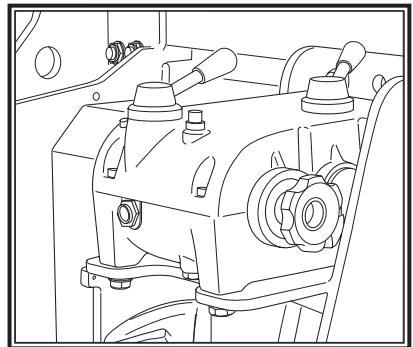
To adjust the distance between plants in the sowing line and also the quantity per hectare to sow, we have to intervene in the machine transmission relation. In order to realise the operation the machine takes a gearbox.

Depending on the machine type, seed drills Prosem takes 2 gearbox types:

1- Traditional gearbox. With chain (see drawing).



2- Automatic gearbox (see drawing).



Depending on the machine gearbox, you are going to use the adjustment table (see points 6.1.1 or 6.1.2). On the tables you can find the relations according the distribution holes number.

Total sowing population (plants number per hectare) is indicated for the machine rows distance and the plants distance (see table).

SEEDS TABLE PER HECTARE

Rows distance (cm)	45	50	55	60	65	70	75	80	90	95
Plants distance (cm)	Plants number per hectare									
2,0	1.111.100	1.000.000	909.100	833.300	769.200	714.300	666.700	625.000	555.600	526.300
2,3	966.200	869.600	790.500	724.600	668.900	621.100	579.700	543.500	483.100	457.700
2,4	925.900	833.300	757.600	694.400	641.000	595.200	555.600	520.800	463.000	438.600
2,6	854.700	769.200	699.300	641.000	591.700	549.500	512.800	480.800	427.400	404.900
2,7	823.000	740.700	673.400	617.300	569.800	529.100	493.800	463.000	411.500	389.900
2,8	793.700	714.300	649.400	595.200	549.500	510.200	476.200	446.400	396.800	375.900
3,0	740.700	666.700	606.100	555.600	512.800	476.200	444.400	416.700	370.400	350.900
3,2	694.400	625.000	568.200	520.800	480.800	446.400	416.700	390.600	347.200	328.900
3,3	673.400	606.100	551.000	505.100	466.200	432.900	404.000	378.800	336.700	319.000
3,4	653.600	588.200	534.800	490.200	452.500	420.200	392.200	367.600	326.800	309.600
3,5	634.900	571.400	519.500	476.200	439.600	408.200	381.000	357.100	317.500	300.800
3,6	617.300	555.600	505.100	463.000	427.400	396.800	370.400	347.200	308.600	292.400
3,7	600.600	540.500	491.400	450.500	415.800	386.100	360.400	337.800	300.300	284.500
3,8	584.800	526.300	478.500	438.600	404.900	375.900	350.900	328.900	292.400	277.000
3,9	569.800	512.800	466.200	427.400	394.500	366.300	341.900	320.500	284.900	269.900
4,0	555.600	500.000	454.500	416.700	384.600	357.100	333.300	312.500	277.800	263.200
4,1	542.000	487.800	443.500	406.500	375.200	348.400	325.200	304.900	271.000	256.700
4,2	529.100	476.200	432.900	396.800	366.300	340.100	317.500	297.600	264.600	250.600
4,3	516.800	465.100	422.800	387.600	357.800	332.200	310.100	290.700	258.400	244.800
4,5	493.800	444.400	404.000	370.400	341.900	317.500	296.300	277.800	246.900	233.900
4,6	483.100	434.800	395.300	362.300	334.400	310.600	289.900	271.700	241.500	228.800
4,7	472.800	425.500	386.800	354.600	327.300	304.000	283.700	266.000	236.400	224.000
4,8	463.000	416.700	378.800	347.200	320.500	297.600	277.800	260.400	231.500	219.300
4,9	453.500	408.200	371.100	340.100	314.000	291.500	272.100	255.100	226.800	214.800
5,0	444.400	400.000	363.600	333.300	307.700	285.700	266.700	250.000	222.200	210.500
5,1	435.700	392.200	356.500	326.800	301.700	280.100	261.400	245.100	217.900	206.400
5,2	427.400	384.600	349.700	320.500	295.900	274.700	256.400	240.400	213.700	202.400
5,3	419.300	377.400	343.100	314.500	290.300	269.500	251.600	235.800	209.600	198.600
5,4	411.500	370.400	336.700	308.600	284.900	264.600	246.900	231.500	205.800	194.900
5,5	404.000	363.600	330.600	303.000	279.700	259.700	242.400	227.300	202.000	191.400
5,6	396.800	357.100	324.700	297.600	274.700	255.100	238.100	223.200	198.400	188.000
5,7	389.900	350.900	319.000	292.400	269.900	250.600	233.900	219.300	194.900	184.700

SEEDS TABLE PER HECTARE

Rows distance (cm)	45	50	55	60	65	70	75	80	90	95
Plants distance (cm)	Plants number per hectare									
5,8	383.100	344.800	313.500	287.400	265.300	246.300	229.900	215.500	191.600	181.500
5,9	376.600	339.000	308.200	282.500	260.800	242.100	226.000	211.900	188.300	178.400
6,0	370.400	333.300	303.000	277.800	256.400	238.100	222.200	208.300	185.200	175.400
6,1	364.300	327.900	298.100	273.200	252.200	234.200	218.600	204.900	182.100	172.600
6,2	358.400	322.600	293.300	268.800	248.100	230.400	215.100	201.600	179.200	169.800
6,3	352.700	317.500	288.600	264.600	244.200	226.800	211.600	198.400	176.400	167.100
6,4	347.200	312.500	284.100	260.400	240.400	223.200	208.300	195.300	173.600	164.500
6,5	341.900	307.700	279.700	256.400	236.700	219.800	205.100	192.300	170.900	161.900
6,6	336.700	303.000	275.500	252.500	233.100	216.500	202.000	189.400	168.400	159.500
6,7	331.700	298.500	271.400	248.800	229.600	213.200	199.000	186.600	165.800	157.100
6,8	326.800	294.100	267.400	245.100	226.200	210.100	196.100	183.800	163.400	154.800
6,9	322.100	289.900	263.500	241.500	223.000	207.000	193.200	181.200	161.000	152.600
7,0	317.500	285.700	259.700	238.100	219.800	204.100	190.500	178.600	158.700	150.400
7,1	313.000	281.700	256.100	234.700	216.700	201.200	187.800	176.100	156.500	148.300
7,2	308.600	277.800	252.500	231.500	213.700	198.400	185.200	173.600	154.300	146.200
7,3	304.400	274.000	249.100	228.300	210.700	195.700	182.600	171.200	152.200	144.200
7,4	300.300	270.300	245.700	225.200	207.900	193.100	180.200	168.900	150.200	142.200
7,5	296.300	266.700	242.400	222.200	205.100	190.500	177.800	166.700	148.100	140.400
7,6	292.400	263.200	239.200	219.300	202.400	188.000	175.400	164.500	146.200	138.500
7,8	284.900	256.400	233.100	213.700	197.200	183.200	170.900	160.300	142.500	135.000
7,9	281.300	253.200	230.100	211.000	194.700	180.800	168.800	158.200	140.600	133.200
8,0	277.800	250.000	227.300	208.300	192.300	178.600	166.700	156.300	138.900	131.600
8,1	274.300	246.900	224.500	205.800	189.900	176.400	164.600	154.300	137.200	130.000
8,2	271.000	243.900	221.700	203.300	187.600	174.200	162.600	152.400	135.500	128.400
8,3	267.700	241.000	219.100	200.800	185.400	172.100	160.600	150.600	133.900	126.800
8,5	261.400	235.300	213.900	196.100	181.000	168.100	156.900	147.100	130.700	123.800
8,6	258.400	232.600	211.400	193.800	178.900	166.100	155.000	145.300	129.200	122.400
8,7	255.400	229.900	209.000	191.600	176.800	164.200	153.300	143.700	127.700	121.000
8,9	249.700	224.700	204.300	187.300	172.900	160.500	149.800	140.400	124.800	118.300
9,0	246.900	222.200	202.000	185.200	170.900	158.700	148.100	138.900	123.500	117.000
9,1	244.200	219.800	199.800	183.200	169.100	157.000	146.500	137.400	122.100	115.700
9,2	241.500	217.400	197.600	181.200	167.200	155.300	144.900	135.900	120.800	114.400

SEEDS TABLE PER HECTARE

Rows distance (cm)	45	50	55	60	65	70	75	80	90	95
Plants distance (cm)	Plants number per hectare									
9,3	238.900	215.100	195.500	179.200	165.400	153.600	143.400	134.400	119.500	113.200
9,4	236.400	212.800	193.400	177.300	163.700	152.000	141.800	133.000	118.200	112.000
9,5	233.900	210.500	191.400	175.400	161.900	150.400	140.400	131.600	117.000	110.800
9,7	229.100	206.200	187.400	171.800	158.600	147.300	137.500	128.900	114.500	108.500
9,9	224.500	202.000	183.700	168.400	155.400	144.300	134.700	126.300	112.200	106.300
10,0	222.200	200.000	181.800	166.700	153.800	142.900	133.300	125.000	111.100	105.300
10,2	217.900	196.100	178.300	163.400	150.800	140.100	130.700	122.500	108.900	103.200
10,3	215.700	194.200	176.500	161.800	149.400	138.700	129.400	121.400	107.900	102.200
10,4	213.700	192.300	174.800	160.300	147.900	137.400	128.200	120.200	106.800	101.200
10,5	211.600	190.500	173.200	158.700	146.500	136.100	127.000	119.000	105.800	100.300
10,6	209.600	188.700	171.500	157.200	145.100	134.800	125.800	117.900	104.800	99.300
10,7	207.700	186.900	169.900	155.800	143.800	133.500	124.600	116.800	103.800	98.400
10,8	205.800	185.200	168.400	154.300	142.500	132.300	123.500	115.700	102.900	97.500
10,9	203.900	183.500	166.800	152.900	141.100	131.100	122.300	114.700	101.900	96.600
11,0	202.000	181.800	165.300	151.500	139.900	129.900	121.200	113.600	101.000	95.700
11,1	200.200	180.200	163.800	150.200	138.600	128.700	120.100	112.600	100.100	94.800
11,4	194.900	175.400	159.500	146.200	135.000	125.300	117.000	109.600	97.500	92.300
11,6	191.600	172.400	156.700	143.700	132.600	123.200	114.900	107.800	95.800	90.700
11,7	189.900	170.900	155.400	142.500	131.500	122.100	114.000	106.800	95.000	90.000
11,8	188.300	169.500	154.100	141.200	130.400	121.100	113.000	105.900	94.200	89.200
12,0	185.200	166.700	151.500	138.900	128.200	119.000	111.100	104.200	92.600	87.700
12,1	183.700	165.300	150.300	137.700	127.100	118.100	110.200	103.300	91.800	87.000
12,2	182.100	163.900	149.000	136.600	126.100	117.100	109.300	102.500	91.100	86.300
12,4	179.200	161.300	146.600	134.400	124.100	115.200	107.500	100.800	89.600	84.900
12,5	177.800	160.000	145.500	133.300	123.100	114.300	106.700	100.000	88.900	84.200
12,7	175.000	157.500	143.200	131.200	121.100	112.500	105.000	98.400	87.500	82.900
12,9	172.300	155.000	140.900	129.200	119.300	110.700	103.400	96.900	86.100	81.600
13,0	170.900	153.800	139.900	128.200	118.300	109.900	102.600	96.200	85.500	81.000
13,2	168.400	151.500	137.700	126.300	116.600	108.200	101.000	94.700	84.200	79.700
13,4	165.800	149.300	135.700	124.400	114.800	106.600	99.500	93.300	82.900	78.600
13,6	163.400	147.100	133.700	122.500	113.100	105.000	98.000	91.900	81.700	77.400
13,8	161.000	144.900	131.800	120.800	111.500	103.500	96.600	90.600	80.500	76.300

