

Instruction Manual



GSPCR-E

Wheel Type Offset Disc Harrow Remote Control - Reavy Duty Special



■ Presentation

We appreciate your preference and congratulate you for the Excellent choice you have just made, as you have purchased a product manufactured with **BALDAN**



IMPLEMENTOS AGRÍCOLAS S/A.

This manual will guide you through the procedures that are necessary since its acquisition until the operating procedures of use, safety and maintenance.

BALDAN guarantees that it delivered this implement to the reseller complete and in perfect condition.

The resale is accountable for the custody and maintenance during the period it was in its power, and also for assembly, retightening, lubrication and overhaul.

In technical delivery, the dealer should guide the user customer regarding maintenance, security, their obligation to possible technical assistance, the strict observance of the warranty and reading the instructions manual.

Any request for technical assistance under warranty must be made to the dealer where it was purchased.

We reiterate the need for careful reading of the warranty certificate and the observance of all items in this manual, because doing so will increase the life of your implement.

Instruction Manual



GSPCR-E

Wheel Type Offset Disc Harrow Remote Control - Heavy Duty Special

BALDAN IMPLEMENTOS AGRÍCOLAS S/A.

CNPJ: 52.311.347/0009-06

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Scan the QR Code on the nameplate of your equipment and access this instruction Manual online.



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▪ **Baldan Warranty**

BALDAN IMPLEMENTOS AGRÍCOLAS S/A guarantees the normal operation of the implement to the dealer for a period of 6 (six) months from the date of delivery on the resale invoice to the first end consumer.

During this period, **BALDAN** undertakes to remedy defects in materials and/or workmanship of its responsibility, being labor, freight and other expenses the dealer's responsibilities.

During the warranty period, the request and replacement of any defective parts must be made to the regional dealer, who will send the defective part for analysis at **BALDAN**.

When such procedure is not possible and the reseller has exhausted its resolution capacity, it will request support from **BALDAN's** Technical Assistance, through a specific form distributed to resellers.

After analyzing the replaced items by **BALDAN's** Technical Assistance, and concluding that it is not a warranty, then the costs related to the replacement will be the responsibility of the dealer;

as well as expenses for material, travel including accommodation and meals, accessories, used lubricant and other expenses arising from the call for Technical Assistance, and the company **BALDAN** is authorized to make the respective billing on behalf of the reseller.

Any repair made to the product that is within the warranty period by the dealer, will only be authorized by **BALDAN** upon prior presentation of a quote describing parts and labor to be performed.

This term excludes the product that undergoes repairs or modifications by officials who do not belong to the **BALDAN** dealer network, as well as the application of non-genuine parts or components to the user's product.

This guarantee will become null when it is determined that the defect or damage is resulting from improper product use, failure to follow instructions or the inexperience of the operator.

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

Manufacturing and or material defects, object of this warranty term, will not constitute, under any circumstances, reason for purchase and sale contract termination, or compensation of any nature.

Baldan reserves the right to change and/or improve the technical characteristics of its products, without prior notice, and without obligation to do so with previously manufactured products.

▪ General Information

• To owner

BALDAN IMPLEMENTOS AGRÍCOLAS S/A, is not responsible for any damage caused by accident from use, transport or in improper or incorrect storage of your implement, whether by negligence and / or inexperience of anyone.

Only people who have full knowledge of the tractor and the implement must make the transport and the operation thereof

BALDAN is not responsible for any damage caused in unpredictable situations or others to implement's normal use.

Improper handling of this equipment can result in serious or fatal accidents. Before putting the equipment into operation, carefully read the instructions contained in this manual. Make sure that the person responsible for the operation is instructed in the correct and safe handling. Also make sure the operator has read and understood the product instruction manual.

ATTENTION

NR-31 - SAFETY AND HEALTH AT WORK IN AGRICULTURE, LIVESTOCK FORESTRY, LOGGING AND AQUACULTURE.

This Regulatory Standard is to establish the principles to be observed in the organization and in the workplace, consistent with planning and development of agricultural, livestock, forestry, logging and aquaculture activities with safety and health, environment of Work.

MR. OWNER OR EQUIPMENT OPERATOR.

Read and follow carefully the provisions of NR-31.

More information, visit the website and read in full the NR-31.
<http://portal.mte.gov.br/legislacao/normas-regulamentadoras-1.htm>

▪ Safety Standards

- To operator



THIS SYMBOL INDICATES AN IMPORTANT SAFETY WARNING. IN THIS MANUAL, WHENEVER YOU FIND IT, CAREFULLY READ THE FOLLOWING MESSAGE AND BE AWARE OF THE POSSIBILITY OF PERSONAL INJURY.



ATTENTION



Read the instruction manual carefully for recommended safety practices.



ATTENTION



Only start operating the tractor when you are properly accommodated and with the seat belt fastened.



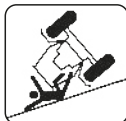
ATTENTION



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



ATTENTION



There is a risk of serious injury from tipping over when working on slopes. Do not use excessive speed.



ATTENTION



Do not work with the tractor if the front is without enough ballast for the rear equipment. If there is a tendency to lift, add weights or weights to the front or front wheels.



ATTENTION



Before doing any maintenance on your equipment, make sure it is properly stopped. Avoid getting run over.



ATTENTION



Be careful when handling the GSPCR-E support leg, as there is a risk of accidents.

▪ Safety Standards

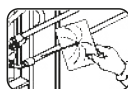
! ATTENTION FOLLOW ALL RECOMMENDATIONS, WARNINGS AND SAFE PRACTICES RECOMMENDED IN THIS MANUAL, UNDERSTAND THE IMPORTANCE OF YOUR SAFETY. ACCIDENTS CAN LEAD TO DISABILITY OR EVEN DEATH. REMEMBER, ACCIDENTS CAN BE AVOIDED!

! ATTENTION



Do not make adjustments with the GSPCR-E in operation. When doing any work on the GSPCR-E, turn off the tractor first. Use proper tools.

! ATTENTION



When looking for a possible leak in the hoses, use a piece of cardboard or wood, never use your hands. Avoid incising fluid into the skin.

! ATTENTION

25
KM/H

15
MPH

When transporting the GSPCR-E, do not exceed a speed of 25 km/h or 15 MPH, avoiding the risk of damage and accidents.

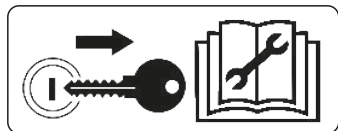
! ATTENTION

12
KM/H

7
MPH

When working with the GSPCR-E, do not exceed the speed of 12 km/h or 7 MPH, avoiding the risk of damages and accidents.

! ATTENTION



Remove the ignition key before performing any maintenance on the GSPCR-E. Protect yourself from possible injury or death caused by an unforeseen departure of the GSPCR-E.

If the GSPCR-E is not properly engaged, do not start the tractor.

! ATTENTION



Hydraulic oil under pressure can cause serious injury if it leaks. Periodically check the condition of the hoses.

If there are signs of leaks, replace immediately. Before connecting or disconnecting the hydraulic hoses, relieve the system pressure, activating the command with the tractor turned off.

▪ Safety Standards**! ATTENTION**

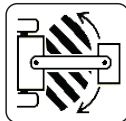
Always keep the access and work places clean of residues such as oil or grease, as they can cause accidents.

! ATTENTION

Before starting work on or transporting the GSPCR-E, check it for people or obstructions.

! ATTENTION

Avoid heating parts near fluid lines.
Heating can cause material fragility, rupture and release of pressurized fluid, which can cause burns and injuries.

! ATTENTION

Keep the hinge area free while the GSPCR-E is in operation.
In sharp turns, prevent the tractor wheels from touching the header.

! ATTENTION

Never weld the tire mounted wheel, the heat can cause the air pressure to build up and cause the tire to explode.
When inflating the tire, position yourself beside the tire, never in front of it. To inflate the tyre, always use a containment device (inflation cage).

! ATTENTION

Always keep away from the active elements of the GSPCR-E (discs), they are sharp and can cause accidents.
When carrying out any service on the discs, wear safety gloves on your hands.

! ATTENTION

Improperly disposing of waste affects the environment and ecology, as it will be polluting rivers, canals or the soil.
Find out about the correct way to recycle or dispose of waste.
PROTECT THE ENVIRONMENT!

▪ Safety Standards

• PPE Equipment

! ATTENTION | DO NOT WORK WITH THE GSPCR-E WITHOUT PUTTING THE PPE (SAFETY EQUIPMENT) ON BEFORE. IGNORING THIS WARNING COULD CAUSE HEALTH DAMAGE, SERIOUS INJURY OR DEATH.

When performing certain procedures with the **GSPCR-E**, put the following PPE (Safety Equipment) below:



! IMPORTANT

The safety practice must be carried out at all stages of work with the GSPCR-E, thus avoiding accidents such as impact from objects, falls, noise, cuts and ergonomics; that is, the person responsible for operating the GSPCR-E is subject to internal and external damage to his or her body.

🔍 OBSERVATION | All PPE (Security Equipment) must have a certificate of authenticity.



▪ Warnings

-  When operating the GSPCR-E, do not allow people to stand too close or on top of it.
-  Never stand near the GSPCR-E in operation; imminent risk of being run over and lacerations.
-  When carrying out any maintenance service, use PPE equipment.
-  Before connecting or disconnecting the hydraulic hoses, relieve the system pressure by activating the command with the tractor turned off.
-  Periodically check the condition of the hydraulic hoses. If there are signs of oil leakage, replace the hose immediately, as the oil works under high pressure and can cause serious accidents.
-  Do not wear clothes that are too loose as they could get caught in the GSPCR-E.
-  When starting the tractor engine, be properly seated in the operator's seat and aware of complete knowledge of the correct and safe handling of both the tractor and the GSPCR-E. Always place the gearshift lever in the neutral position, disconnect the control gear from the power take-off and place the hydraulic controls in the neutral position.
-  Do not run the tractor engine indoors, without adequate ventilation, as the exhaust gases are harmful to health.
-  When maneuvering the tractor to the GSPCR-E hitch, make sure you have enough space and that no one is too close, always maneuver at idle speed and be prepared to brake in an emergency.
-  Do not make adjustments with the GSPCR-E in operation.
-  When working on sloping terrain, proceed with care always trying to maintain the necessary stability. In case of an out-of-balance beginning, reduce the acceleration, turn the wheels to the side of the terrain slope and never raise the GSPCR-E.
-  Always drive the tractor at speeds compatible with safety, especially when working in rough terrain or slopes, keep the tractor always engaged.
-  When driving the tractor on roads, keep the brake pedals interconnected.
-  No not work with the tractor with a light rear end. If the rear tends to lift, add more weight to the rear wheels.
-  When leaving the tractor, place the gearshift lever in neutral position and apply the parking brake. Never leave the GSPCR-E hitched to the tractor in the raised position of the hydraulic system.
-  Any and all maintenance on the GSPCR-E must be done with the same shutdown and with the tractor turned off.
-  Do not travel on highways, especially at night. Use warning signs throughout the route.
-  If there is a need to travel with the GSPCR-E on the highways, consult the transit agencies.

▪ Warnings

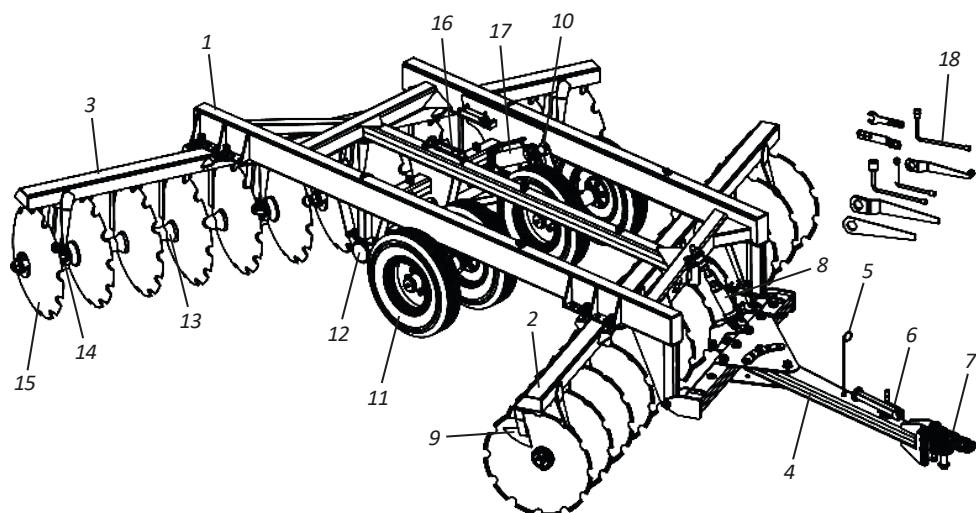
-  Do not allow the use of the GSPCR-E by people who have not been trained, that is, who do not know how to operate it correctly.
-  Do not transport or work with the GSPCR-E near obstacles, rivers or streams.
-  Alterations of the original characteristics of the GSPCR-E are not authorized, as they may alter safety, functioning and affect its useful life.
-  Carefully read all safety information contained in this manual and in the GSPCR-E.
-  Read or explain all procedures in this manual to the operator who cannot read.
-  Always check that the GSPCR-E is in perfect working condition. In case of any irregularity that may interfere with the functioning of the GSPCR-E, arrange for proper maintenance before any work or transport.
-  The maintenance and especially the inspection in risk areas of the GSPCR-E, must only be done by a trained or qualified worker, observing all safety guidelines. Before starting maintenance, disconnect all drive systems from the GSPCR-E.
-  Periodically check all components of the GSPCR-E before using it.
-  Depending on the equipment used and the working conditions in the field or in maintenance areas, precautions are necessary. Baldan has no direct control over precautions, so it is the owner's responsibility to put in place safety procedures while working with the GSPCR-E.
-  Check the recommended minimum tractor power for each GSPCR-E model. Only use tractor with power and ballast compatible with the load and topography of the terrain.
-  When transporting the GSPCR-E, travel at speeds compatible with the terrain and never above 25 km/h, this reduces maintenance and consequently increases the life of the GSPCR-E.
-  Alcoholic beverages or some medications can cause loss of reflexes and alter the operator's physical condition. Therefore, never operate this GSPCR-E under the use of these substances.
-  Read or explain all the procedures in this manual to the user who cannot read.

If in doubt, contact the After Sales.
Telephone: 0800-152577 / E-mail: posvenda@baldan.com.br

▪ Components

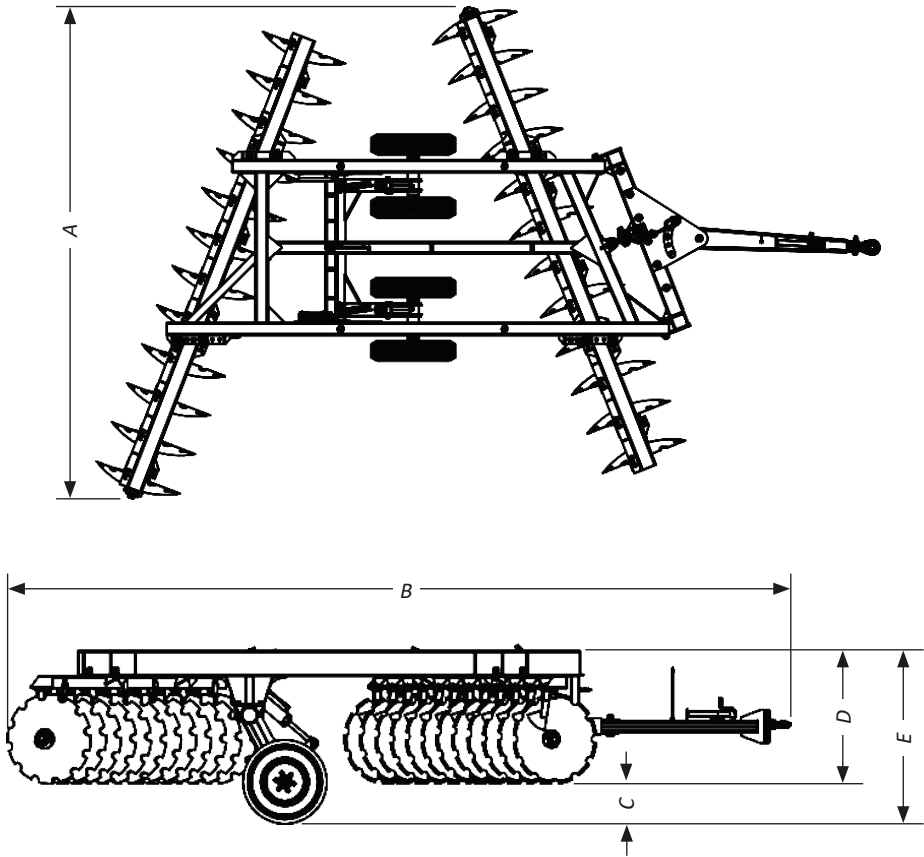
• GSPCR-E - Wheel Type Offset Disc Harrow Remote Control - Heavy Duty Special

- | | |
|----------------------------------|-----------------------------|
| 1. Main frame | 10. Wheel Support |
| 2. Front gang | 11. Tire |
| 3. Rear gang | 12. Fixation bearing |
| 4. Hitch drawbar | 13. Spool |
| 5. Hoses Support | 14. Bearing |
| 6. Mechanical jack | 15. Disc |
| 7. Security chain | 16. Hydraulic Hoses |
| 8. Drawbar Articulation Cylinder | 17. Hydraulic Lift Cylinder |
| 9. Scraper | 18. Wrenches |



▪ **Dimensions**

• GSPCR-E - 12 / 14 / 16 / 18 / 20 / 22 / 24 Discs



Model	Number of discs	Measurement A (mm)	Measurement B (mm)	Measurement C (mm)	Measurement D (mm)	Measurement E (mm)
GSPCR-E	12	2992	8912	459	1529	1988
	14	3438	9037	459	1529	1988
	16	4015	9051	459	1579	2038
	18	4489	9078	459	1579	2038
	20	4945	9153	459	1579	2038
	22	5410	9259	459	1579	2038
	24	5878	9358	459	1579	2038

▪ Specifications

• GSPCR-E - Wheel Type Offset Disc Harrow Remote Control - Heavy Duty Special

Model	Number of discs	Working Width (mm)	Axle Diameter (ø)	Diameter of Discs (ø)	Working depth (mm)	Tractor Power (HP)
GSPCR-E	12	2957	2.1/2"	36" - 38" 40" - 42"	200 - 400	280 - 310
	14	3405				310 - 340
	16	3909				360 - 400
	18	4371				400 - 430
	20	4828				430 - 460
	22	5292				460 - 500
	24	5759				510 - 540

Model	Number of discs	Tires		Approximate weight (Kg)							
				With tires 900 x 20				With tires 400 x 60			
		Quantity	Model	36"	38"	40"	42"	36"	38"	40"	42"
GSPCR-E	12	2	900 x 20 14 canvas	5318	5370	5466	5569	5258	5310	5406	5509
	14	2		5866	5926	6078	6159	5806	5866	6018	6099
	16	4		7301	7370	7498	7635	7238	7307	7436	7573
	18	4		7763	7840	7984	8138	7705	7782	7926	8080
	20	4		8099	8184	8345	8516	8013	8099	8260	8431
	22	4		8428	8522	8699	8887	8343	8437	8614	8802
	24	4		8750	8852	9045	9250	8685	8778	8980	9185

Disc spacing 500 mm

Baldan reserves the right to change and/or improve the technical characteristics of its products, without prior notice, and without obligation to do so with previously manufactured products.

Technical specifications are approximate and reported under normal working conditions.

INTENDED USE OF GSPCR-E

- GSPCR-E was developed for soil profile correction.
- The GSPCR-E must be driven and activated only by a duly instructed operator.

NOT ALLOWED USE OF GSPCR-E

- To avoid damage, serious accident or death, DO NOT carry people on any part of the GSPCR-E.
- It is NOT allowed to use the GSPCR-E to attach, tow or push other implements or accessories.
- The GSPCR-E must NOT be used by an inexperienced operator who does not know all the techniques of driving, command and operation.

▪ Assembly

The **GSPCR-E** leaves the factory disassembled. To assemble it, follow the instructions below:

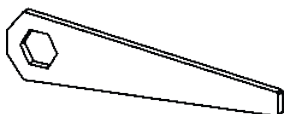
⚠ The assembly of the **GSPCR-E** must be done by the reseller, through people trained, qualified and qualified for this work.

⚠ Before starting the assembly of the **GSPCR-E**, look for an ideal location, where it will facilitate the identification of the parts and its assembly.

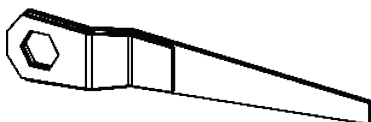
⚠ Do not wear loose clothing as they may get caught in the **GSPCR-E**.

• Wrenches set

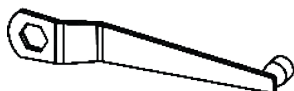
When assembling, disassembling or servicing the **GSPCR-E**, use the set of keys that come with the grid. The wrenches set consists of:



**WRENCH FOR HEX NUT OF
2.1/4" AND 2.1/2" SMALL**



**WRENCH FOR HEX NUT OF
2.1/4" AND 2.1/2" LARGE**



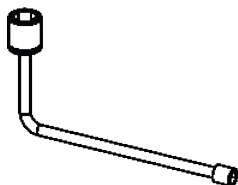
**WRENCH FOR HEX NUT OF
1.5/8" AND 1"**



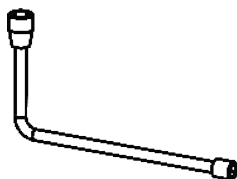
**WRENCH FOR HEX NUT OF
5/8" X 3/4" X 1.1/4"**



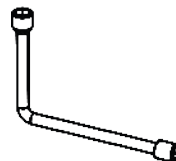
**WRENCH FOR HEX NUT
SELF-LOCKING 5/8" - 1.1/2"
AND BOLT 3/8" - 5/8"**



**"L" WRENCH FOR HEX NUT OF
5/8" AND 1.1/4"**



**"L" WRENCH FOR HEX NUT OF
5/8" AND 1"**



**"L" WRENCH FOR HEX NUT OF
5/8" AND 3/4"**

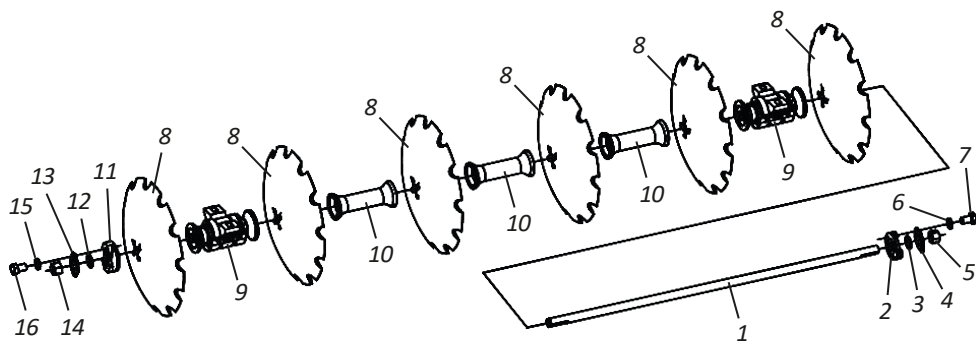
⚠ **ATTENTION** | In case of loss or breakage of any Wrench, acquire another one immediately. Always use original Baldan wrenches.

▪ Assembly

• Assembling the rear disc section

When starting to mount the **GSPCR-E**, always start with the set of discs; to assemble the rear disc section, proceed as follows:

- 01** - Place on the shaft (1) the concave thrust washer (2), flat washer (3), lock (4), nut (5), securing it with the spring washer (6) and the screw (7).
- 02** - Then, place on the shaft (1) the disc (8), bearing (9), another disc (8), separator spool (10) and so on.
- 03** - When the set is complete with all discs, bearings, separator spools, place the convex thrust washer (11), flat washer (12), lock (13), nut (14), tighten with the torques recommended on page 22 (high torque nutrunner procedure) or page 23 (angle tightening procedure).
- 04** - Finish by placing the latch (13) fixing it through the pressure washers (15) and screws (16).



ATTENTION

During the first week of using the GSPCR-E, re-tighten all disc section bolts and nuts daily, then re-tighten them periodically.



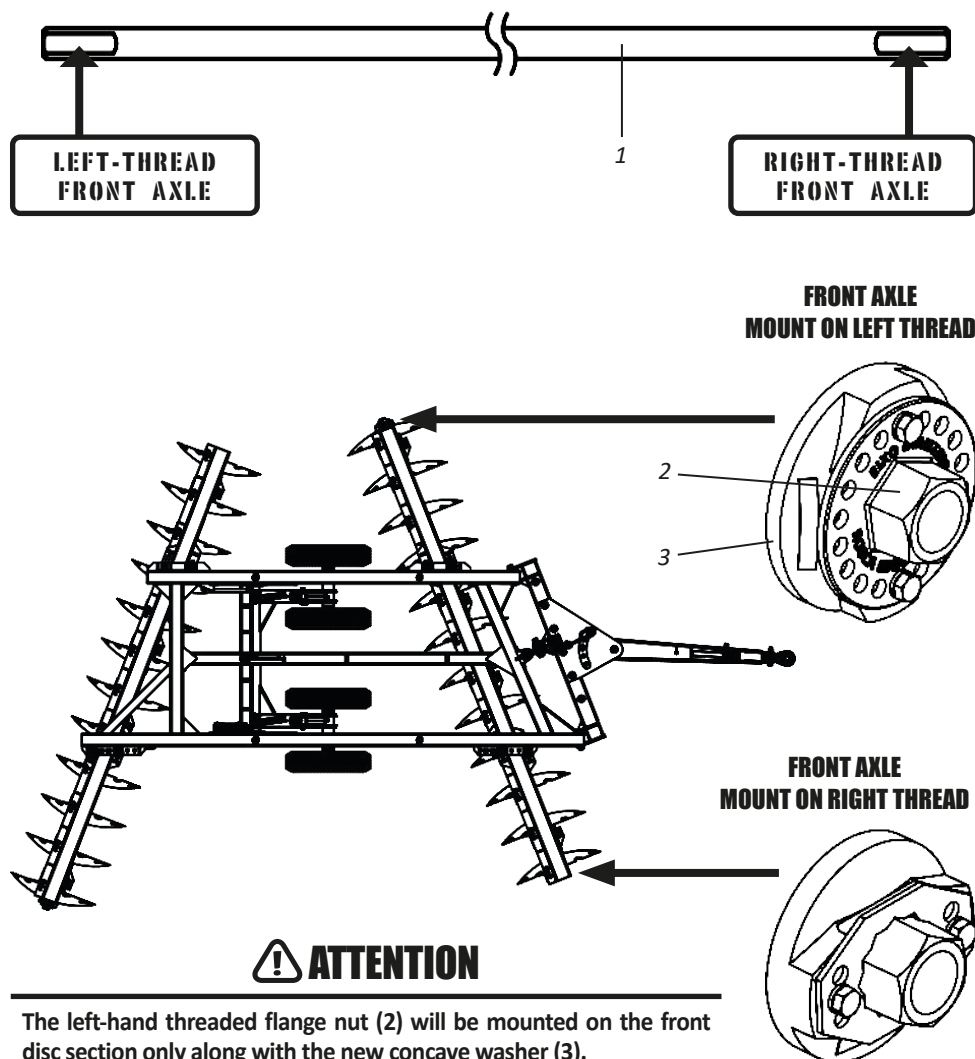
IMPORTANT

Check the right side of the separator spools and bearings, according to the concavity of the discs.

■ Assembly

• Assembling the front disc section - Part I

Before starting the assembly of the front disc section, check the milled area of the shaft (1) for the engraved information “**right-thread front axle**” and “**left-thread front axle**”, as there is the correct side for mounting it in the section front discs.



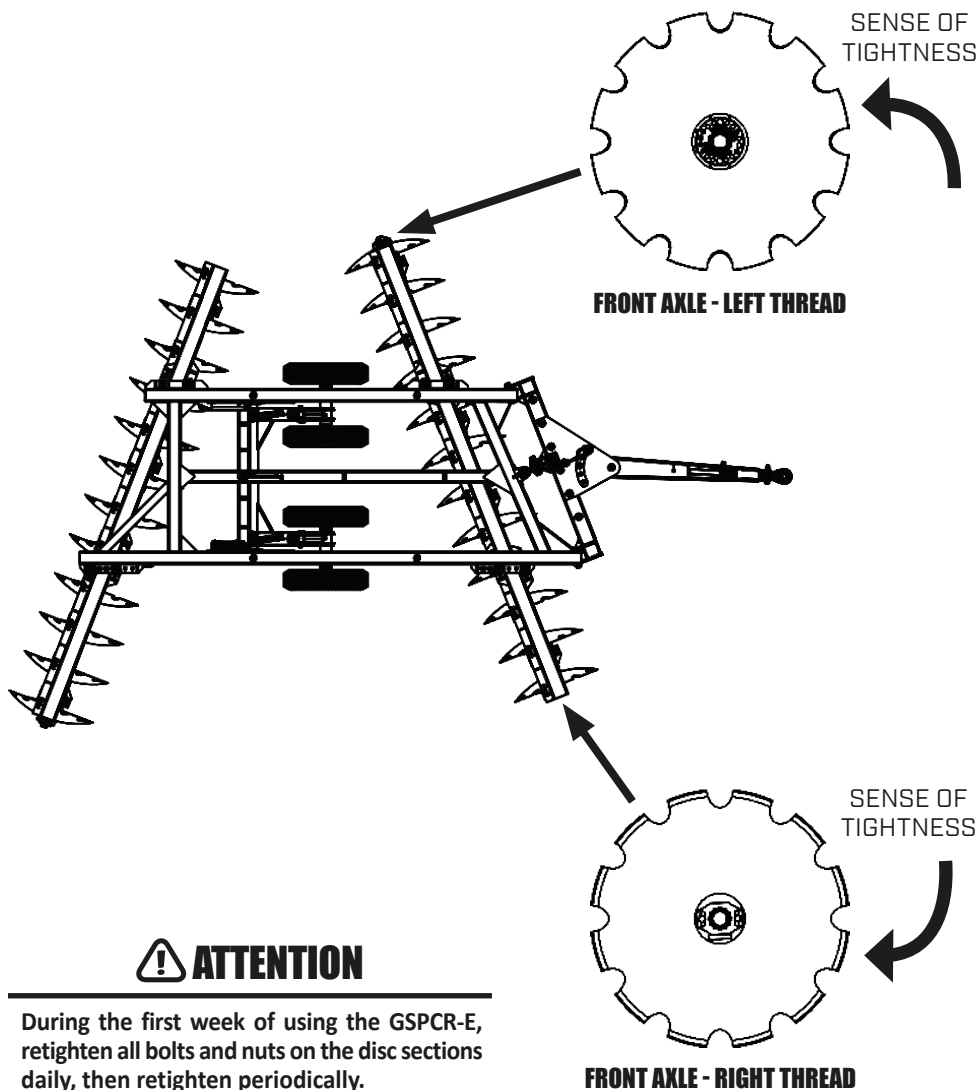
⚠ ATTENTION

The left-hand threaded flange nut (2) will be mounted on the front disc section only along with the new concave washer (3).