SEEDS TABLE PER HECTARE

Rows distance (cm)	45	50	55	60	65	70	75	80	90	95
Plants distance (cm)	Plants number per hectare									
13,9	159.900	143.900	130.800	119.900	110.700	102.800	95.900	89.900	79.900	75.700
14,1	157.600	141.800	128.900	118.200	109.100	101.300	94.600	88.700	78.800	74.700
14,3	155.400	139.900	127.100	116.600	107.600	99.900	93.200	87.400	77.700	73.600
14,4	154.300	138.900	126.300	115.700	106.800	99.200	92.600	86.800	77.200	73.100
14,5	153.300	137.900	125.400	114.900	106.100	98.500	92.000	86.200	76.600	72.600
14,6	152.200	137.000	124.500	114.200	105.400	97.800	91.300	85.600	76.100	72.100
14,7	151.200	136.100	123.700	113.400	104.700	97.200	90.700	85.000	75.600	71.600
14,9	149.100	134.200	122.000	111.900	103.300	95.900	89.500	83.900	74.600	70.600
15,0	148.100	133.300	121.200	111.100	102.600	95.200	88.900	83.300	74.100	70.200
15,6	142.500	128.200	116.600	106.800	98.600	91.600	85.500	80.100	71.200	67.500
15,7	141.500	127.400	115.800	106.200	98.000	91.000	84.900	79.600	70.800	67.000
16,1	138.000	124.200	112.900	103.500	95.600	88.700	82.800	77.600	69.000	65.400
16,2	137.200	123.500	112.200	102.900	95.000	88.200	82.300	77.200	68.600	65.000
16,3	136.300	122.700	111.500	102.200	94.400	87.600	81.800	76.700	68.200	64.600
16,5	134.700	121.200	110.200	101.000	93.200	86.600	80.800	75.800	67.300	63.800
17,1	130.000	117.000	106.300	97.500	90.000	83.500	78.000	73.100	65.000	61.600
17,4	127.700	114.900	104.500	95.800	88.400	82.100	76.600	71.800	63.900	60.500
18,0	123.500	111.100	101.000	92.600	85.500	79.400	74.100	69.400	61.700	58.500
18,1	122.800	110.500	100.500	92.100	85.000	78.900	73.700	69.100	61.400	58.200
18,2	122.100	109.900	99.900	91.600	84.500	78.500	73.300	68.700	61.100	57.800
18,3	121.400	109.300	99.400	91.100	84.100	78.100	72.900	68.300	60.700	57.500
18,6	119.500	107.500	97.800	89.600	82.700	76.800	71.700	67.200	59.700	56.600
19,0	117.000	105.300	95.700	87.700	81.000	75.200	70.200	65.800	58.500	55.400
19,3	115.100	103.600	94.200	86.400	79.700	74.000	69.100	64.800	57.600	54.500
19,4	114.500	103.100	93.700	85.900	79.300	73.600	68.700	64.400	57.300	54.300
20,0	111.100	100.000	90.900	83.300	76.900	71.400	66.700	62.500	55.600	52.600
20,4	108.900	98.000	89.100	81.700	75.400	70.000	65.400	61.300	54.500	51.600
20,8	106.800	96.200	87.400	80.100	74.000	68.700	64.100	60.100	53.400	50.600
21,1	105.300	94.800	86.200	79.000	72.900	67.700	63.200	59.200	52.700	49.900
21,4	103.800	93.500	85.000	77.900	71.900	66.800	62.300	58.400	51.900	49.200
21,7	102.400	92.200	83.800	76.800	70.900	65.800	61.400	57.600	51.200	48.500
21,9	101.500	91.300	83.000	76.100	70.200	65.200	60.900	57.100	50.700	48.100

SEEDS TABLE PER HECTARE

Rows distance (cm)	45	50	55	60	65	70	75	80	90	95
Plants distance (cm)	Plants number per hectare									
22,3	99.700	89.700	81.500	74.700	69.000	64.100	59.800	56.100	49.800	47.200
23,1	96.200	86.600	78.700	72.200	66.600	61.800	57.700	54.100	48.100	45.600
23,5	94.600	85.100	77.400	70.900	65.500	60.800	56.700	53.200	47.300	44.800
23,6	94.200	84.700	77.000	70.600	65.200	60.500	56.500	53.000	47.100	44.600
24,0	92.600	83.300	75.800	69.400	64.100	59.500	55.600	52.100	46.300	43.900
24,3	91.400	82.300	74.800	68.600	63.300	58.800	54.900	51.400	45.700	43.300
24,4	91.100	82.000	74.500	68.300	63.100	58.500	54.600	51.200	45.500	43.100
24,7	90.000	81.000	73.600	67.500	62.300	57.800	54.000	50.600	45.000	42.600
25,7	86.500	77.800	70.700	64.900	59.900	55.600	51.900	48.600	43.200	41.000
26,1	85.100	76.600	69.700	63.900	58.900	54.700	51.100	47.900	42.600	40.300
27,1	82.000	73.800	67.100	61.500	56.800	52.700	49.200	46.100	41.000	38.800
27,5	80.800	72.700	66.100	60.600	55.900	51.900	48.500	45.500	40.400	38.300
27,9	79.600	71.700	65.200	59.700	55.100	51.200	47.800	44.800	39.800	37.700
29,0	76.600	69.000	62.700	57.500	53.100	49.300	46.000	43.100	38.300	36.300
29,1	76.400	68.700	62.500	57.300	52.900	49.100	45.800	43.000	38.200	36.200
30,0	74.100	66.700	60.600	55.600	51.300	47.600	44.400	41.700	37.000	35.100
31,2	71.200	64.100	58.300	53.400	49.300	45.800	42.700	40.100	35.600	33.700
31,4	70.800	63.700	57.900	53.100	49.000	45.500	42.500	39.800	35.400	33.500
32,1	69.200	62.300	56.600	51.900	47.900	44.500	41.500	38.900	34.600	32.800
32,4	68.600	61.700	56.100	51.400	47.500	44.100	41.200	38.600	34.300	32.500
32,6	68.200	61.300	55.800	51.100	47.200	43.800	40.900	38.300	34.100	32.300
32,9	67.500	60.800	55.300	50.700	46.800	43.400	40.500	38.000	33.800	32.000
34,2	65.000	58.500	53.200	48.700	45.000	41.800	39.000	36.500	32.500	30.800
34,7	64.000	57.600	52.400	48.000	44.300	41.200	38.400	36.000	32.000	30.300
36,0	61.700	55.600	50.500	46.300	42.700	39.700	37.000	34.700	30.900	29.200
36,1	61.600	55.400	50.400	46.200	42.600	39.600	36.900	34.600	30.800	29.200
36,4	61.100	54.900	50.000	45.800	42.300	39.200	36.600	34.300	30.500	28.900
36,6	60.700	54.600	49.700	45.500	42.000	39.000	36.400	34.200	30.400	28.800
37,1	59.900	53.900	49.000	44.900	41.500	38.500	35.900	33.700	29.900	28.400
38,0	58.500	52.600	47.800	43.900	40.500	37.600	35.100	32.900	29.200	27.700
40,1	55.400	49.900	45.300	41.600	38.400	35.600	33.300	31.200	27.700	26.300
40,7	54.600	49.100	44.700	41.000	37.800	35.100	32.800	30.700	27.300	25.900

SEEDS TABLE PER HECTARE

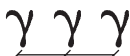
Rows distance (cm)	45	50	55	60	65	70	75	80	90	95
Plants distance (cm)	Plants number per hectare									
42,3	52.500	47.300	43.000	39.400	36.400	33.800	31.500	29.600	26.300	24.900
42,9	51.800	46.600	42.400	38.900	35.900	33.300	31.100	29.100	25.900	24.500
44,6	49.800	44.800	40.800	37.400	34.500	32.000	29.900	28.000	24.900	23.600
47,0	47.300	42.600	38.700	35.500	32.700	30.400	28.400	26.600	23.600	22.400
48,6	45.700	41.200	37.400	34.300	31.700	29.400	27.400	25.700	22.900	21.700
49,5	44.900	40.400	36.700	33.700	31.100	28.900	26.900	25.300	22.400	21.300
51,4	43.200	38.900	35.400	32.400	29.900	27.800	25.900	24.300	21.600	20.500
52,2	42.600	38.300	34.800	31.900	29.500	27.400	25.500	23.900	21.300	20.200
54,3	40.900	36.800	33.500	30.700	28.300	26.300	24.600	23.000	20.500	19.400
55,0	40.400	36.400	33.100	30.300	28.000	26.000	24.200	22.700	20.200	19.100
58,0	38.300	34.500	31.300	28.700	26.500	24.600	23.000	21.600	19.200	18.100
58,3	38.100	34.300	31.200	28.600	26.400	24.500	22.900	21.400	19.100	18.100
60,0	37.000	33.300	30.300	27.800	25.600	23.800	22.200	20.800	18.500	17.500
62,4	35.600	32.100	29.100	26.700	24.700	22.900	21.400	20.000	17.800	16.900
65,1	34.100	30.700	27.900	25.600	23.600	21.900	20.500	19.200	17.100	16.200
65,8	33.800	30.400	27.600	25.300	23.400	21.700	20.300	19.000	16.900	16.000
69,4	32.000	28.800	26.200	24.000	22.200	20.600	19.200	18.000	16.000	15.200
72,0	30.900	27.800	25.300	23.100	21.400	19.800	18.500	17.400	15.400	14.600
73,3	30.300	27.300	24.800	22.700	21.000	19.500	18.200	17.100	15.200	14.400

6.1.1 TRADITIONAL GEARBOX. WITH CHAIN



		DISC HOLES NUMBER								
		10	20	30	40	50	60	70	100	120
POSITION PINION CHANGE	A6	23,6	11,8	7,9	5,9	4,7	3,9	3,4	2,4	2,0
	A5	27,9	13,9	9,3	7,0	5,6	4,6	4,0	2,8	2,3
	B6	31,4	15,7	10,5	7,9	6,3	5,2	4,5	3,1	2,6
	A4	32,1	16,1	10,7	8,0	6,4	5,4	4,6	3,2	2,7
	A3	36,4	18,2	12,1	9,1	7,3	6,1	5,2	3,6	3,0
	B5	37,1	18,6	12,4	9,3	7,4	6,2	5,3	3,7	3,1
	A2	40,7	20,4	13,6	10,2	8,1	6,8	5,8	4,1	3,4
	B4	42,9	21,4	14,3	10,7	8,6	7,1	6,1	4,3	3,6
	C5	44,6	22,3	14,9	11,1	8,9	7,4	6,4	4,5	3,7
	B3	48,6	24,3	16,2	12,1	9,7	8,1	6,9	4,9	4,0
	C4	51,4	25,7	17,1	12,9	10,3	8,6	7,3	5,1	4,3
	B2	54,3	27,1	18,1	13,6	10,9	9,0	7,8	5,4	4,5
	C3	58,3	29,1	19,4	14,6	11,7	9,7	8,3	5,8	4,9
	B1	60,0	30,0	20,0	15,0	12,0	10,0	8,6	6,0	5,0
C2	65,1	32,6	21,7	16,3	13,0	10,9	9,3	6,5	5,4	
C1	72,0	36,0	24,0	18,0	14,4	12,0	10,3	7,2	6,0	

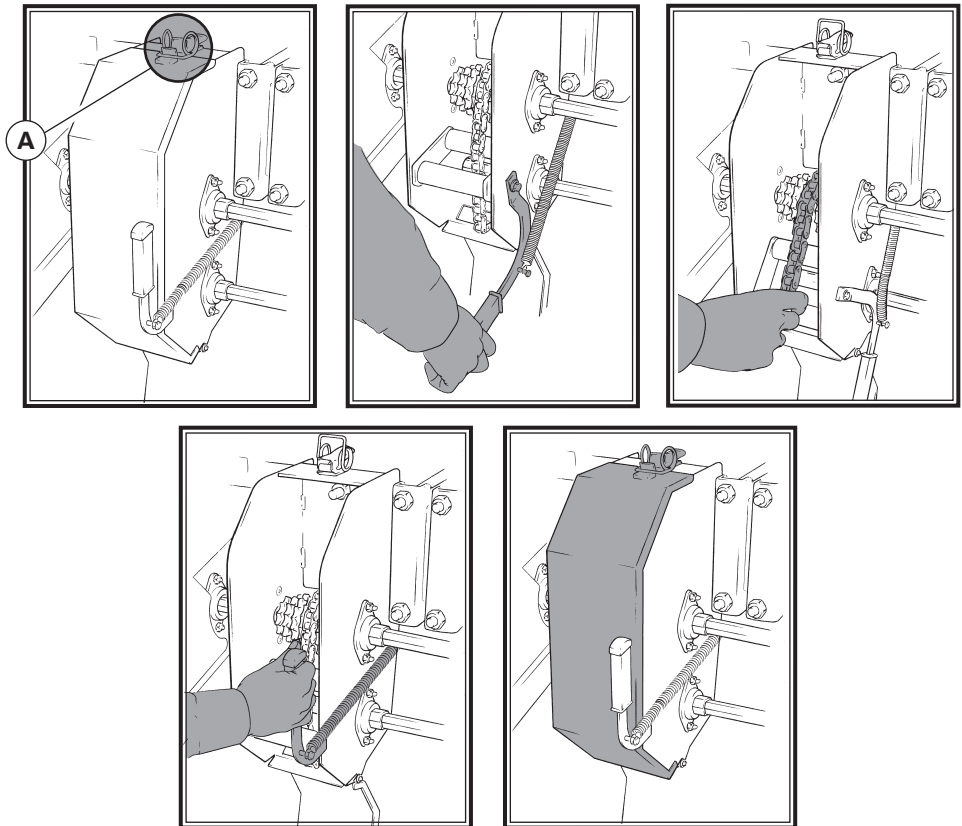
PLANTS DISTANCE (cm)



Before to modify transmission relation, be sure the pinions position is correct respect our disc holes number and the plants distance.

To modify the transmission relation, we are going to do:

- Open the transmission cover by device A.
- Press the lever downwards to slacken the chain.
- Place the chain in the transmission, as the table before. The group of 3 pinions are the words A-B-C and the group of 6 pinions are the numbers 1-2-3-4-5-6.
- Tighten the chain by the lever and leaving it at he initial position.
- Close the cover.

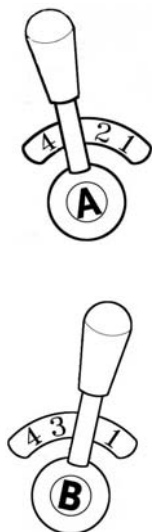
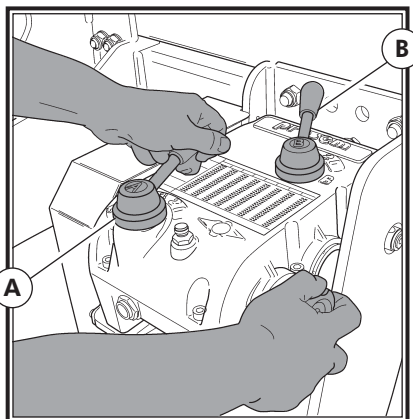


6.1.2 AUTOMATIC GEARBOX

Before to modify the transmission relation, be sure that the levers position of the automatic gearbox is correct with reference to our disc holes number and concerning plants distance.

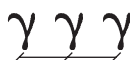
To modify the transmission relation:

- Hang up the machine to avoid contact between the transmission wheels and the soil.
- Place lever "A" in the correct position and turn the wheel in advance direction until the change comes in. Repeat the operation with the lever "B". If after turning 3 or 4 times, the change does not come in, adjust the lever position until the correct point.



LEVER		DISC HOLES NUMBER									
A	B	10	20	30	40	50	60	70	100	120	
1	1	32,4	16,2	10,8	8,1	6,5	5,4	4,6	3,2	2,7	
1	2	34,2	17,1	11,4	8,5	6,8	5,7	4,9	3,4	2,8	
1	3	36,1	18,0	12,0	9,0	7,2	6,0	5,2	3,6	3,0	
1	4	38,0	19,0	12,7	9,5	7,6	6,3	5,4	3,8	3,2	
2	1	40,1	20,0	13,4	10,0	8,0	6,7	5,7	4,0	3,3	
2	2	42,3	21,1	14,1	10,6	8,5	7,0	6,0	4,2	3,5	
2	3	44,6	22,3	14,9	11,1	8,9	7,4	6,4	4,5	3,7	
2	4	47,0	23,5	15,7	11,8	9,4	7,8	6,7	4,7	3,9	
3	1	49,5	24,7	16,5	12,4	9,9	8,2	7,1	4,9	4,1	
3	2	52,2	26,1	17,4	13,0	10,4	8,7	7,5	5,2	4,3	
3	3	55,0	27,5	18,3	13,8	11,0	9,2	7,9	5,5	4,6	
3	4	58,0	29,0	19,3	14,5	11,6	9,7	8,3	5,8	4,8	
4	1	62,4	31,2	20,8	15,6	12,5	10,4	8,9	6,2	5,2	
4	2	65,8	32,9	21,9	16,5	13,2	11,0	9,4	6,6	5,5	
4	3	69,4	34,7	23,1	17,4	13,9	11,6	9,9	6,9	5,8	
4	4	73,3	36,6	24,4	18,3	14,7	12,2	10,5	7,3	6,1	

PLANTS DISTANCE (cm)



6.2 SEED DISTRIBUTION ADJUSTMENT

Three adjustments that have influence in the seed distribution quality are:

1. Selector position with reference to the disc holes. Adjust the selector position depending on the seed to sowing.
2. The position of the seed knockout with reference to the disc holes. To improve the distribution, the Prosem distributor has a pawl to eject the seeds.
3. The suction power (drawdown) existing at the disc level. It is necessary to adapt the suction power to the seed weight to sowing.

6.2.1 SELECTOR ADJUSTMENT

Selector lever adjusts from number 0 to 10. If we turns the lever to a large number, we remove the selector to the hole and we have to increase suction capacity promoting a tendency to doubles. The other way, if we turn the level to a minor number, we approach the selector the sole and we reduce the suction capacity promoting a tendency to the errors.

Advised selector positions:

- Corn: 3,5
- Sunflower: 2,8
- Coated sugar beet: 3,5
- Broad beans: 10 (special selector)
- Cotton: 5
- Beans: 5
- Sorghum: 2,8
- Soybean-peas: 3,5
- Uncoated sugar beet: 3
- Rape: 3,2
- Chickpeas: 7

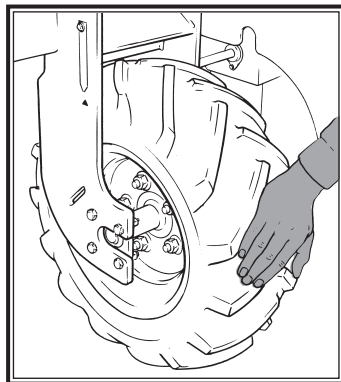


ATTENTION

INDICATED POSITIONS ARE FOR GUIDANCE ONLY, CONTROLS IN THE SOWING BEGINNING AND DURING SOWING ARE ESSENTIAL.

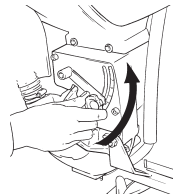
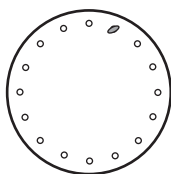
To control selector position, we can do:

1. Raise the machine from the soil.
2. Start the power point.
3. Turn manually the wheels and verify the seed distribution.



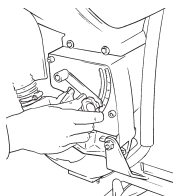
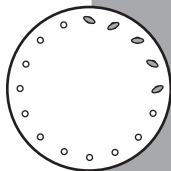
4. Adjust the selector lever position with reference to the seed distribution:

INCORRECT seed position. Mistakes in the distributor.



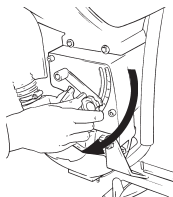
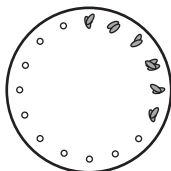
Place the lever in a higher number.

CORRECT seed position.



Fix the lever.

INCORRECT seed position. Distributor makes doubles.



Place lever in a smallest number adjustments.

6.2.2 SEED EJECTOR ADJUSTMENT



CAUTION

Adjustment must be done before loading the hopper.

The seed ejector sets all the seed on the same way into the disc holes and it ejects them in the same place in order to be put with precision into the furrow bed.

To adjust the ejector you must:

- 1- To remove the two fixation handles from the distributor cover (A)
- 2- To remove the distributor cover.
- 3- To slacken the fixation handle from the slipper (B)
- 4- To place the slipper (fig 1), tangent on the outside of the disc hole coinciding with the cutting line of vacuum, see the mark on the slipper. (fig 1)

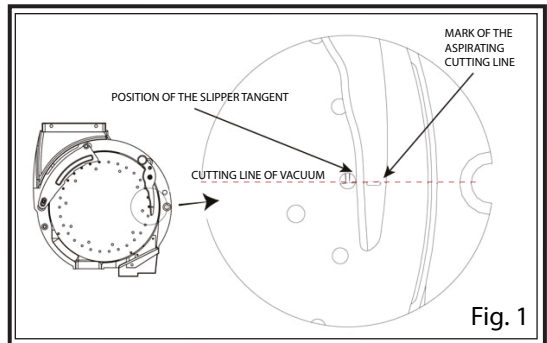
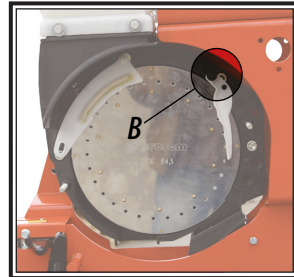
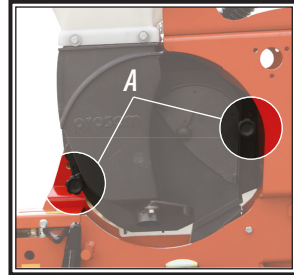
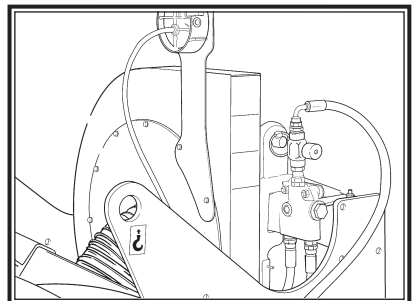


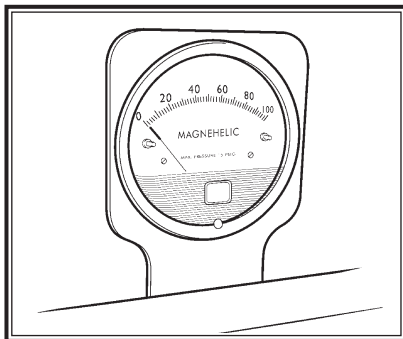
Fig. 1

6.2.3 ADJUSTMENT OF THE ASPIRATION POWER

The aspiration makes the vacuum and it's connected to the distributors by pipes.



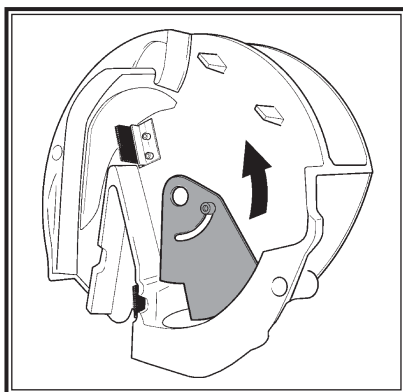
The Vacuummeter is the instrument for the vacuum measuring. The device supplied for the manufacturer shows suction levels between 0 and -100 mbar. Indicative average of the levels, for the big seeds (chickpeas, beans, soya) is between 70 and 80 mbar. For small seeds (beat, sunflower) is between 40 and 50 mbar.



6.2.4 SEED ADJUSTMENT TO THE DISTRIBUTOR

This door allows adjust seed level in the distributor. When we use pilled seeds (exemple beet), disc turn over the seeds can break them.

In this case, close the seed access door to obtain a minimal quantity of seed en contact with the disc in motion.