▪ Assembly

• Assembling the front disc section - Part II

Then check the tightening direction for each side of the front disc section; then assemble and tighten to the torques recommended on page 22 (high torque nutrunner procedure) or page 23 (angle tightening procedure).

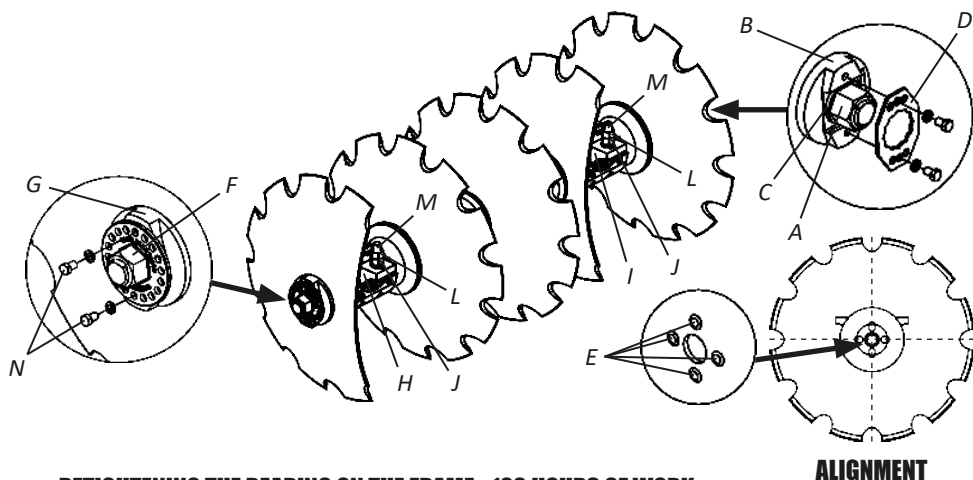


■ Assembly

• Tightening procedure with high torque nutrunner - Disc section

- INITIAL GRIP

- 01** - I threaded the nut (A) with the concave washer (B), flat washer (C) considering 3 to 4 threads after the nut.
- 02** - Place the lock (D) from the nut (A).
- 03** - Assemble the disc section interspersing discs, bearings and separators according to the grid configuration, aligning the disc ridges (E) with the recesses of the thrust washers of the bearings and separators. *(Make a superficial mark with chalk or pen on the components of the stops on the disks to visualize if the alignments are correct).*
- 04** - I threaded the flanged nut (F) on the convex washer (G) considering an initial torque of **200N.m** as a reference point;
- 05** - Following the steps above, torque the flanged nut (F) with **5000N.m**.
- 06** - Screw the disc sections on the grid frames through the bearing bases (H and I) with a torque of **1500N.m** on the primary nut (J), loosen and repeat the procedure for adjusting the fastening components. For counter nut (L) consider a torque of **400N.m**.



- RETIGHTENING THE BEARING ON THE FRAME - 120 HOURS OF WORK

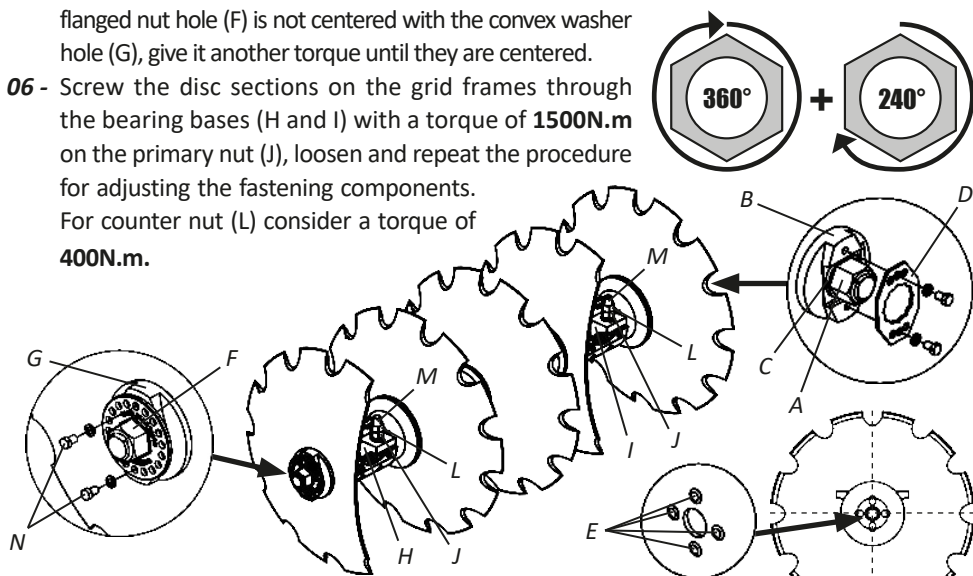
- 01** - Loosen the screws (M) of the bearing bases (H and I).
- 02** - Loosen the screws (N) of the flanged nut (F).
- 03** - Retighten the flanged nut (F) reaching a torque of **5000N.m**.
- 04** - Retighten the screws (M) of the bearing base (H and I) reaching a torque of **1500N.m** on the primary nut (J) and **400N.m** on the counter nut (L).
- 05** - Finish by tightening the bolts (N) of the flanged nut (F).

▪ Assembly

• Angled tightening procedure - Disc section

- INITIAL GRIP

- 01 - I threaded the nut (A) with the concave washer (B), flat washer (C) considering 3 to 4 threads after the nut.
- 02 - Place the lock (D) from the nut (A).
- 03 - Assemble the disc section interspersing discs, bearings and separators according to the grid configuration, aligning the disc ridges (E) with the recesses of the thrust washers of the bearings and separators. *(Make a superficial mark with chalk or pen on the components of the stops on the disks to visualize if the alignments are correct).*
- 04 - I threaded the flanged nut (F) on the convex washer (G) considering an initial torque of **200N.m** as a reference point;
- 05 - Following the steps above, torque the flanged nut (F) with 1 turn $360^\circ + 240^\circ$; if the center of the flanged nut hole (F) is not centered with the convex washer hole (G), give it another torque until they are centered.
- 06 - Screw the disc sections on the grid frames through the bearing bases (H and I) with a torque of **1500N.m** on the primary nut (J), loosen and repeat the procedure for adjusting the fastening components. For counter nut (L) consider a torque of **400N.m**.



- RETIGHTENING THE BEARING ON THE FRAME - 120 HOURS OF WORK

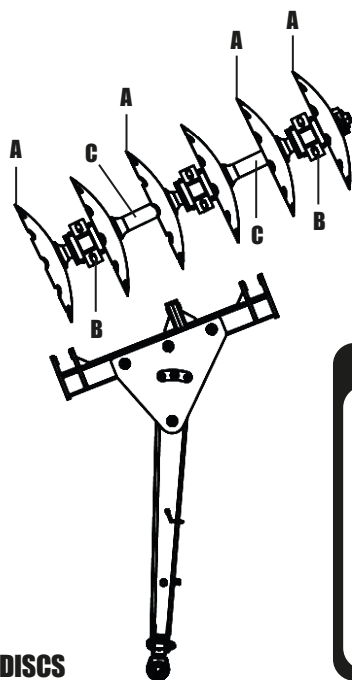
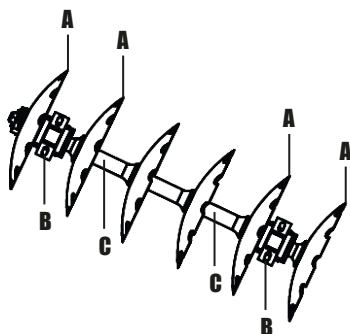
ALIGNMENT

- 01 - Loosen the screws (M) of the bearing bases (H and I).
- 02 - Loosen the screws (N) of the flanged nut (F).
- 03 - Retighten the flanged nut (F) according to the indicated torque value.
- 04 - Retighten the screws (M) of the bearing base (H and I) reaching a torque of **1500N.m** on the primary nut (J) and **400N.m** on the counter nut (L).
- 05 - Finish by tightening the bolts (N) of the flanged nut (F).

■ Assembly

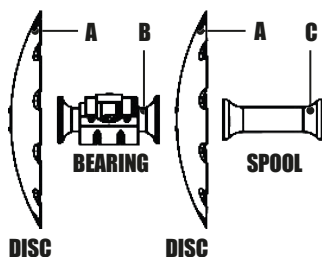
• Mounting of disc sections - GSPCR-E 12 discs

Check below the assembly of the disc sections of the **GSPCR-E** 12 discs.



GSPCR-E 12 DISCS

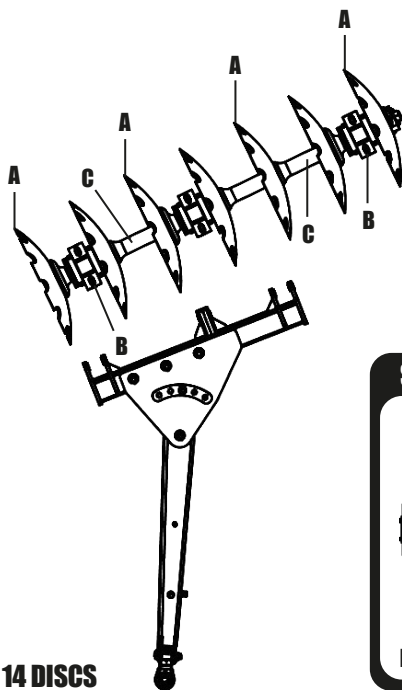
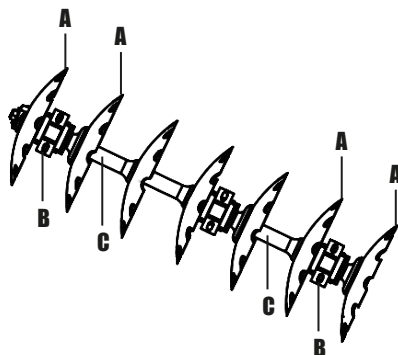
SUBTITLE:



▪ Assembly

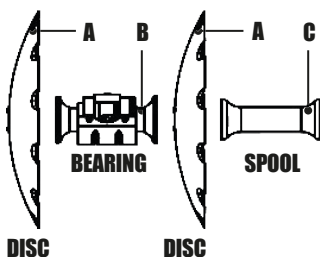
• Mounting of disc sections - GSPCR-E 14 discs

Check below the assembly of the disc sections of the **GSPCR-E** 14 discs.



GSPCR-E 14 DISCS

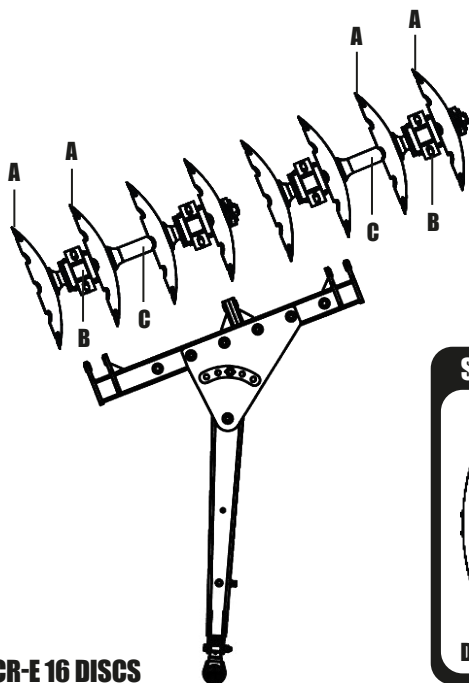
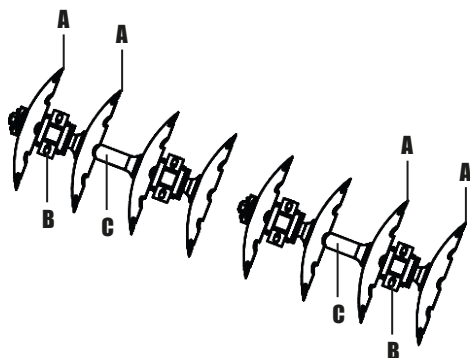
SUBTITLE:



■ Assembly

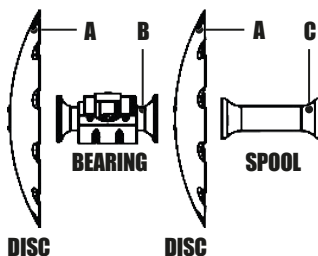
• Mounting of disc sections - GSPCR-E 16 discs

Check below the assembly of the disc sections of the **GSPCR-E** 16 discs.