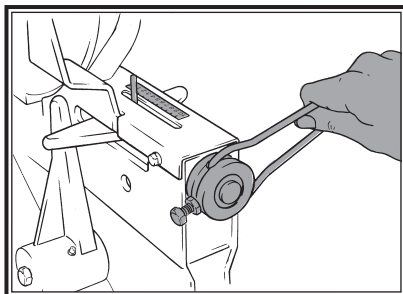


6.3 SEED DEPTH CONTROL

6.3.1. ADJUSTMENT FOR THE MODEL PROSEM K

Realize the operations to each elements on the machine.

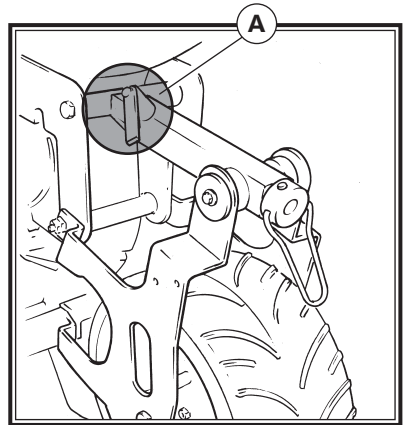
Turn the cranck until obtain the sowing depth shown in the adhesive with scale from 0 to 10.



6.3.2. ADJUSTMENT FOR THE MODEL PROSEM P

Realize the operations to each element on the machine.

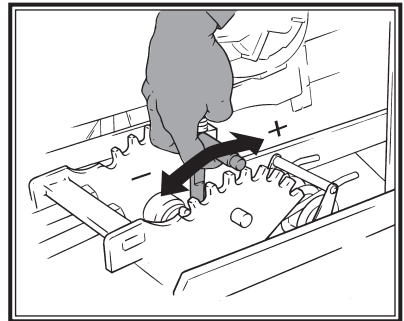
- Slacken the lever A.
- Turn the crank until obtain the sowing depth shown in the adhesive with scale from 0 to 10.
- Fix the position by lever A.



6.4 PRESSURE ELEMENT ADJUSTMENT

For the worked soils , decrease the spring rigidity. For the soils with small preparation, increase the spring rigidity.

Draw upwards the lever positioning device and place it in the correct position for the soil where we are going to work.



ATTENTION

HOLD ON THE LEVER TO AVOID POSSIBLE DAMAGES IN THE HAND.

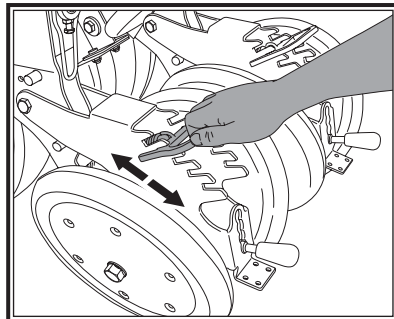
6.5 FURROW CLOSING ADJUSTMENT

The wheel adjustments can be done by two ways:

6.5.1. PRESSURE ADJUSTMENT ON THE SOIL.

For the worked soils , decrease the spring rigidity. For the soils with small preparation, increase the spring rigidity.

Draw upwards the lever positioning device and place it in the correct position for the soil where we are going to work.

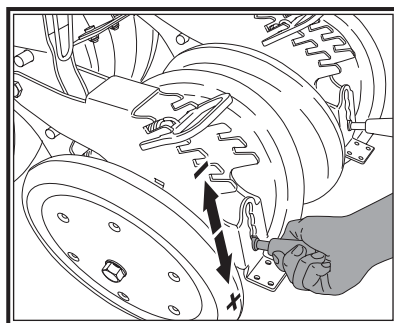


ATTENTION

HOLD ON THE LEVER TO AVOID POSSIBLE DAMAGES IN THE HAND

6.5.2. INCIDENCE ANGLE ADJUSTMENT ON THE SOIL.

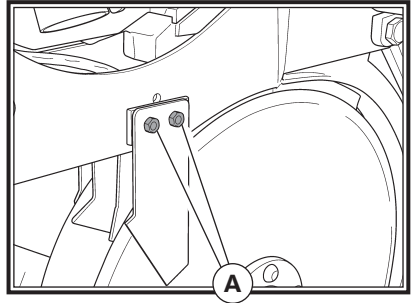
Press the lever inside and place it in the correct position for the soil where we are going to work.



6.6 DISC SCRAPERS ADJUSTMENT. SOWING ROWS PROSEM K

By two bolts (A) adjust the internal and external scrapers position of the disc, the scrapers must be in the correct position and avoid they cause friction too much.

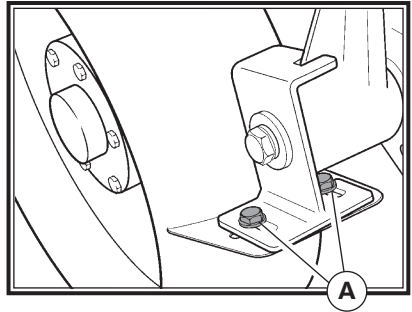
Realize the same operation in the other discs.



6.7 SOWING DEPTH CONTROL ADJUSTMENT OF THE WHEEL SCRAPERS (PROSEM K)

By the bolts (A) adjust the wheel scrapers position in order to adjust them correctly. (aprox. 3-4mm).

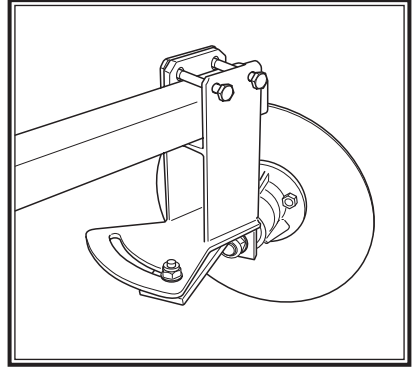
Realize the same operation in the other wheel.



6.8 HYDRAULIC DISC MARKERS ADJUSTMENT

6.8.1. TRACK MARKERS ADJUSTMENT.

Track markers are placed on the frame end with hydraulic motion. For telescopic machines is very important close track markers before machine folding for the transport. Track markers arms are extensible. To calculate the horizontal distance between disc and external row (B), apply the following formula:



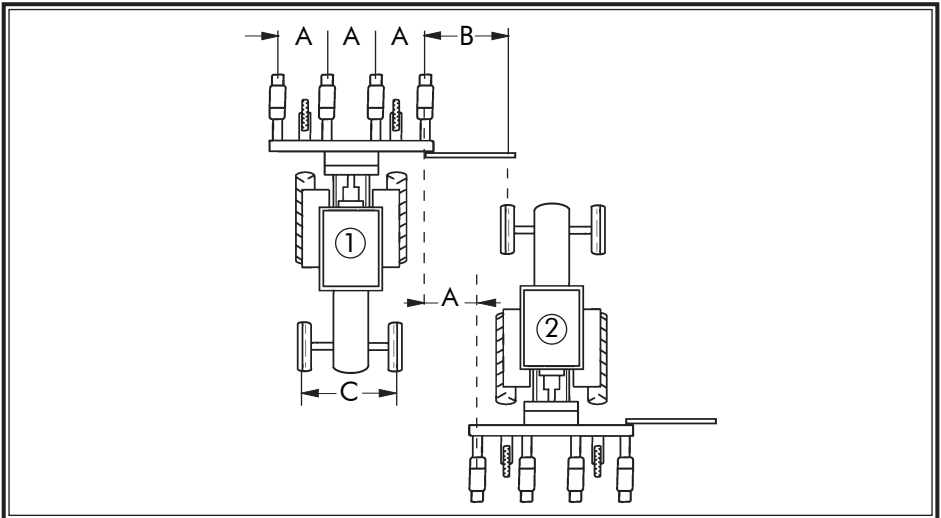
$$B = \frac{A \times (\text{rows distance} + 1) - C}{2}$$

NOTE:

A= distance between rows centre.

B= horizontal distance between disc and external row.

C= tractor way wide.

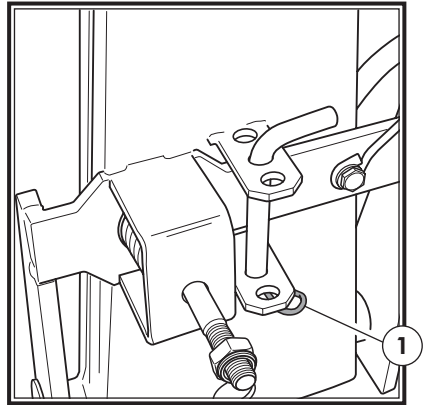


Adjustment allows to maintain the same distance between rows A between race 1 and race 2.

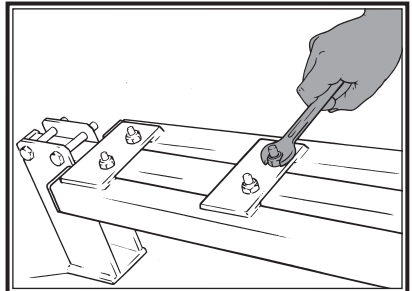
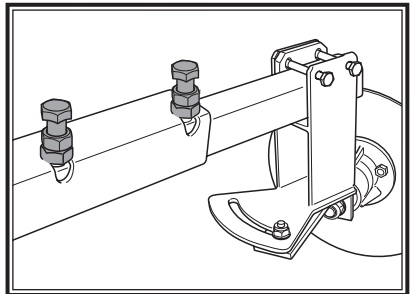
Once calculated the distance B we can adjust the length of the track markers arm.

Draw up the handle (1) and remove the fixing device upwards for unblocking the track markers.

Lower down the track marker.



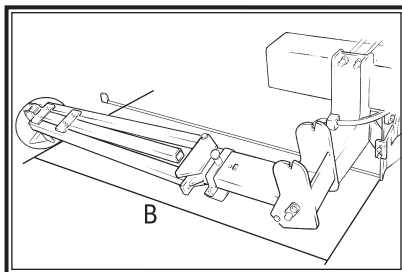
Slacken the fixing bolts.



Place the track marker disc to the distance B .

B= distance between track marker disc and sowing row nearest to the track marker.

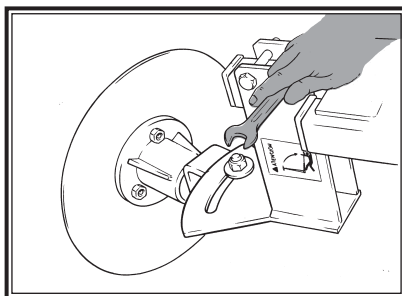
Finally, fix the bolts.



6.8.2. ADJUSTMENT OF THE TRACK MARKER DISC INCLINATION.

Adjust the track marker disc inclination slacking the fixing bolt in order to facilitate the disc incidence on the soil.

Fix the bolt at the end of the operation.



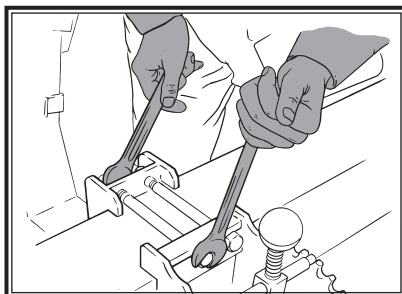
6.9 ROWS DISTANCE ADJUSTMENT

6.9.1. FIX MACHINES

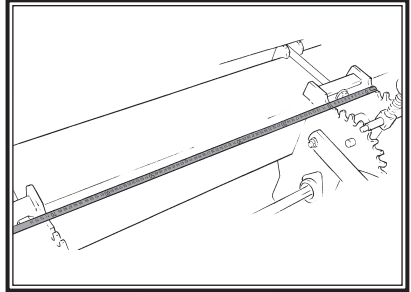
Distance between lines can be regulated depending on the seed we are going to sow.

To adjust the distance in fix machines, operate as following:

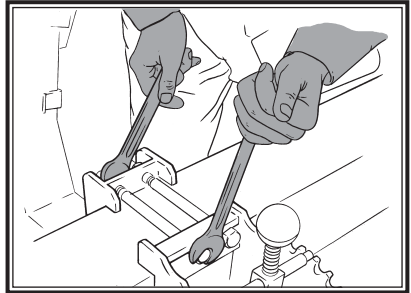
Slacken the bolts by the keys.



By a tape measure, place the rows to the chosen measure.



Fix the rows by the screws.



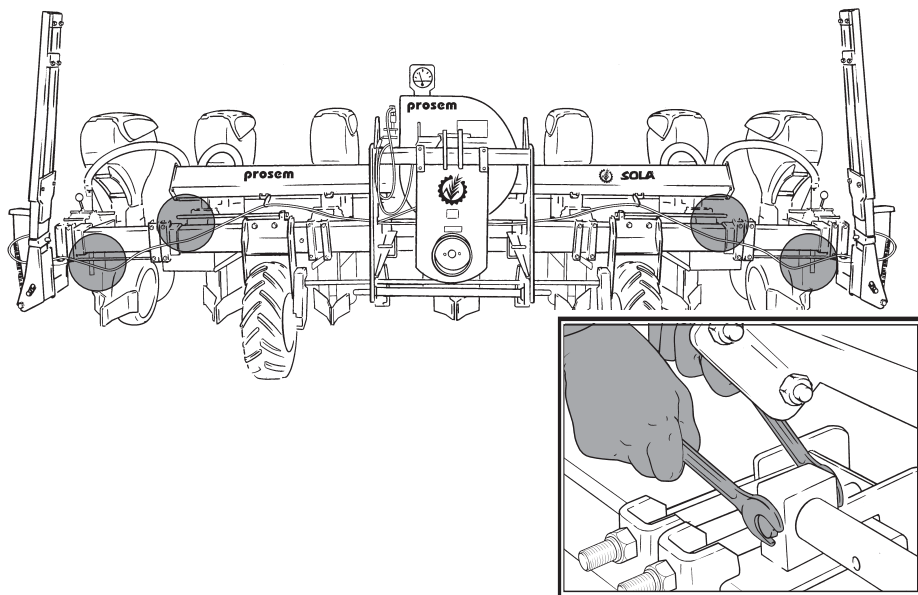
6.9.2 TELESCOPIC MACHINES

Telescopic machines only allow some distance measures between rows. In the following table we find possible measures with the standard machine.

<i>FRAME COMPATIBILITY / ROWS NUMBER / ROWS DISTANCE</i>		
MACHINE MODEL	Distance between rows(cm) in reference with the rows number	
	6 filas	7 filas
TELESCOPIC 250S/6	70-75	
TELESCOPIC 300/6	70-75-80	
TELESCOPIC 300S/7		63-70
TELESCOPIC 330/6	70-75-80	
TELESCOPIC 330/7	70-75-80	55-60
TELESCOPIC 330/7 HIBRID	80	60

To change the rows distance, we are doing:

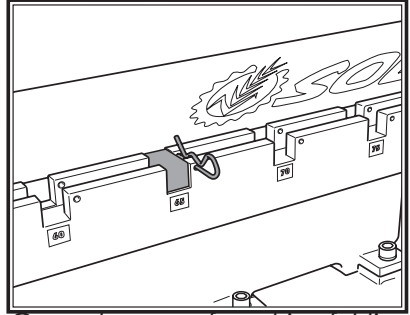
1. Change the fastening point of the central rows (3 and 4 in 6 rows models, 3,4 and 5 in 7 rows models).
2. Adjust 4 opening snug of the lateral rows.



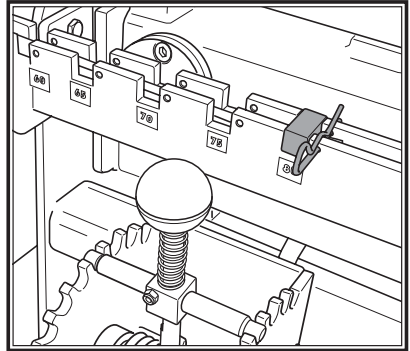
6.9.3 VARIANT MACHINES

Variant machines allow change the distance between sowing rows with a simple and fast operation.

The row distance changement is made by moving the snugs.



General snugs of machine folding



Opening snugs between rows

In the following table you can find the possible measures with standard machine.

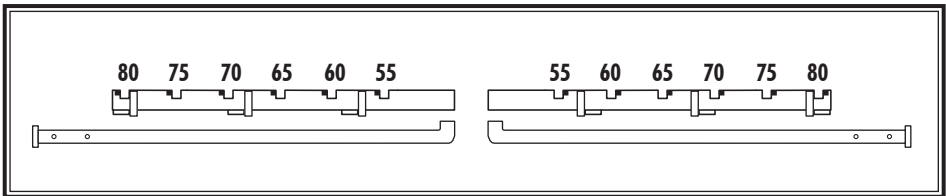
FRAME COMPATIBILITY / ROWS NUMBER / ROWS DISTANCE					
MACHINE MODEL	Rows distance(cm)depending on rows number				
	4 rows	6 rows	7 rows	8 rows	9 rows
VARIANT 300/6 45-75		45-50-55-60-65-70-75			
VARIANT 300/6 50-80		50-55-60-65-70-75-80			
VARIANT 300/6 50-75 4F95	95	50-55-60-65-70-75			
VARIANT 300/7 45-60 6F75-80		75-80	45-50-55-60		
VARIANT 300/7 50-80 DCH			50-55-60-65-70-75-80		
VARIANT 300/8 45-75				45-50-55-60-65-70-75	
VARIANT 330/8 43-80				43-50-55-60-65-70-75-80	
VARIANT 330/9 40-60					40-45-50-55-60

MODELO VARIANT 300/6 45-75

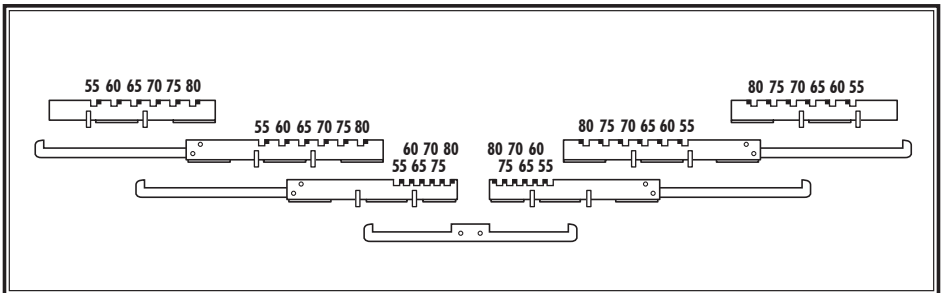
When the machine is folding, rows distance is from 45 cm. Adjusting unfolding snugs we can open the machine to the distance between the following rows: 50, 55, 60, 65, 70, 75. Machine must be completely folding to adjust to avoid serious damages.

To adjust folding snugs:

1. Adjust the 2 general snugs of machine folding.



2. Adjust the 6 opening snugs between rows.

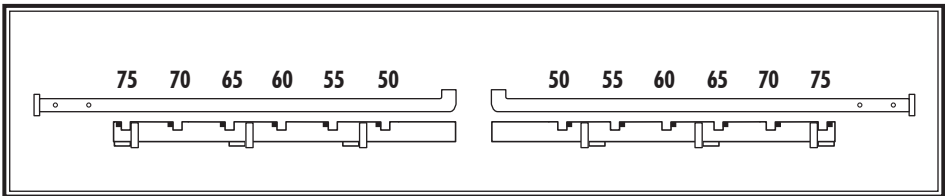


MODELO VARIANT 300/6 50-80

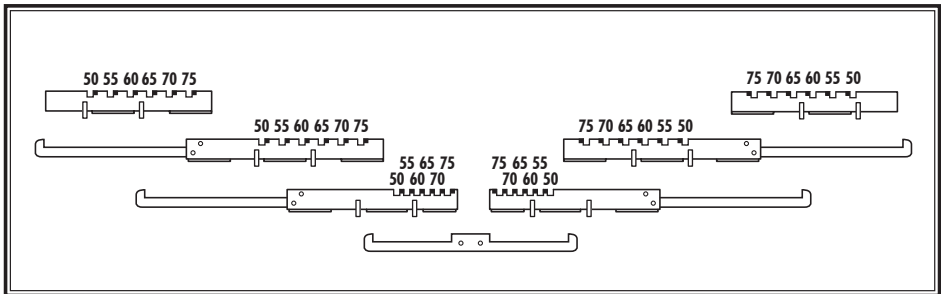
In this model, when the machine is folding, the rows distance is from 50 cm. Adjusting the snugs folding we can open the machine to the distance between the following rows: 60, 65, 70, 75, 80. The machine must be completely folding to adjust to avoid serious damages.

To adjust folding snugs:

1. Adjust the 2 general opening snugs.



2. Adjust the 6 opening snugs between rows.

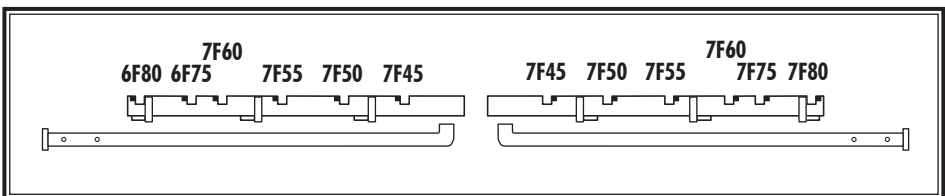


MODEL VARIANT 300 7F45-60 6F75-80

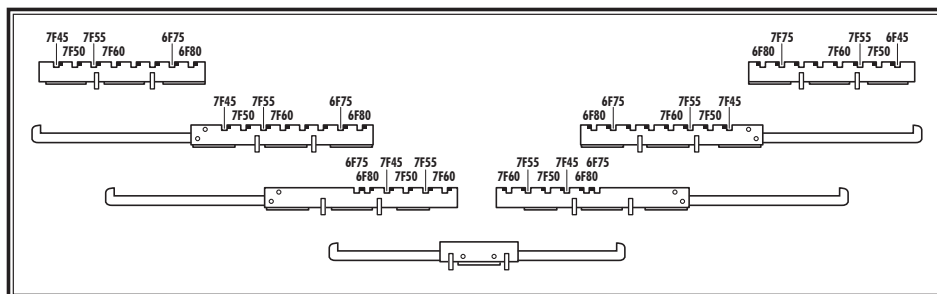
This model allows to sow with 7 rows to 45, 50, 55 and 60 cm between rows. Also we can sow with 6 rows to 75 and 80 cm between rows excluding the central row (see point ...). For doing the adjustment the machine must be completely folding to adjust to avoid serious damages.

To adjust opening snugs:

1. Adjust the 2 general opening snugs.



2. Adjust the 6 opening snugs between rows.



MODEL VARIANT 300 6F50-75 4F95

This model allows to sow with 6 rows to 50, 55, 60, 65, 70 and 75 cm between rows. It allows to sow with 2 distance combination between not equidistant rows (combination "A" and "B"):

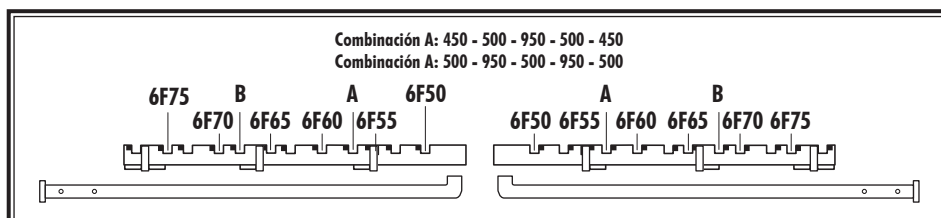
- Combination "A" (distances between rows in cm): 45 – 50 – 95 – 50 – 45
- Combination "B" (distances between rows in cm): 50 – 95 – 50 – 95 – 50

We can sow with 4 rows to 95 cm between rows excluding the rows 2 and 5 (see point...) and placing the snugs in the chosen position with the letter "A".