GSPCR-E 16 DISCS

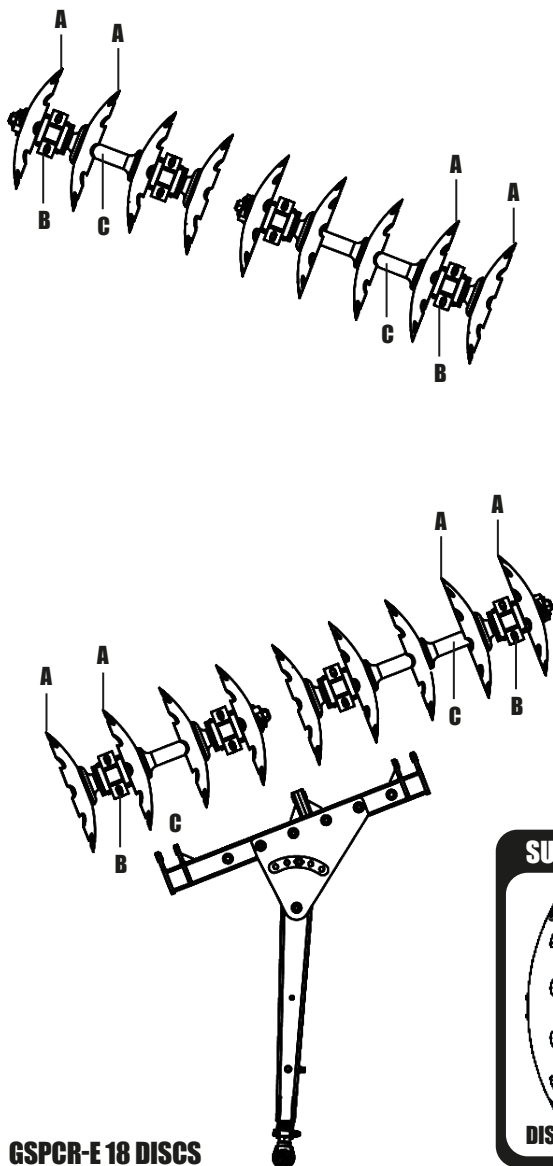
SUBTITLE:



▪ Assembly

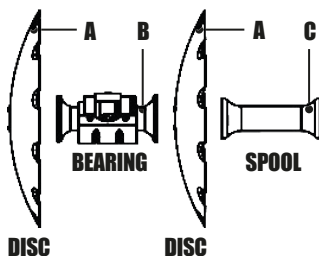
• Mounting of disc sections - GSPCR-E 18 discs

Check below the assembly of the disc sections of the **GSPCR-E** 18 discs.



GSPCR-E 18 DISCS

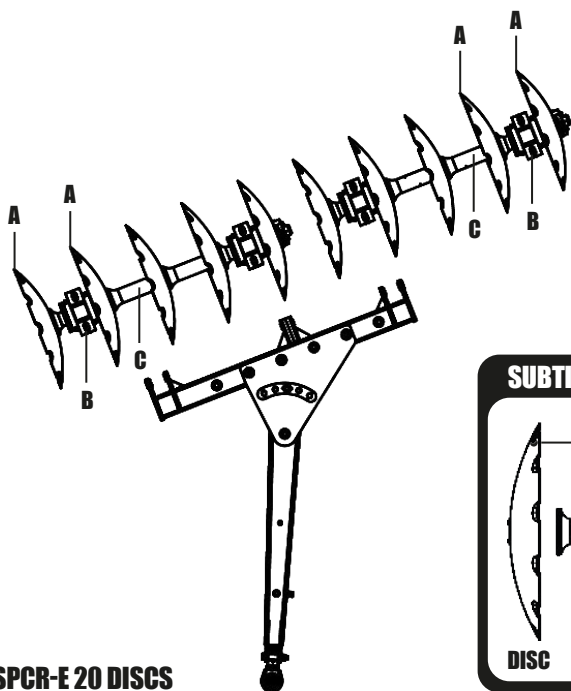
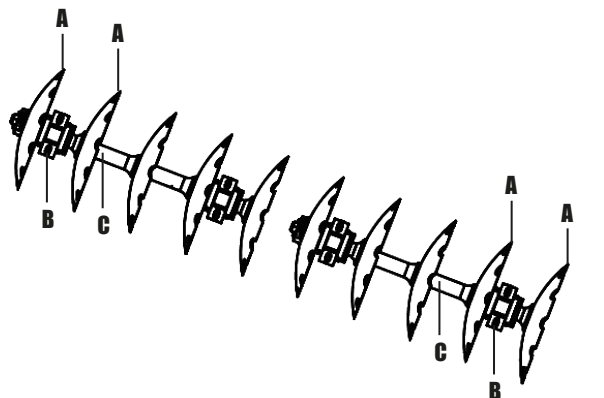
SUBTITLE:



■ Assembly

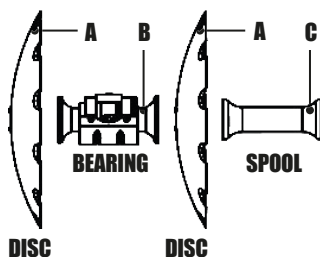
• Mounting of disc sections - GSPCR-E 20 discs

Check below the assembly of the disc sections of the **GSPCR-E 20** discs.



GSPCR-E 20 DISCS

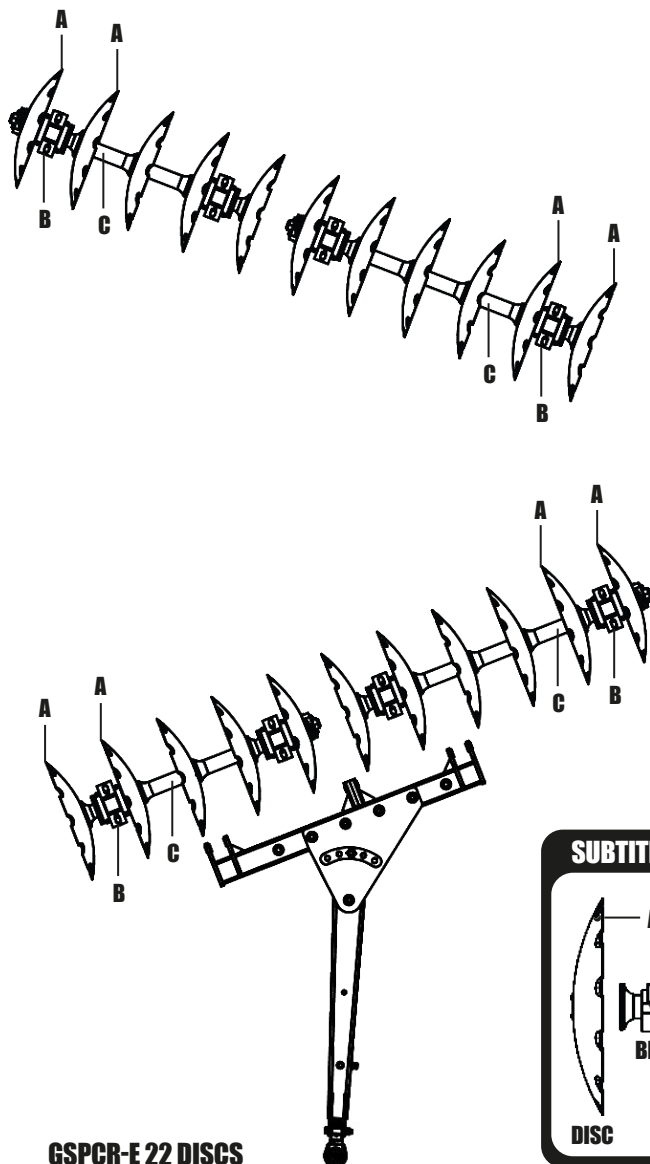
SUBTITLE:



▪ Assembly

• Mounting of disc sections - GSPCR-E 22 discs

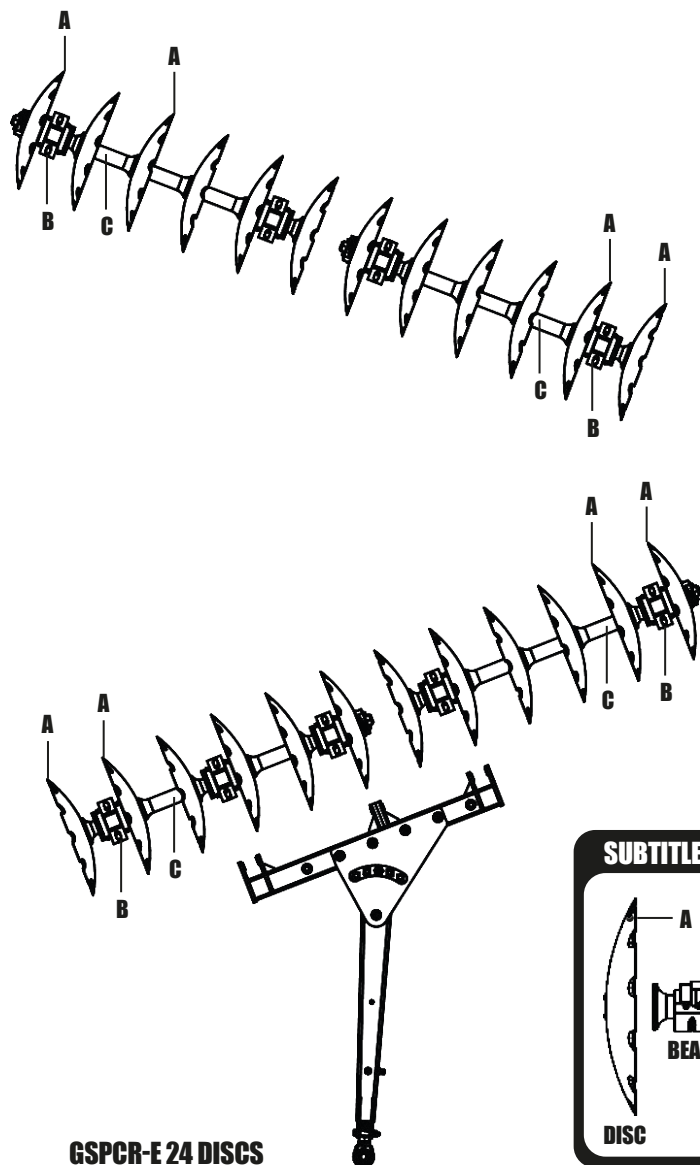
Check below the assembly of the disc sections of the **GSPCR-E** 22 discs.



▪ Assembly

• Mounting of disc sections - GSPCR-E 24 discs

Check below the assembly of the disc sections of the **GSPCR-E** 24 discs.

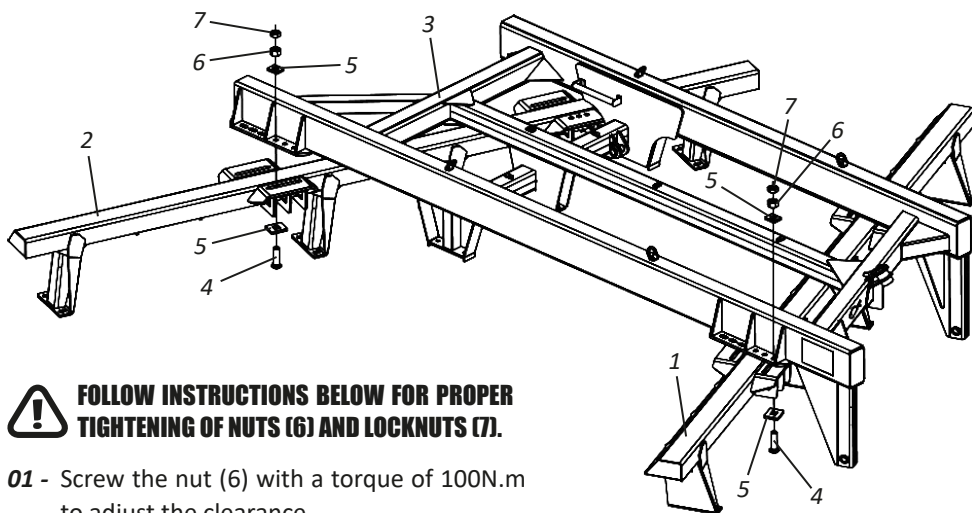


▪ Assembly

• Mounting of upstream frames

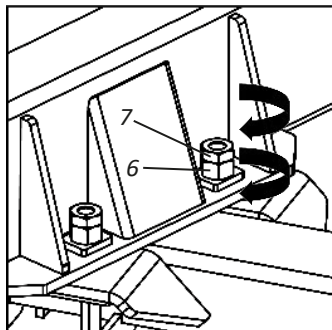
To attach the front and rear frames to the upright, proceed as follows:

- 01** - Place the front (1) and rear (2) frames in a clean, flat location.
- 02** - Then, place the upright (3) on the front (1) and rear (2) frames, fixing them through the screws (4), locks (5), nuts (6) and locknut (7).



FOLLOW INSTRUCTIONS BELOW FOR PROPER TIGHTENING OF NUTS (6) AND LOCKNUTS (7).

- 01** - Screw the nut (6) with a torque of 100N.m to adjust the clearance.
- 02** - Next, consider another 1/4 turn (90°) to reach the desired torque of approximately 1560N.m.
- 03** - Then, loosen the nut (6) and repeat the above process to guarantee the tightening with the necessary adjustments.
- 04** - Afterwards, screw the locknut (7) with a torque of 100N.m.
- 05** - Next, consider another 1/8 turn (45°) to ensure proper tightening.



ATTENTION

Repeat the above instructions also for the main frame.

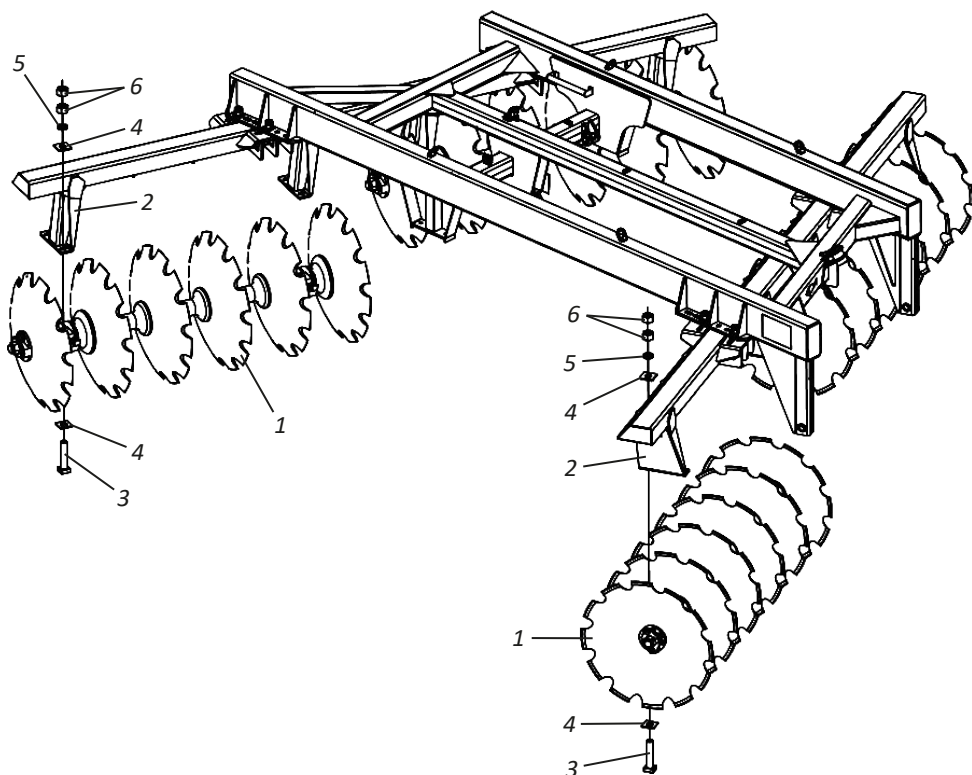
Ignoring the above instructions will cause improper tightening causing damage to the equipment or serious accidents.