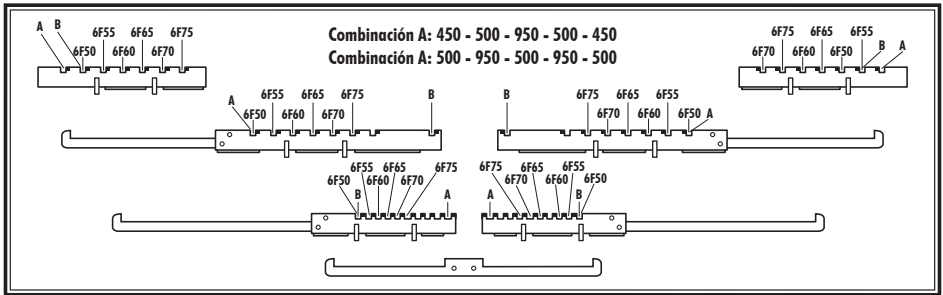
For doing the adjustment the machine must be completely folding to adjust to avoid serious damages.

To adjust opening snugs:

1. Adjust the 2 general opening snugs



2. Adjust the 6 opening snugs between rows.



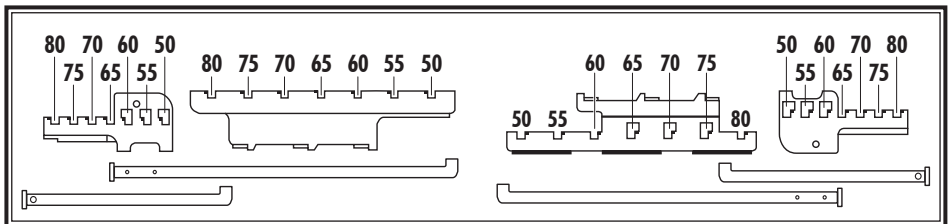
MODELO VARIANT 300/7 50-80 DCH

Adjusting opening snugs we can open the machine choosing the distance between following rows: 50, 55, 60, 65, 70, 75 and 80 cm.

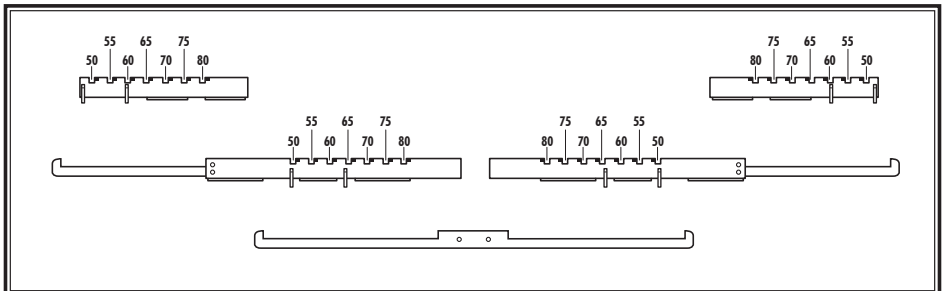
For doing the adjustment the machine must be completely folding to adjust to avoid serious damages.

To adjust opening snugs:

1. Adjust the 4 general opening snugs .



2. Adjust the 4 opening snugs between rows.



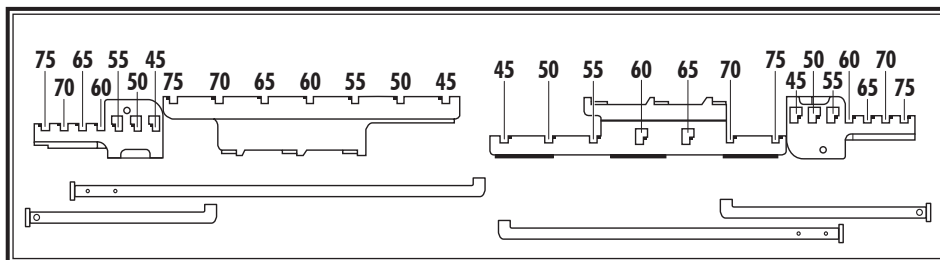
MODEL VARIANT 300/8 45-75

Adjusting opening snugs we can open the machine to the distance between the following rows: 45, 50, 55, 60, 65, 70 and 75 cm.

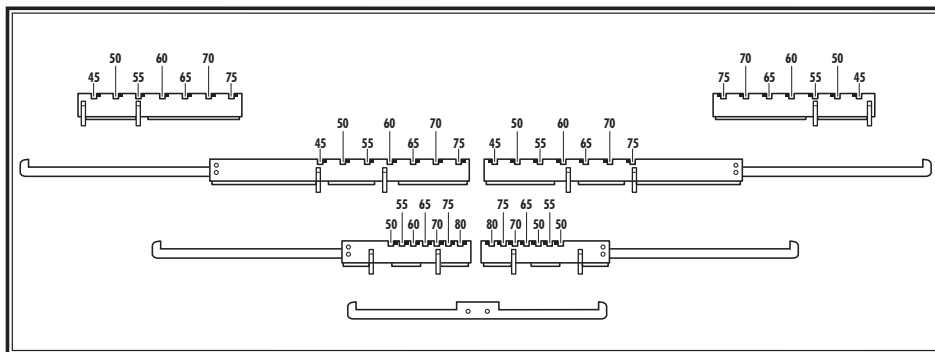
For doing the adjustment the machine must be completely folding to adjust to avoid serious damages.

To adjust opening snugs:

1. Adjust the 4 general opening snugs .



2. Adjust the 4 opening snugs between rows.

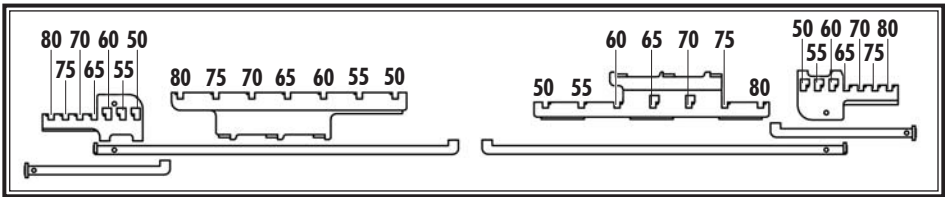


MODELO VARIANT 330/8 43-80

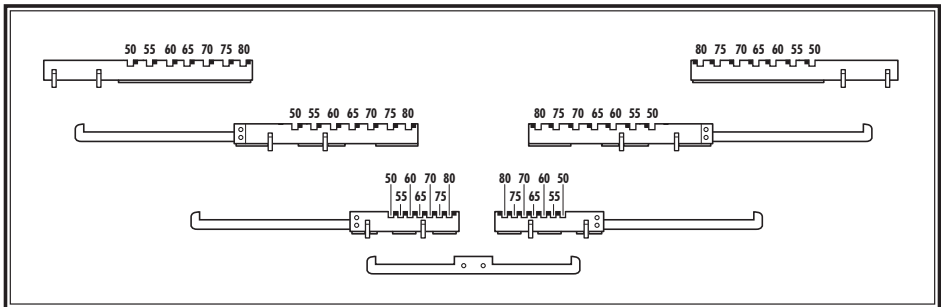
On this model, when the machine is unfolding, distance between rows is 43 cm. Adjusting opening snugs we can open the machine to the following distance between rows: 50, 55, 60, 65, 70, 75 and 80 cm. For doing the adjustment the machine must be completely folding to adjust to avoid serious damages.

To adjust opening snugs:

1. Adjust the 4 general opening snugs.

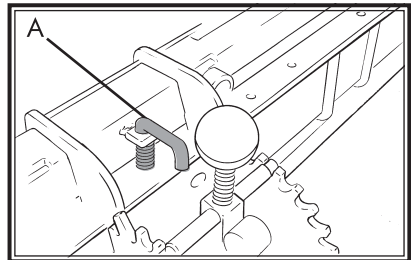


2. Adjust the 4 opening snugs between rows.

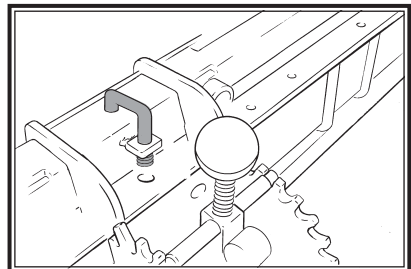


6.9.4. MACHINES VARIANT MANUAL

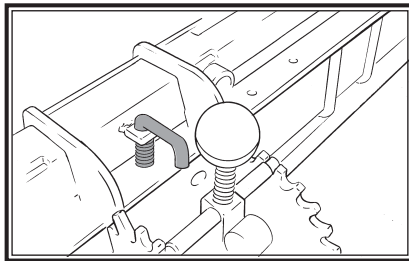
To change the distance between rows, raise the clamp (A).



Place the clamp under the base to make easy the row movement.



For blocking the row, return the clump to the blocking initial position.



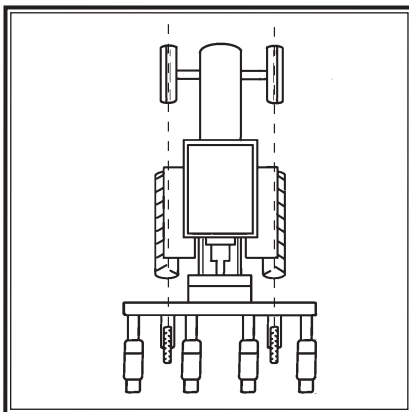
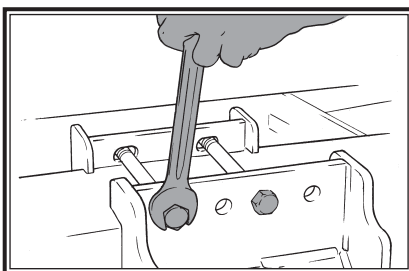
6.10 DISTANCE ADJUSTMENT BETWEEN WHEELS

Wheels have to be fit between 2 rows. Preferably coinciding with tractor wheels.

Slacken the nut of the screws

Place the wheel in the correct situation.

Fix the nuts of the wheels support.



6.11 FERTILIZER ADJUSTMENT

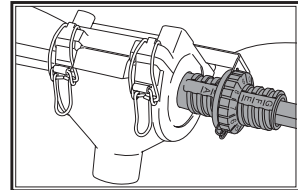
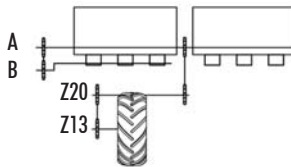
To adjust the fertilizer distribution it is necessary to know the distance between rows, the fertilizer quantity to distribute in each soil hectare and the fertilizer specific weight.

It is very difficult to obtain a very precise regulation due to the fertilizer variety . Density and granulometry are irregular.

To adjust dosage we can find on the following table. The same information is also to be stuck on the cover of the fertilizer hopper.

FERTILIZER SPREADER VOLUMETRIC - Quantity distribution table in Kg/Ha																			
A = 14Z B = 35Z		Distance between the rows																	
		45 cm			50 cm			60 cm			70 cm			75 cm			80 cm		
		Specific weight of the product in kg/dm ³																	
		0,8	1	1,2	0,8	1	1,2	0,8	1	1,2	0,8	1	1,2	0,8	1	1,2	0,8	1	1,2
Adjustment	B/0	42	52	62	37	47	56	31	39	47	27	33	40	25	31	37	23	29	35
	B/5	62	78	94	56	70	84	47	59	70	40	50	60	37	47	56	35	44	53
	C/0	80	100	120	72	90	108	60	75	90	51	64	77	48	60	72	45	56	68
	C/5	104	130	156	94	117	140	78	98	117	67	84	100	62	78	94	59	73	88
	D/0	126	157	188	113	141	170	94	118	141	81	101	121	75	94	113	71	88	106
	D/5	141	176	211	127	158	190	106	132	158	91	113	136	84	106	127	79	99	119
	E/0	158	198	238	143	178	214	119	149	178	102	127	153	95	119	143	89	111	134
	E/5	175	219	263	158	197	237	131	164	197	113	141	169	105	131	158	99	123	148
	F/0	203	254	305	183	229	274	152	191	229	131	163	196	122	152	183	114	143	171
	F/5	221	276	331	199	248	298	166	207	248	142	177	213	132	166	199	124	155	186
	G/0	238	298	358	215	268	322	179	224	268	153	192	230	143	179	215	134	168	201
G/5	259	324	389	233	292	350	194	243	292	167	208	250	156	194	233	146	182	219	
G/10	277	346	415	249	311	374	208	260	311	178	222	267	166	208	249	156	195	234	

TRANSMISSION
FERTILIZER SPREADER



FERTILIZER SPREADER VOLUMETRIC - Quantity distribution table in Kg/Ha																			
A = 25Z B = 25Z		Distance between the rows																	
		45 cm			50 cm			60 cm			70 cm			75 cm			80 cm		
		Specific weight of the product in kg/dm ³																	
		0,8	1	1,2	0,8	1	1,2	0,8	1	1,2	0,8	1	1,2	0,8	1	1,2	0,8	1	1,2
Adjustment	B/0	103	129	155	93	116	139	77	97	116	66	83	100	62	77	93	58	73	87
	B/5	157	196	235	141	176	212	118	147	176	101	126	151	94,1	118	141	88,2	110	132
	C/0	201	251	301	181	226	271	151	188	226	129	161	194	120	151	181	113	141	169
	C/5	259	324	389	233	292	350	194	243	292	167	208	250	156	194	233	146	182	219
	D/0	314	393	472	283	354	424	236	295	354	202	253	303	189	236	283	177	221	265
	D/5	352	440	528	317	396	475	264	330	396	226	283	339	211	264	317	198	248	297
	E/0	397	496	595	357	446	536	298	372	446	255	319	383	238	298	357	223	279	335
	E/5	438	547	656	394	492	591	328	410	492	281	352	422	263	328	394	246	308	369
	F/0	509	636	763	458	572	687	382	477	572	327	409	491	305	382	458	286	358	429
	F/5	551	689	827	496	620	744	413	517	620	354	443	532	331	413	496	310	388	465
	G/0	595	744	893	536	670	804	446	558	670	383	478	574	357	446	536	335	419	502
G/5	649	811	973	584	730	876	487	608	730	417	521	626	389	487	584	365	456	547	
G/10	692	865	1038	623	779	934	519	649	779	445	556	667	415	519	623	389	487	584	

Distribution adjustment is placed in each distributor under the hopper. We can adjust the distributor by a wheel turn placed on each distributor side (see photo). The control scale goes from letter A to letter E, having for each letter 10 numbers. It is not advisable adjustments in inferior positions to B/0 causing irregular distributions.

Equipment is fit with a double gearing that allow change the distribution transmission. By this way, we can obtain more dosage possibilities. On the table we can find two possible transmissions: A=11Z B=26Z or A=18Z B=18Z.

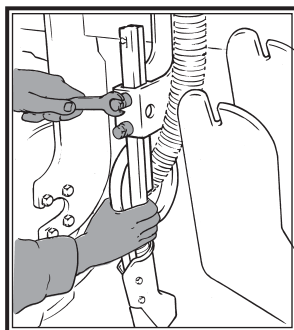
6.12 FERTILIZER BOOT ROW ADJUSTMENT

6.12.1 FERTILIZER DEPTH CONTROL.

Slacken the 2 lock nuts and the 2 screws.

Adjust the boot position of the sowing depth.

Slacken the screws and the lock nuts.

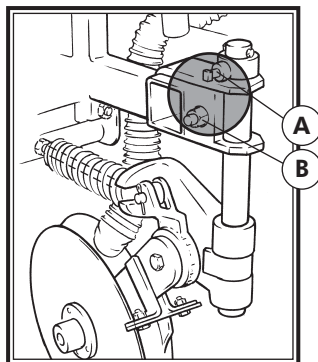


6.12.2 ADJUSTMENT OF THE FERTILIZER DOUBLE DISC DEPTH.

It can be adjusted by two ways:

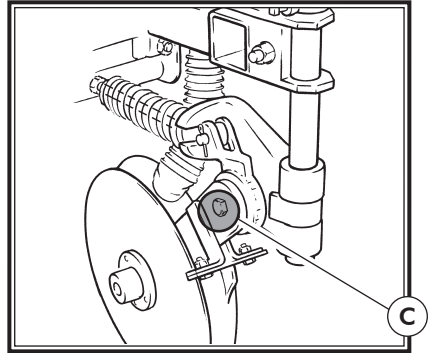
1: Rod position.

- Slacken screw s A and B.
- Place the rod in the correct position.
- Fix the two screws.



2: Position of the double disc rod.

- Slacken the screw C.
- Place the correct rod angle.
- Fix the screw.



6.12.3 ADJUSTMENT OF THE FERTILIZER ROW LOCATION

Fertilizer rows are fitted in the factory with a distance from 5 to 9 cm between sowing row and fertilizer row.



IMPORTANT

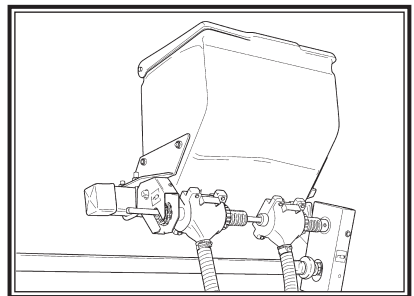
BEFORE TO SOW, BE SURE THE DISTANCES BETWEEN SOWING ROWS AND FERTILIZER ROWS ARE CORRECT, BUT THEY CAN CHANGE DURING TRANSPORT AND STORAGE.

6.13 MICROGRANULATOR ADJUSTMENT

To adjust microgranulator distribution we have to know the distance between rows, product quantity to distribute en each soil hectare and the product specific weight

It is very difficult to obtain a very precise regulation due to the fertilizer variety . Density and granulometry are irregular.

To adjust dosage we can find on the following table. The same information is also to sticked on the cover of the fertilizer hopper.

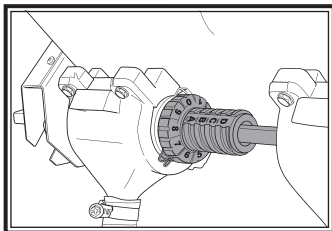
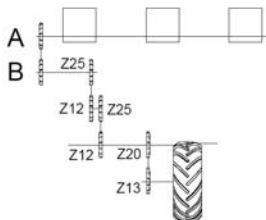


ADJUSTMENTS

MICROGRANULATOR - Quantity distribution table in Kg/Ha

A = 22Z B = 12Z		Distance between the rows																	
		45 cm			50 cm			60 cm			70 cm			75 cm			80 cm		
		Specific weight of the product in kg/dm ³																	
		0,8	1	1,2	0,8	1	1,2	0,8	1	1,2	0,8	1	1,2	0,8	1	1,2	0,8	1	1,2
Adjustment	A/6	3,6	4,5	5,4	3,3	4,1	4,9	2,7	3,4	4,1	2,3	2,9	3,5	2,2	2,7	3,3	2,0	2,6	3,1
	A/8	3,8	4,8	5,7	3,4	4,3	5,2	2,9	3,6	4,3	2,5	3,1	3,7	2,3	2,9	3,4	2,2	2,7	3,2
	B/0	4,6	5,8	7,0	4,2	5,2	6,3	3,5	4,3	5,2	3,0	3,7	4,5	2,8	3,5	4,2	2,6	3,3	3,9
	B/5	5,8	7,3	8,8	5,3	6,6	7,9	4,4	5,5	6,6	3,8	4,7	5,6	3,5	4,4	5,3	3,3	4,1	4,9
	C/0	7,3	9,1	10,9	6,5	8,2	9,8	5,4	6,8	8,2	4,7	5,8	7,0	4,4	5,4	6,5	4,1	5,1	6,1
	C/5	8,7	10,8	13,0	7,8	9,8	11,7	6,5	8,1	9,8	5,6	7,0	8,4	5,2	6,5	7,8	4,9	6,1	7,3
	D/0	10,1	12,6	15,1	9,1	11,3	13,6	7,6	9,5	11,3	6,5	8,1	9,7	6,1	7,6	9,1	5,7	7,1	8,5
	D/5	11,3	14,1	16,9	10,2	12,7	15,2	8,5	10,6	12,7	7,3	9,1	10,9	6,8	8,5	10,2	6,4	7,9	9,5
	E/0	12,5	15,6	18,8	11,3	14,1	16,9	9,4	11,7	14,1	8,0	10,0	12,1	7,5	9,4	11,3	7,0	8,8	10,6
E/5	13,3	16,6	20,0	12,0	15,0	18,0	10,0	12,5	15,0	8,6	10,7	12,8	8,0	10,0	12,0	7,5	9,4	11,2	

TRANSMISSION
MICRO



A = 12Z B = 22Z		Distance between the rows																	
		45 cm			50 cm			60 cm			70 cm			75 cm			80 cm		
		Specific weight of the product in kg/dm ³																	
		0,8	1	1,2	0,8	1	1,2	0,8	1	1,2	0,8	1	1,2	0,8	1	1,2	0,8	1	1,2
Adjustment	B/0	16	19	23	14	18	21	12	15	18	10	13	15	9	12	14	9	11	13
	B/5	20	25	29	18	22	27	15	18	22	13	16	19	12	15	18	11	14	17
	C/0	24	31	37	22	27	33	18	23	27	16	20	24	15	18	22	14	17	21
	C/5	29	36	44	26	33	39	22	27	33	19	23	28	17	22	26	16	20	25
	D/0	34	42	51	31	38	46	25	32	38	22	27	33	20	25	31	19	24	29
	D/5	38	47	57	34	43	51	28	36	43	24	31	37	23	28	34	21	27	32
	E/0	42	53	63	38	47	57	32	39	47	27	34	41	25	32	38	24	30	35
	E/5	45	56	67	40	50	60	34	42	50	29	36	43	27	34	40	25	31	38

Distribution adjustment is placed in each distributor under the hopper. We can adjust distributor by a wheel turn placed on each distributor side. (see photo).

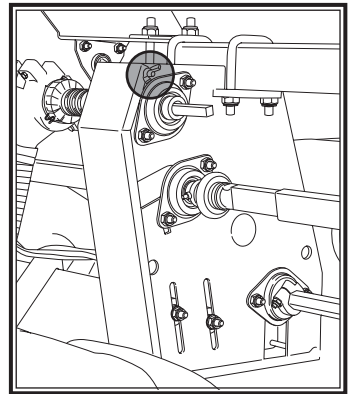
Adjustment scale goes from letter A to letter E, having 10 numbers for each letter. . It is not advisable adjustments in inferior positions to B/0 causing irregular distributions.

Equipment is fit with a double gearing that allow change the distribution transmission. By this way, we can obtain more dosage possibilities. On the table we can find two possible transmissions: A=11Z B=26Z or A=18Z B=18Z.

6.13.1 TRANSMISSION CHANGE (A=12Z B=22Z Y A=22Z B=12Z)

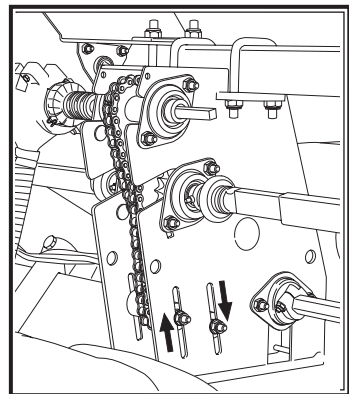
Take away the superior screw of the cover of the transmission box.

Turn the cover downwards.



Slacken the tightener by the keys.

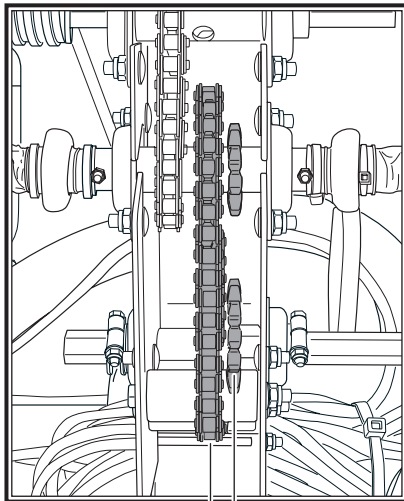
Press the tightener downward to slacken the chain.



Change the chain position.

Draw the chain by 2 tighteners.

To finish, fix the tightener position by the fixing nut.



A = Z22

B = Z12

A = Z12

B = Z22

7.- MAINTENANCE

7.1 SCREWS JOINTS

All screw joints have to be controlled and tighten after first 8 working hours.