▪ Assembly

• Assembly of disc sections on frames

After attaching the front and rear frames to the upright, secure the disc sections for this, proceed as follows:

- 01** - Lift the front or rear part of the harrow and place the disc section (1) in line and match the holes of the shoes (2) with those of the bearings and fix them using the screws (3); locks (4), spring washer (5), and nuts and locknuts (6).
- 02** - Afterwards, lift the other part of the grid and repeat the operation, checking the concavity of the discs from one section to the other, which should be opposite.
- 03** - When finishing the assembly, check that the shoes (2) are facing the concavity of the discs.



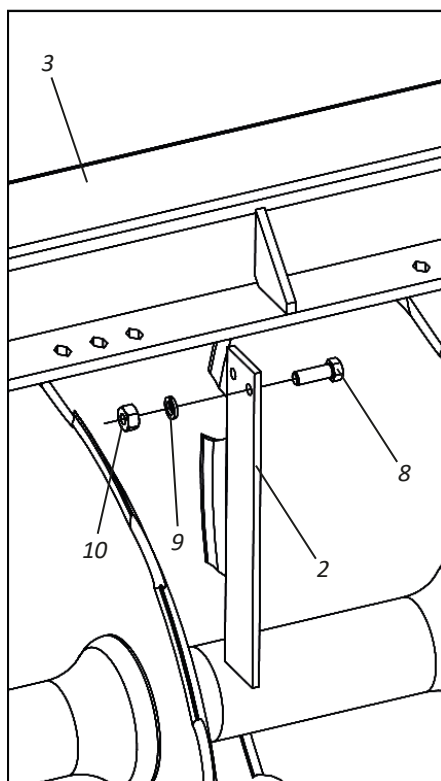
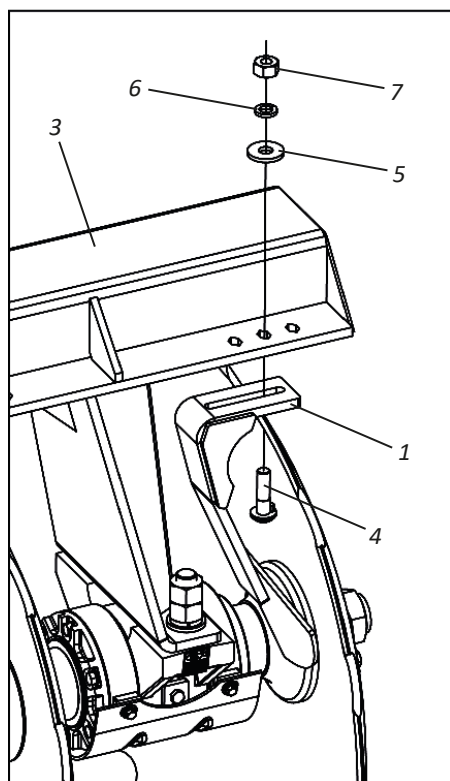
ATTENTION To mount the disc sections on the frames, note that the frame shoes must face the concavity of the discs.

▪ Assembly

• Assembly of wipers

After assembling the disc sections on the frames, fix the wipers (1) and central wipers (2), to do this, proceed as follows:

- 01** - Couple the wipers (1), on the frames (3), securing through the screws (4), flat washers (5), spring washers (6) and nuts (7).
- 02** - Then, couple the central wipers (2) to the frames (3), securing through the screws (8), spring washers (9) and nuts (10).



ATTENTION

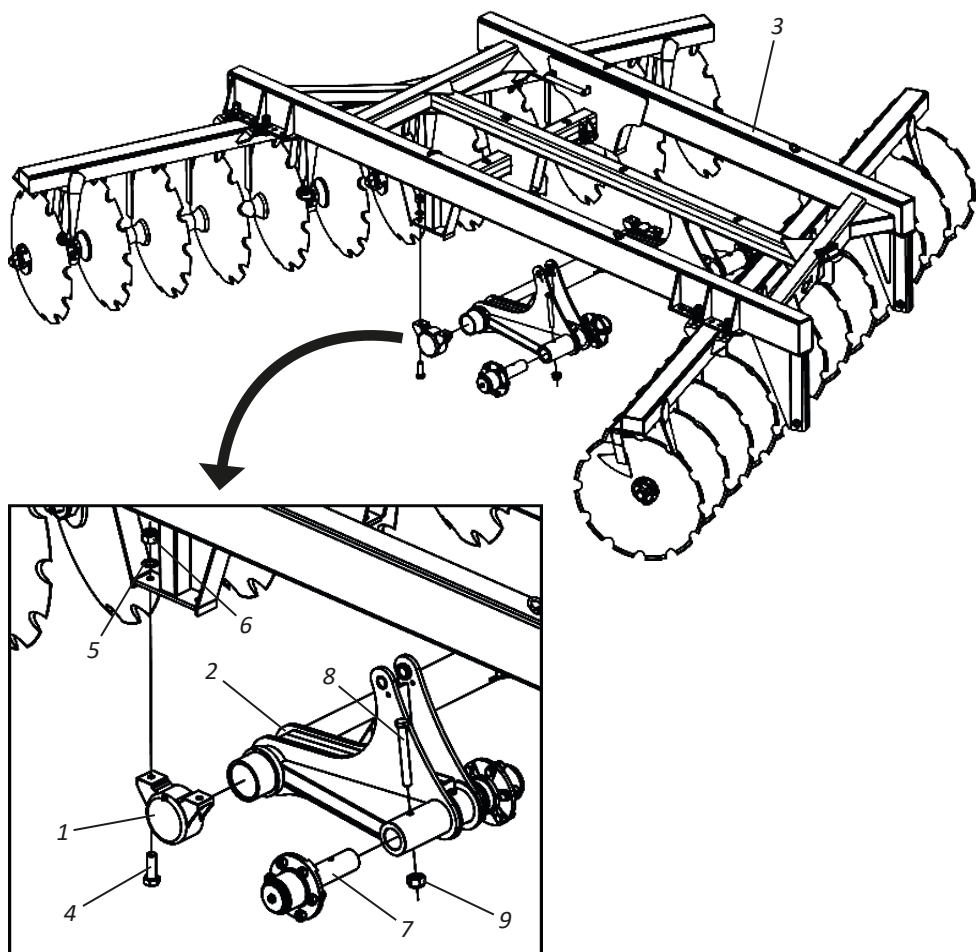
When assembling the cleaners (1), they must be 0.5 to 1.0 cm away from the discs.

▪ Assembly

• Wheel Support Assembly

After assembling the wipers, fix the wheel axle support for this, proceed as follows:

- 01** - Couple the hubs (1) to the wheel pivot shaft (2), then secure the hubs (1) to the strut (3) using screws (4), spring washers (5) and nuts (6).
- 02** - Then couple the wheel axle (7) to the wheel pivot axle (2) using the bolt (8) and nut (9).

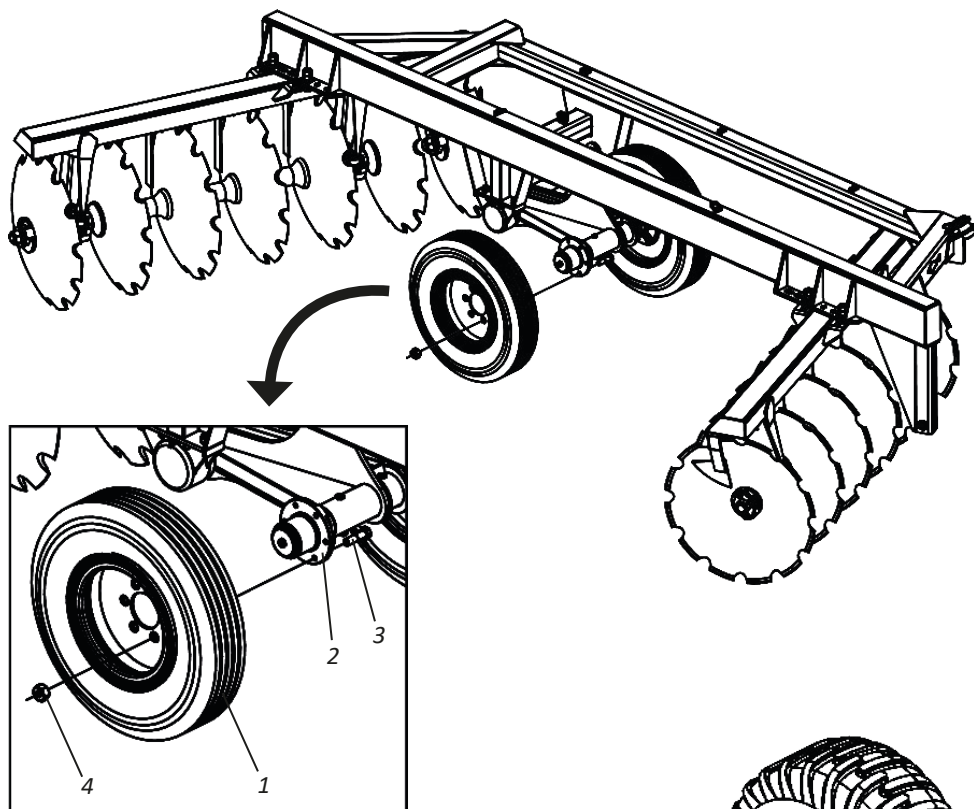


▪ Assembly

• Tire assembly

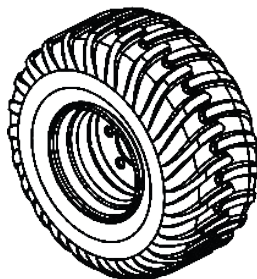
After assembling the wheel axle support, fix the tires (1) to do this, proceed as follows:

- 01** - Couple the tires (1) on the wheel axle support (2), securing with the screws (3) and nuts (4).



! ATTENTION

When purchasing the GSPCR-E with 400x60 tires (optional), all tires must be mounted anti-traction, that is, with the claws facing the front of the GSPCR-E, as shown in detail "A".



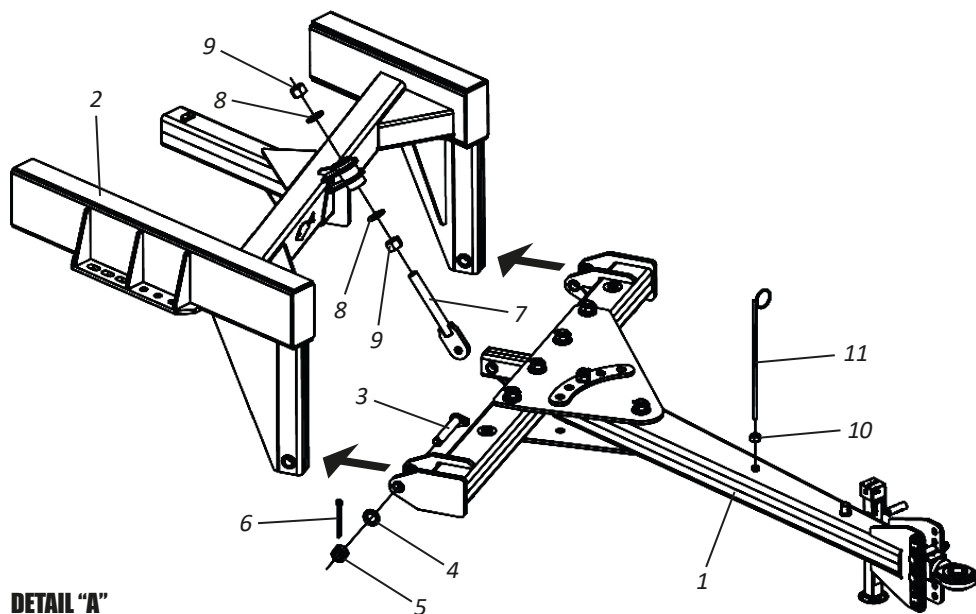
DETAIL "A"

▪ Assembly

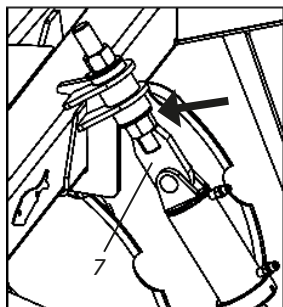
• Hitch Drawbar Assembly

After assembling the tires, fix the hitch header for this, proceed as follows:

- 01** - Couple the hitch header (1) on the mullion (2), securing through the pins (3), flat washers (4), nuts (5) and cotter pins (6).
- 02** - Then, couple the rod (7) to the mullion (2), fixing it through the flat washers (8) and nuts (9).
- 03** - Finish by placing the nut (10) and the hose support (11).



DETAIL "A"



ATTENTION

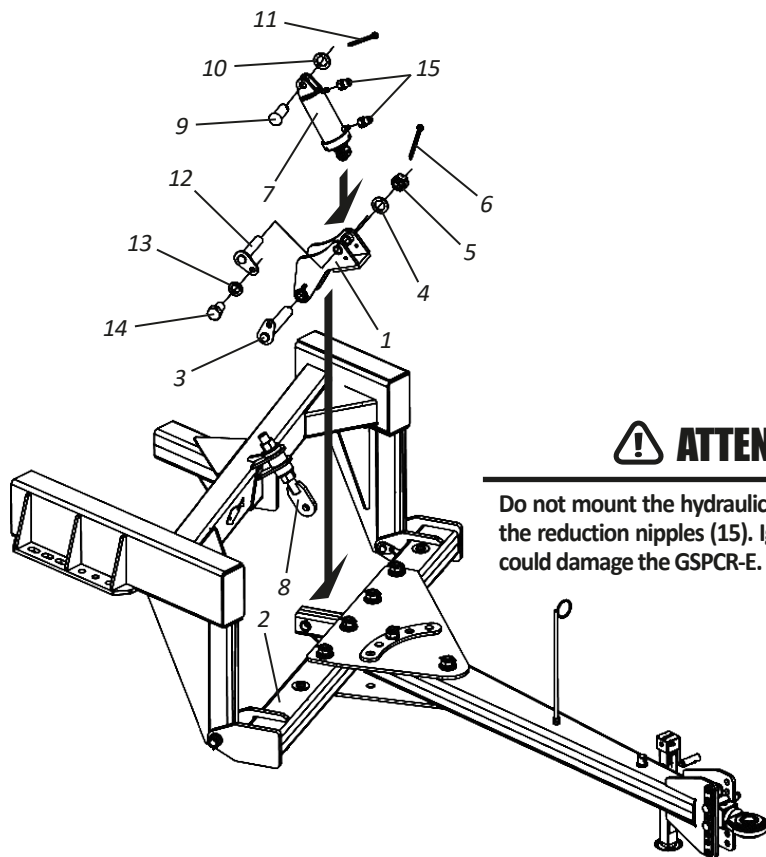
When assembling the rod (7), it must be fully leaning against the bushing, as shown in detail "A".
Adjust the rod (7) when leveling the GSPCR-E, as instructed on page 43.