7.2 WHEELS PRESSURE

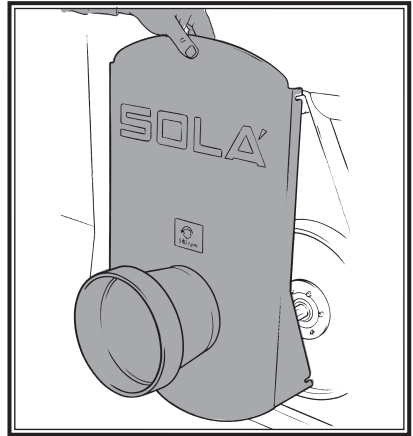
Control the wheel pressure before using the machine.

WHEELS	PRESSURE
5,00 - 15'' 4PR	1,5 bar
23x8,50 - 12'' 4PR	1,5 bar
23x8,50 - 12'' 6PR	2 bar
23x8,50 - 12'' 8PR	2,5 bar
23x10,50 - 12'' 4PR	1,5 bar
23x10,50 - 12'' 8PR	2,5 bar
26x12 - 12'' 8PR	2,5 bar

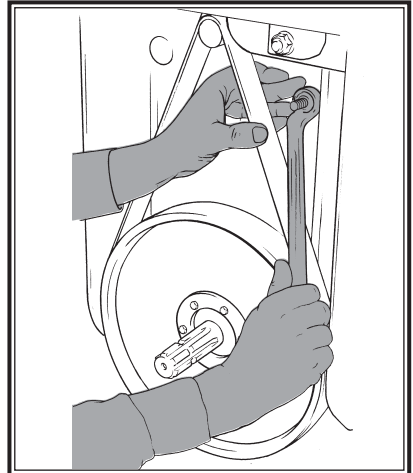
7.3 BELT TRANSMISSION ADJUSTMENT

Slacken the 4 cover wing nuts.

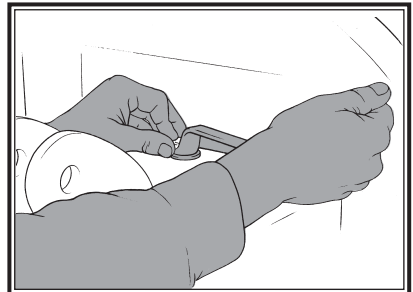
Take out the cover.



Slacken the tightener 4 nuts.



Slacken the transmission belt by a superior screw.



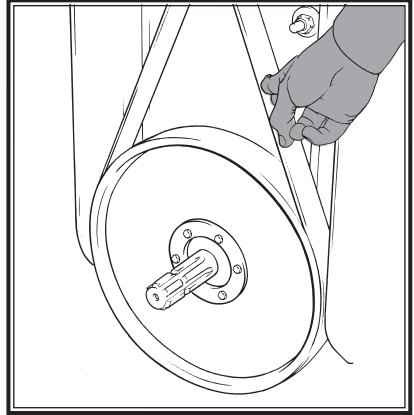
Control the belt stretched pressing on the belt.

Flexion about 2 mm. aprox.

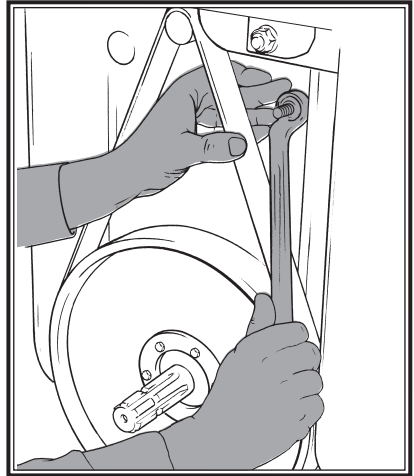


WARNING

COMPRESSING WITH A CHARGE OF 5 KG. ON THE EQUIDISTANT POINT OF THE PULLEYS AXLES WE CAN CONTROL THE BELT TENSION.



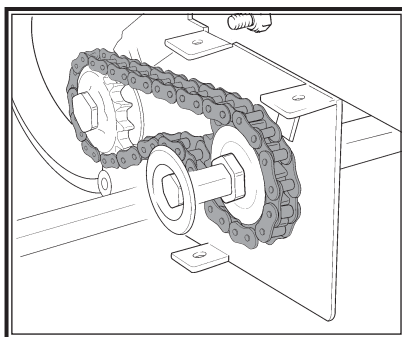
Fix the 4 tightener nuts.



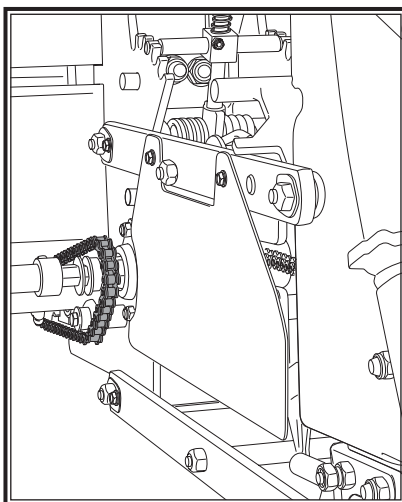
7.4 TRANSMISSION CHAINS

For a correct functioning of the chain transmission it is important grease the transmission . The majority of the transmission chains take automatic tighteners with spring and it is not necessary to draw the chain. It exists some chain transmissions with fix tighteners to draw:

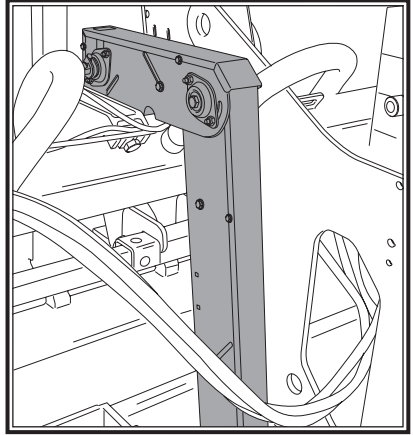
Gearbox central transmission.



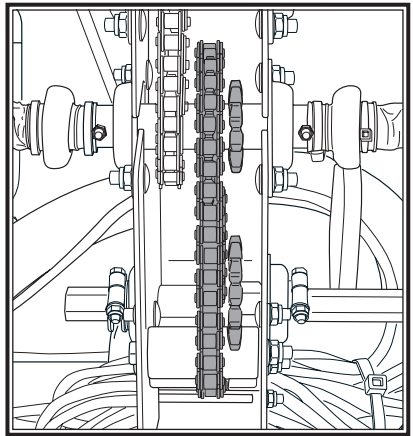
Rows central transmission.



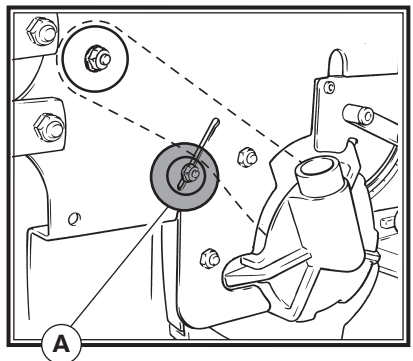
Transmission in "V" micro and fertilizer.



Doble transmission z12-z22 micro.



Prosem P row transmission.



To draw tighteners:

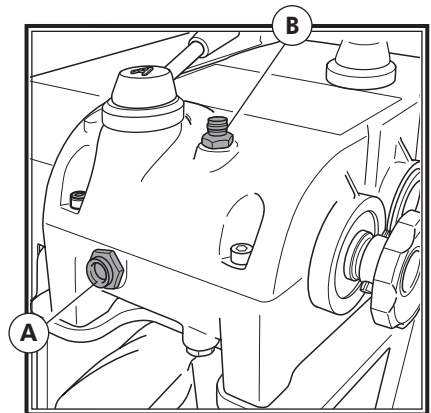
- Take out fixing nuts and take out the covers.
- Slacken the tighteners by two keys.
- Press the tighteners towards the chain to obtain a good draw.

7.5 AUTOMATIC GEARBOX

Control oil level by level small window (B).

With a low level in the gearbox, take out the cap (A) and fill in.

Oil changing each 2 years. Use type SAE 30.



7.6 CLEAN THE MACHINE

To clean the machine we can use water or a high pressure cleaner.



ATTENTION

IN THE CASE TO CLEAN THE HOPPER WITH COMPRESSED AIRE, PAY ATTENTION WITH THE TOXIC POWDERS.

7.7 GREASING POINTS

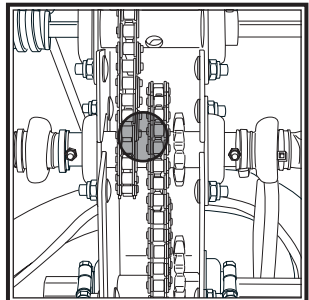
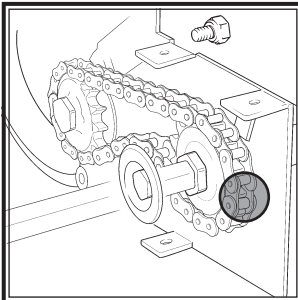
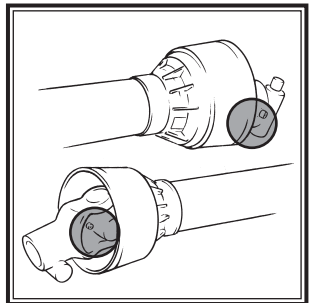
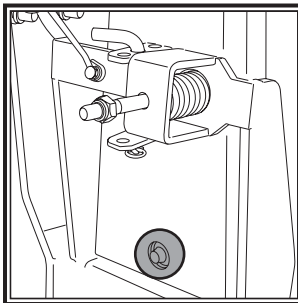
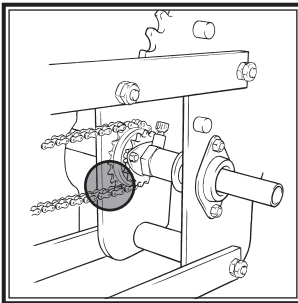
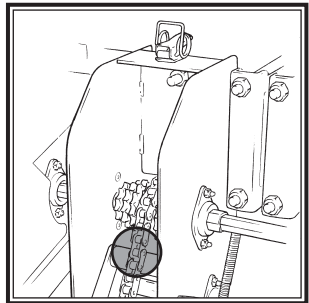
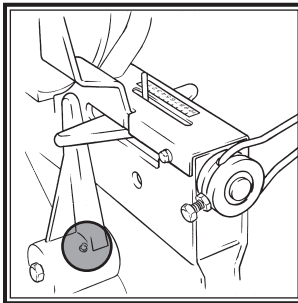
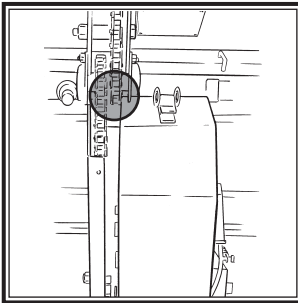
ATTENTION



GREASE THE ROLLER CHAINS AT THE END OF THE SEASON OR AFTER A LONG PERIOD WITHOUT USE.. FIRT, TAKE OUT THE CHAIN PROTECTORS, GREASE AND PLACE THE PROTECTOR.



THE GREASE POINTS OF THE MACHINE MUST BE GREASED EACH 50 WORKING HOURS TO AVOID SERIOUS DAMAGES IN THE MACHINE..



7.8 MAINTENANCE TABLE

A good maintenance of the machine secure a good working and a long life for the machine.



ATTENTION

THESE OPERATIONS MUST BE DONE DISCONNECTING THE POWER POINT, STOPPING THE TRACTOR ENGINE AND DISCONNECTING THE KEYSWITCH.

Find on this table the maintenance operations to realise often:

Supervision zone	Operation	Hours			
		8	50	100	500
Machine organs	Grease.		●		
	Slacken machine screws.	●*			
Fan	Belt adjustment.				●
Wheels	Control presión neumáticos.			●	
Transmisiones de cadena	Transmission chains grease.			●	
	Transmission chains adjustment				●
Chain traditional gearbox	Pinions and chain grease.			●	
Distributor	Transmission chain grease.			●	
	Transmission chain adjustment. (Prosem P).				●
Automatic gearbox	Oil removing.	Each 2 years			

(*) Realise after first 8 hours of the machine working.



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