▪ Assembly

• Mounting the hydraulic cylinder on the hitch header

After assembling the coupling header, fix the hydraulic cylinder on the header for this, proceed as follows:

- 01** - Place the articulation bracket (1) on the crossbar (2), securing with the pin (3), flat washer (4), castle nut (5) and cotter pin (6).
- 02** - Then, couple the base of the hydraulic cylinder (7) to the regulator (8), fixing through the pin (9), flat washer (10) and cotter pin (11).
- 03** - Then, couple the hydraulic cylinder rod (7) in the articulation support (1), fixing through the pin (12), spring washer (13) and screw (14).
- 04** - Finish by assembling the reduction nipples (15) on the hydraulic cylinder (7).



! ATTENTION

Do not mount the hydraulic cylinder (7) without the reduction nipples (15). Ignoring this warning could damage the GSPCR-E.

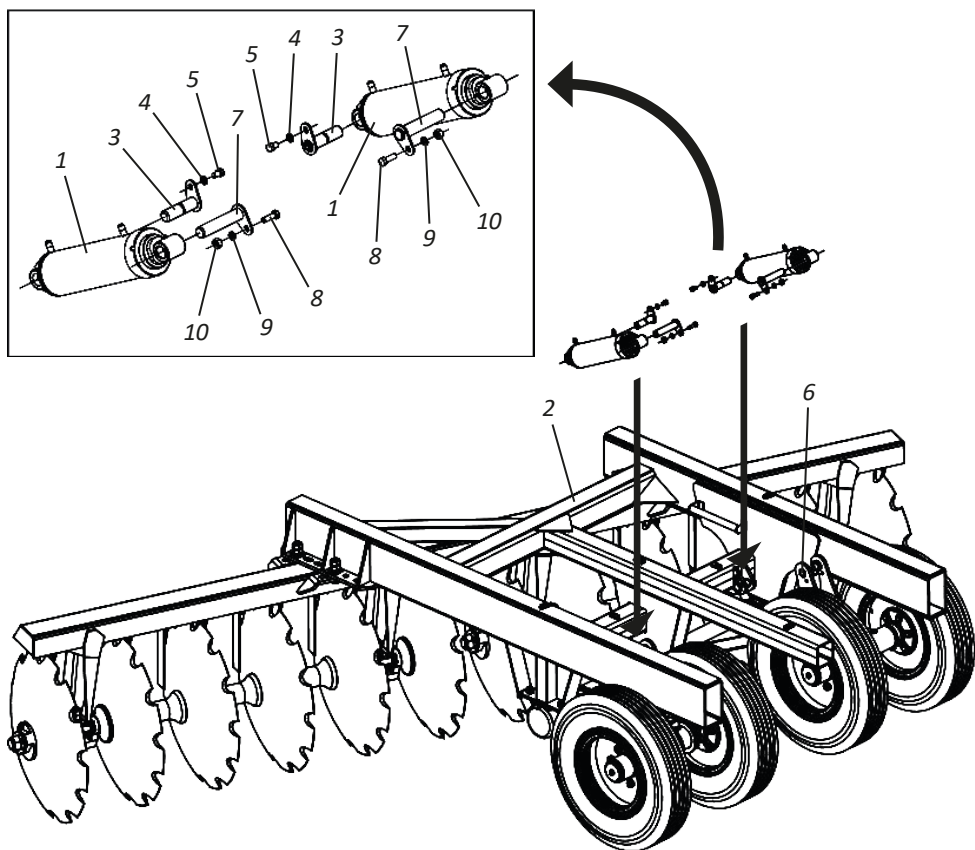
■ Assembly

• Mounting of hydraulic cylinders in the upstream

After assembling the hydraulic cylinder on the hitch header, fix the hydraulic cylinders on the upright for this, proceed as follows:

01 - Couple the base of the hydraulic cylinders (1) on the upright (2), securing through the pins (3), spring washers (4) and nuts (5).

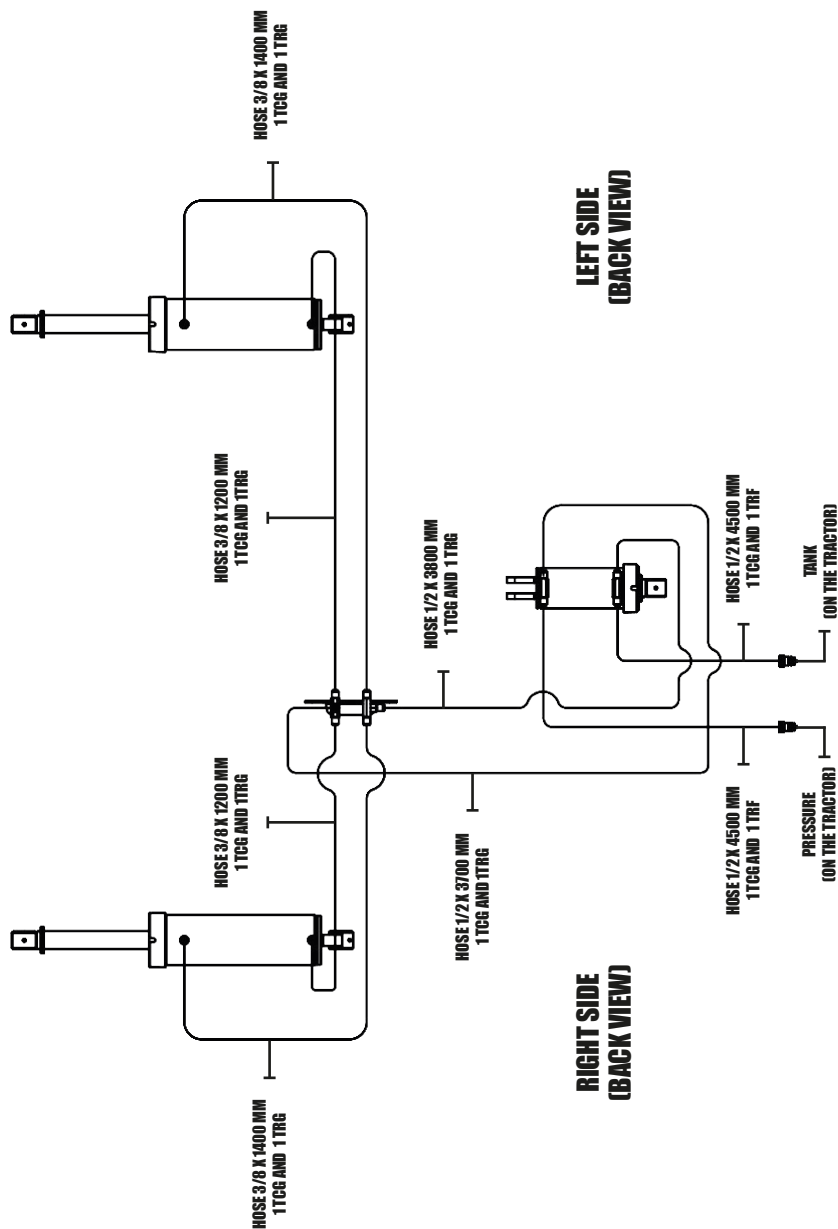
02 - Then, couple the hydraulic cylinders rod (1) to the wheel axle support (6), securing through the pins (7), screws (8), spring washers (9) and nuts (10).



⚠ ATTENTION When assembling the hydraulic cylinders (1), their terminals must be positioned upwards.

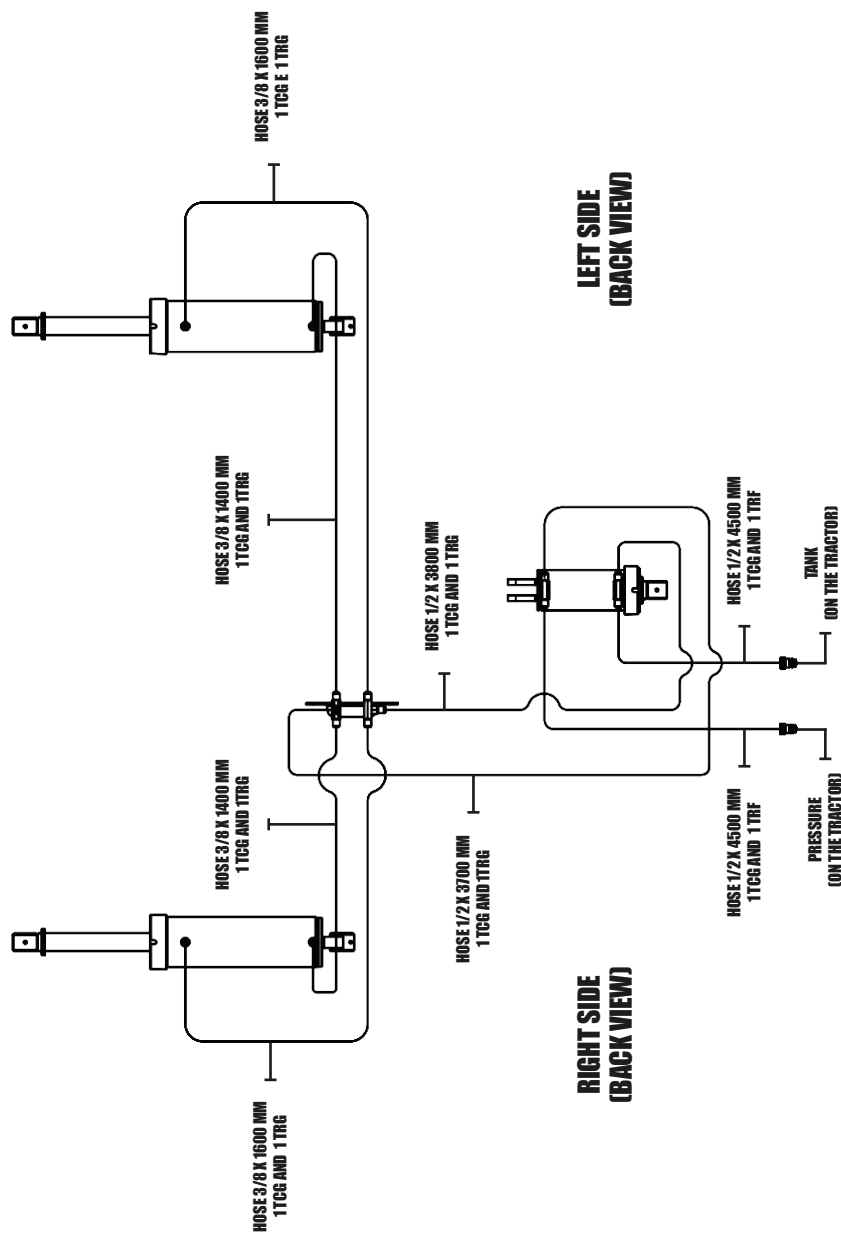
■ Assembly

• Hydraulic System Assembly - GSPCR-E 12 / 14 discs



■ Assembly

- Hydraulic System Assembly - GSPCR-E 16 / 18 / 20 / 22 / 24 discs



▪ Hitch

• Harrow hitch - Category 4 tractors

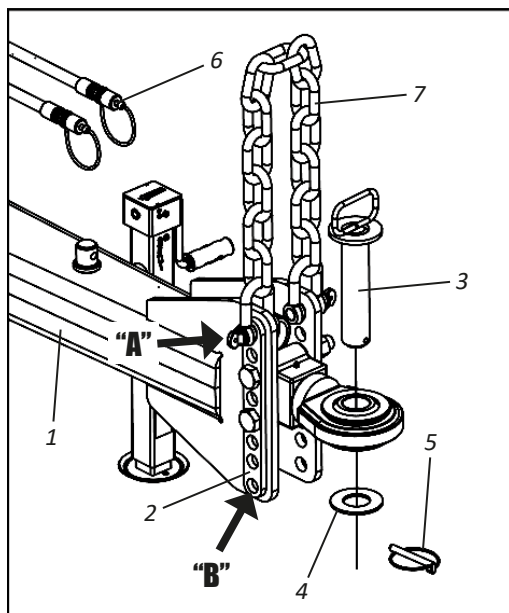
To attach the **GSPCR-E** to **category 4** tractors, proceed as follows:

- 01** - Level the hitch header (1) of the **GSPCR-E** in relation to the tractor hitch through the adjustments (2) of the hitch hitch.
- 02** - Then, slowly approach the tractor to the harrow in reverse gear, paying attention to the application of the brakes and hitch the **GSPCR-E** to the tractor, fixing it through the hitch pin (3), flat washer (4) and lock (5).
- 03** - Finish by attaching the hydraulic hoses (6) to the tractor's quick coupler.

⚠ ATTENTION

The safety chain (7) provides greater safety during work or transport, preventing the GSPCR-E from disengaging from the tractor in case of breakage of the hitch pin (3). Do not work or transport the GSPCR-E without securing the safety chain (7). Ignoring this warning could result in serious injury or death.

If you change the position of the hitch joint to hole "A", pass the safety chain (7) to hole "B".



⚠ IMPORTANT

Before connecting or disconnecting the hydraulic hoses, turn off the engine and relieve the pressure in the hydraulic system by operating the control levers fully. When relieving system pressure, make sure no one is near the equipment moving area.

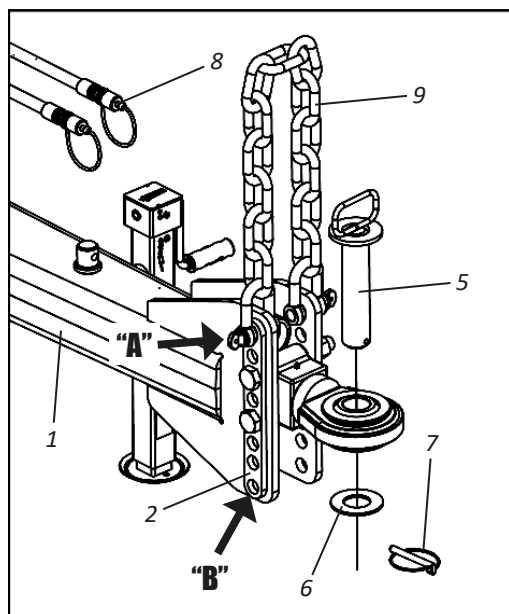
When attaching the GSPCR-E, look for a safe and easily accessible place. Always use low gear with low throttle.

▪ Hitch

• Harrow hitch - Category 5 tractors

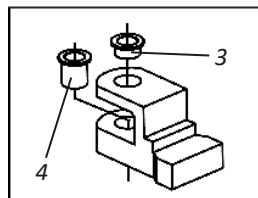
To attach the **GSPCR-E** to **category 5** tractors, proceed as follows:

- 01** - Level the hitch header (1) of the **GSPCR-E** in relation to the tractor hitch through the adjustments (2) of the hitch hitch. Then, take the smaller (3) and larger (4) adapter bushings that are in the packing box and place them on the **category 5** tractor hitch, according to **detail "A"**.
- 02** - Then, slowly approach the tractor to the harrow in reverse gear, paying attention to the application of the brakes and hitch the **GSPCR-E** to the tractor, fixing it through the hitch pin (5), flat washer (6) and lock (7).
- 03** - Finish by attaching the hydraulic hoses (8) to the tractor's quick coupler.



ATTENTION

The safety chain (9) provides greater safety during work or transport, preventing the GSPCR-E from disengaging from the tractor in case of breakage of the hitch pin (5). Do not work or transport the GSPCR-E without securing the safety chain (9). Ignoring this warning could result in serious injury or death. If you change the position of the hitch joint to hole "A", pass the safety chain (9) to hole "B".



DETAIL "A"

IMPORTANT

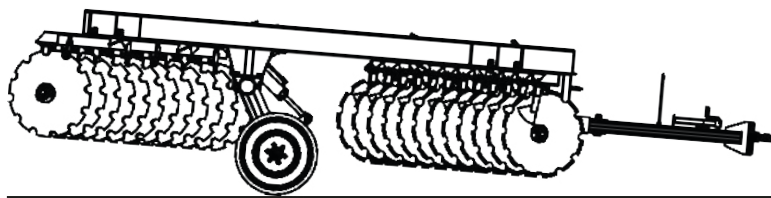
Before connecting or disconnecting the hydraulic hoses, turn off the engine and relieve the pressure in the hydraulic system by operating the control levers fully. When relieving system pressure, make sure no one is near the equipment moving area.

When attaching the GSPCR-E, look for a safe and easily accessible place. Always use low gear with low throttle.

▪ Leveling

• Disc Harrow leveling

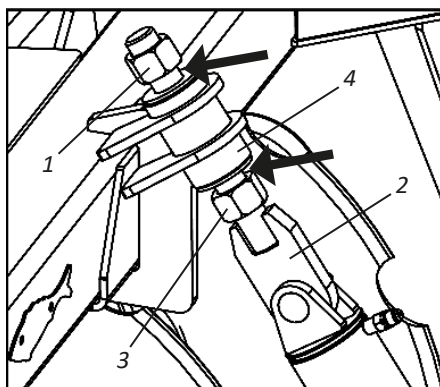
Place the tractor and the **GSPCR-E** in a flat location, lift the harrow and observe if the **GSPCR-E** is positioned in front as shown in the image below.



GSPCR-E - FRONT POSITIONED

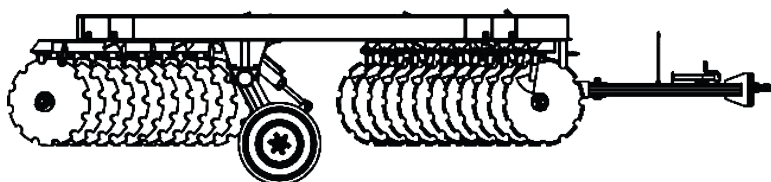
If the **GSPCR-E** is positioned at the front, level the grid, for this, proceed as follows:

- 01 - Lower the **GSPCR-E** by relieving the hydraulic system.
- 02 - Then loosen the upper nut (1) from the center bar (2) every 10 mm.
- 03 - Then tighten the lower nut (3) until it touches the face of the bushing (4).
- 04 - Then activate the hydraulic system to raise the **GSPCR-E** and check the position of the harrow. If you still need to adjust it, lower it again, loosen the upper nut (1) + 10 mm and lift it again and check. Repeat this procedure until the **GSPCR-E** is level, as shown in the image below.



⚠ ATTENTION

The above measurements are initial parameters for leveling the **GSPCR-E**.



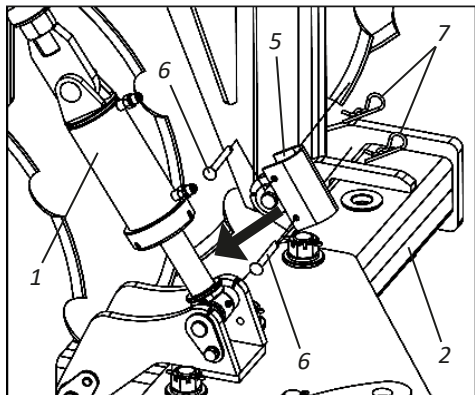
GSPCR-E - LEVEL POSITION

▪ Adjustment

• Adjustment for transport

Before transporting the **GSPCR-E**, proceed as follows:

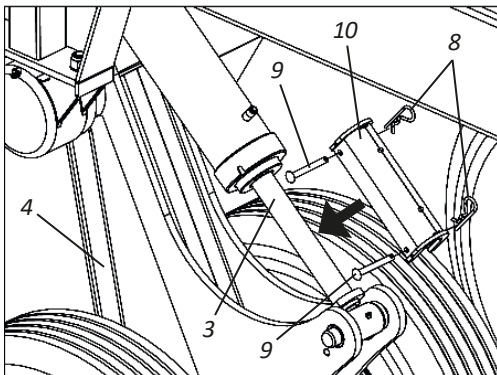
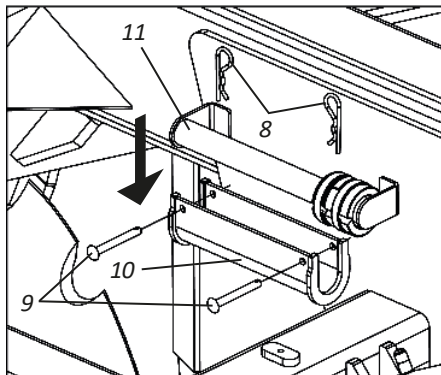
01 - Activate the hydraulic system where it will first open the full stroke of the hydraulic cylinder (1) of the header (2) and then the full stroke of the hydraulic cylinders (3) of the wheel (4).



02 - Then place the lock (5) on the hydraulic cylinder (1) of the header (2), fixing it with the pins (6) and locks (7).

03 - Then, release the locks (8), pins (9) and remove the locks (10) from the upright (11) and place them on the hydraulic cylinders (3) of the wheel set (4) fixing them through the pins (9) and locks (8).

04 - When the transport is finished, remove the locks (10) from the hydraulic cylinders (3) of the wheel (4) and fix them again on the upright (11) through the pins (9) and locks (8); also remove the lock (5) from the hydraulic cylinder (1) from the header (2).



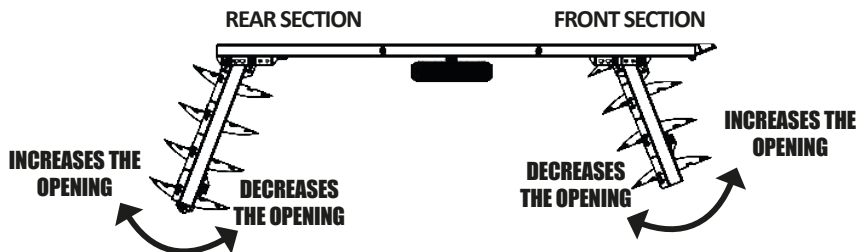
Do not transport the GSPCR-E without the lock (5) on the hydraulic cylinder (1) of the header (2) and the hydraulic cylinders (3) of the wheel set (4). Ignoring this warning could cause damage to the hydraulic cylinders.

▪ Adjustment

• Grid opening adjustment

To obtain the ideal penetration of the discs, the opening of the grid must be adjusted, which varies according to the type of soil:

- **LAND OF GREATER PENETRATION DIFFICULTY:** The opening of the grid must be increased.
- **LIGHT AND LOOSE TERRAIN:** The opening of the grid must be reduced.



INCREASES THE OPENING: Greater Depth.

REDUCES THE OPENING: Lower Depth.

To increase or decrease the opening of the grid, proceed as follows:

- 01 - Loosen the nuts and locknuts (1), pressure washers (2), remove the locks (3) and screws (4).
- 02 - Then adjust the frames (5) decreasing or increasing their opening.
- 03 - Then, fix the frame (5) to the mount (6) again using the screws (4), locks (3) pressure washers (2) and nuts and locknuts (1).

❗ IMPORTANT

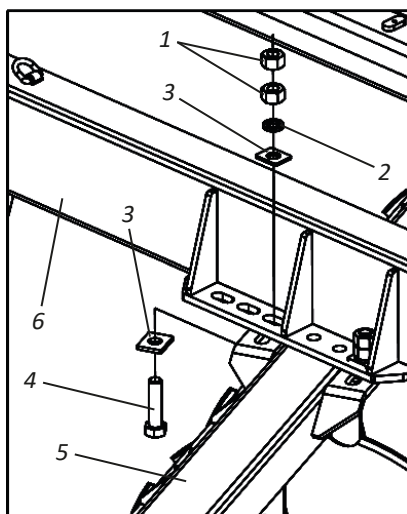
To start the work we recommend using a medium opening in the disc sections. If you need more penetration, increase the rear section opening angle.

The front section generally does not operate wider than the rear section.

The wheels also help to control the depth of the discs.

🔍 OBSERVATION

We advise to control the working depth of the GSPCR-E by opening the disc sections and using the tires only in places where the GSPCR-E penetrates too much.

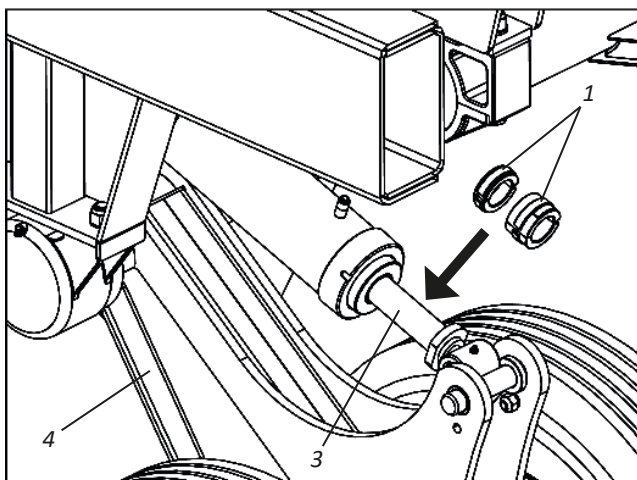
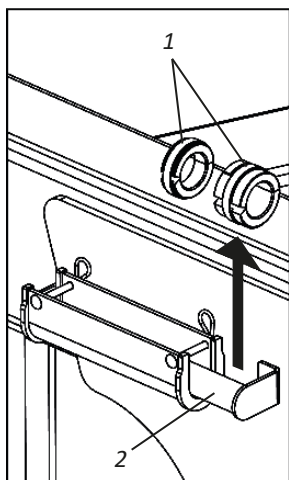


▪ Adjustment

• Working depth adjustment

To regulate the working depth through the tires, the limiting rings (1) are used, which are placed on the hydraulic cylinder rods, obtaining numerous working depth adjustments. To regulate working depth, proceed as follows:

- 01** - Remove the limiting rings (1) from the mullion (2).
- 02** - Then, activate the hydraulic cylinder rods (3) of the wheel (4) until the necessary measure.
- 03** - Then, place the limiting rings (1) on the hydraulic cylinder rods (3) until filling all the space between the rod coupling and the hydraulic cylinder piston (3).



- 04** - After finishing the work, remove the limiting rings (1) from the hydraulic cylinders (3) of the wheel (4) and attach them again to the upright (2).

⚠ ATTENTION Always place the same number of limit rings (1) on the hydraulic cylinders (3) of the wheel (4).

⚠ IMPORTANT

After adjustment, the GSPCR-E will always operate at the same depth, both on hard and loose ground; this is because the limiting rings (1) are limiting the stroke of the hydraulic cylinder (3) of the wheel, that is, preventing the oscillation of the wheels.

🔍 OBSERVATION

The limit rings (1) that come with the GSPCR-E, have different sizes that combined offer various depth adjustments.

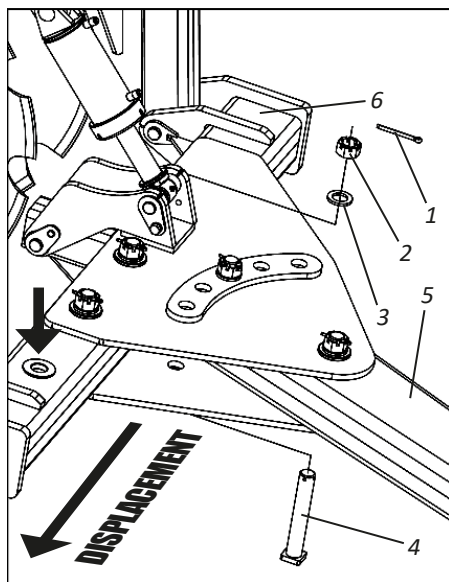
▪ Adjustment

• Disc Harrow Displacement Adjustment - Part I

The displacement of the harrow must be done when the harrow is not giving a perfect finish, that is, leaving a trail of the tractor. In order for the harrow to work centrally with the tractor's traction line, proceed as follows:

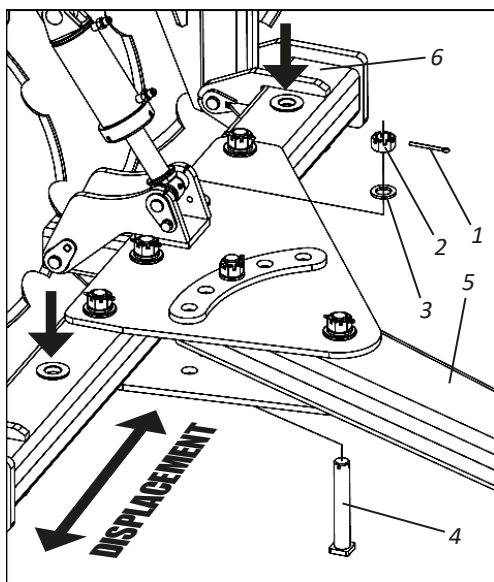
- 01** - Remove the cotter pins (1), loosen the castle nuts (2), flat washers (3) and remove the screw (4).
- 02** - Then, move the hitch header (5) on the crossbar (6), making the ideal adjustment.
- 03** - Finish fixing the screws (4), flat washers (3), castle nuts (2) and cotter pins (1) again.

GSPCR-E 12 AND 14 DISCS



DISPLACEMENT ADJUSTMENT FOR THE OPEN SIDE ONLY.

GSPCR-E 16 TO 24 DISCS

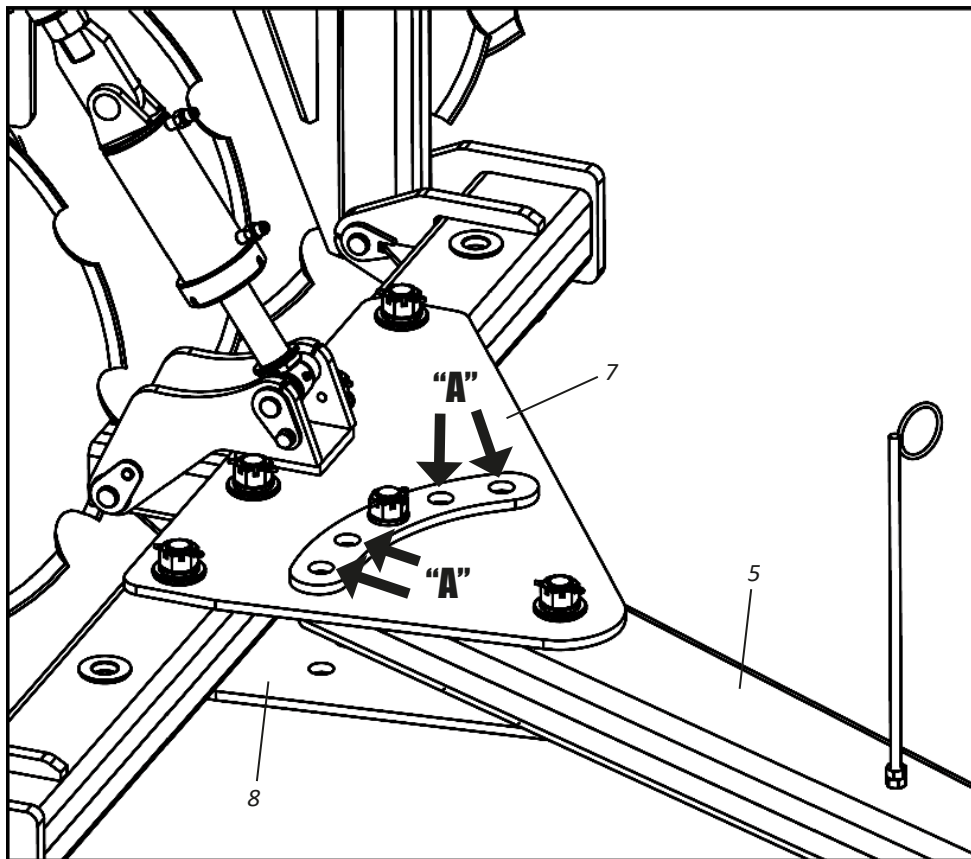


DISPLACEMENT ADJUSTMENT FOR BOTH SIDES (OPEN AND CLOSED).

▪ Adjustment

• Disc Harrow Displacement Adjustment - Part II

Under normal working conditions and during transport, the hitch header (5) must remain in the center hole of the upper (7) and lower (8) plates. When changing the coupling header (5) to the other "A" holes, small lateral displacements of the **GSPCR-E** are obtained.



! IMPORTANT

The GSPCR-E header and tractor drawbar should be as aligned as possible with the working direction.
The tractor's drawbar must remain loose during work and fixed during transport.

▪ Operations

• Recommendations for Operation - Part I

Preparing the **GSPCR-E** and the tractor will save you time as well as a better result in field work. The suggestions below may be helpful.

DISC HARROW STRUCTURE

After the first day of work with the **GSPCR-E**, retighten all screws, nuts and check the condition of the pins and locks of the grid structure. Afterwards, perform a general retightening of all screws and nuts of the grid structure every 24 hours of work.

DISC SECTIONS

Pay special attention to the **GSPCR-E** disk sections. Re-tighten all disc section bolts and nuts daily during the first week of use. Afterwards, retighten the screws and nuts of the disc sections periodically.

GENERAL RECOMMENDATIONS

- 01** - Adjust the tractor according to the content of the instruction manual, always using the front and rear weights to stabilize the equipment.
- 02** - Make the coupling to the tractor always at idle speed and very carefully.
- 03** - When using the **GSPCR-E** it is important to check the coupling and cross leveling system to make sure that the discs will have the same depth of penetration into the ground.
- 04** - After coupling and leveling is done, the next adjustments will be made directly in the work field, analyzing the terrain in terms of its texture, humidity and the types of operations to be done with the **GSPCR-E**.
- 05** - On the tractor, choose a gear that allows you to maintain a certain power reserve, ensuring against unforeseen efforts.
- 06** - Respect the work and transport speeds specified on page 10. We do not advise exceeding speeds to maintain service efficiency and avoid possible damage to the **GSPCR-E**.
- 07** - When performing maneuvers in the headlands, activate the hydraulic cylinders gradually, lifting the disc sections beforehand.
- 08** - Do not uncouple any hose without first relieving the circuit pressure, to do so, activate the control levers a few times with the engine off.
- 09** - Remove sticks or any other object that can get stuck on the discs.

■ Operations

• Recommendations for Operation - Part II

- 10** - On compacted land where it is difficult for the discs to penetrate, the depth can be minimal, making the work unsatisfactory. In these cases, the application of other more suitable products is recommended.
- 11** - During work or transport, the tractor's drawbar must remain fixed.
- 12** - When carrying out any maintenance on the **GSPCR-E**, it must be lowered to the ground and the engine turned off.
- 13** - The **GSPCR-E** has several settings, but only local conditions can determine the best setting for it.

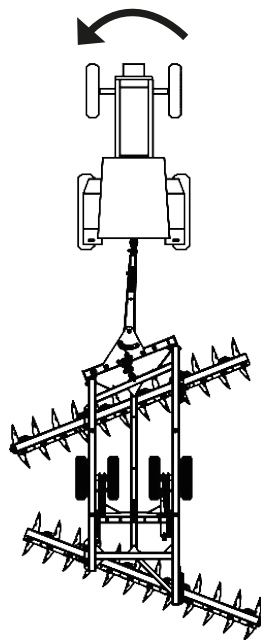
In case of doubt, never operate or handle the GSPCR-E, consult After Sales.
Telephone: 0800-152577 / E-mail: posvenda@baldan.com.br

• Direction of maneuvers

During harrowing (with the discs on the ground), DO NOT maneuver to the right, as the angles formed by the disc sections start to transmit great effort to the equipment, especially the traction components.

ATTENTION

With the disc sections on the ground, it is necessary to make maneuvers on the left (GSPCR-E closed side) avoiding overloads and even the formation of large undesirable grooves in the maneuvering locations.



▪ Operations

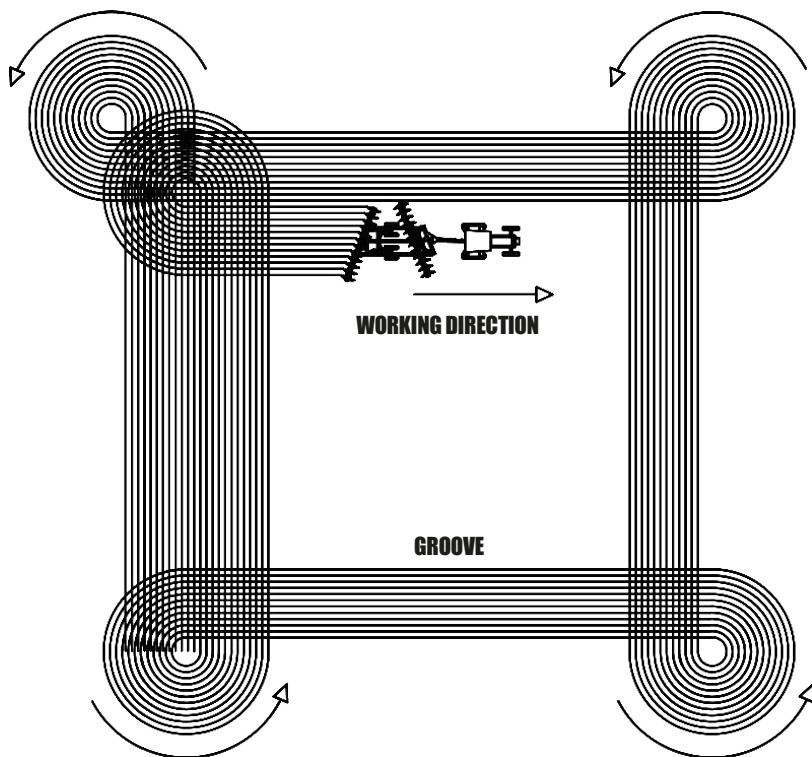
• How to start harrowing

When starting the harrowing, you must always follow the terraces or contour cord, starting the operation so that the terrace is always on the left side of the tractor driver.

OBSERVATION

Before starting operations with the GSPCR-E, check it completely, retightening all screws, nuts, hose terminals, shafts and especially the disc sections.

• Harrowing from outside to inside



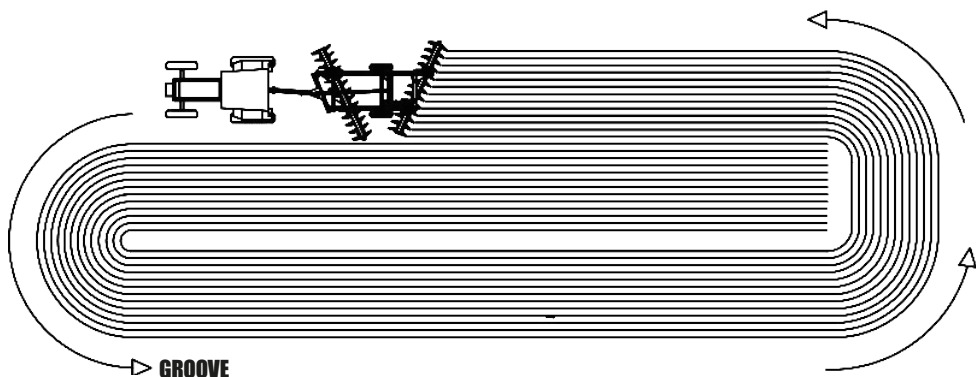
IMPORTANT

Try to drive the tractor in order to obtain a good performance between passes of the GSPCR-E. Avoid the formation of unharrowed windrows or bands.

■ Operations

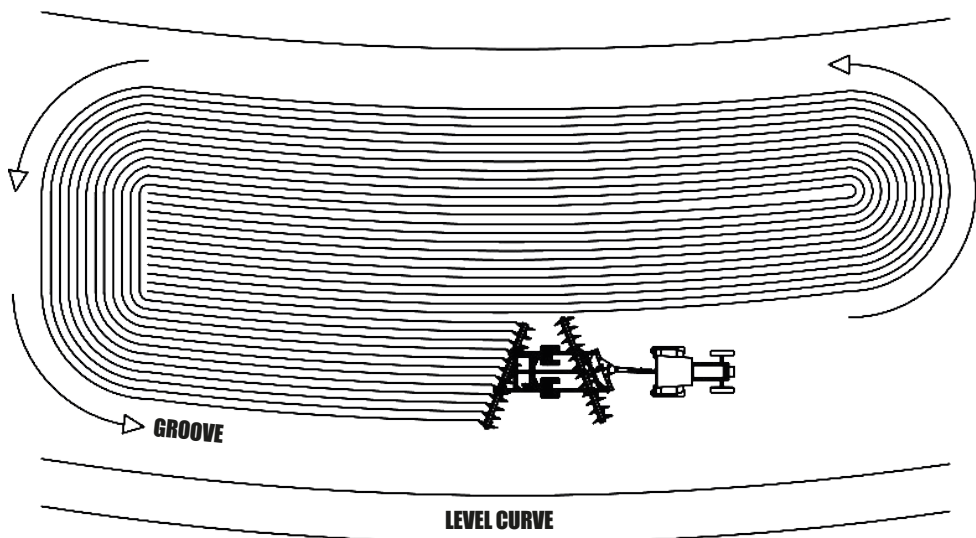
• Harrowing from the inside to the outside

In this sense, greater perfection is obtained. When you're walking a lot at the headlands, it's a good idea to start another block.



• Fields with contour lines

In terrain with a contour line, it is usual to start two plots at a time, taking care to start the work with the contour line on the tractor driver's left side. When you reach the middle of the level curve, it is advisable to start another field to reduce fuel consumption.

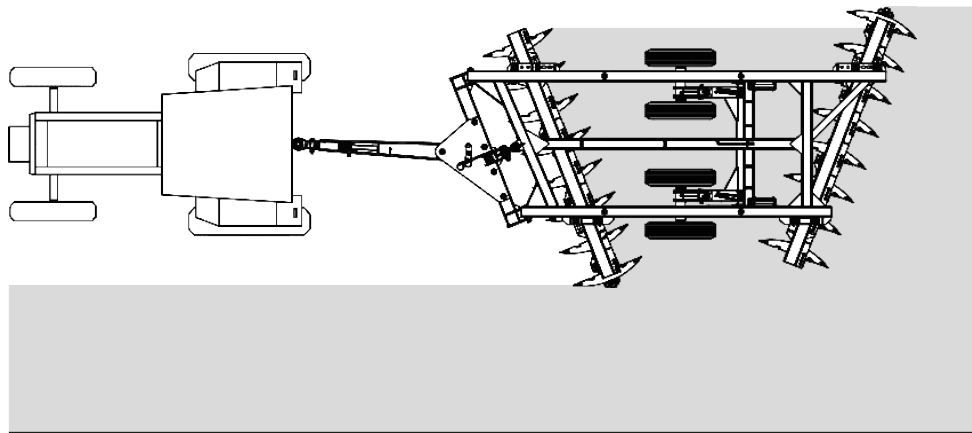


▪ Operations

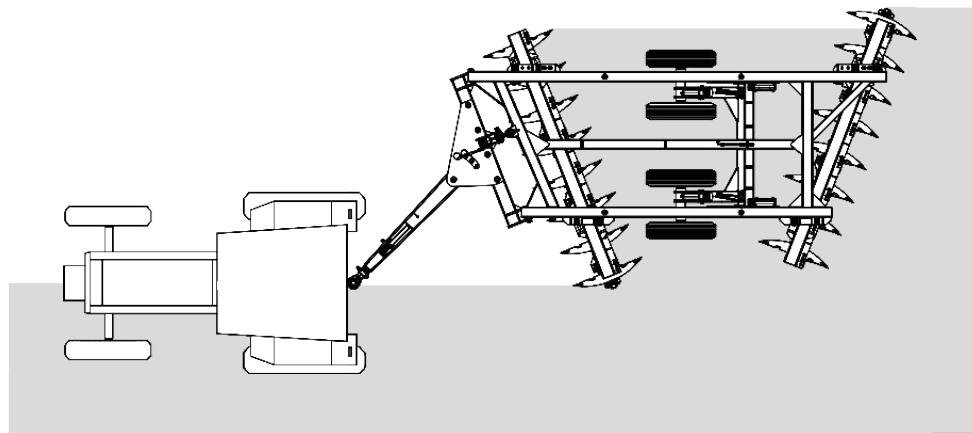
• Correct way of working

When working with the **GSPCR-E**, the tractor must walk on unworked ground and close to the previous furrow.

CORRECT WAY OF WORKING



INCORRECT WAY OF WORK



ATTENTION

Do not work with tractor tires over the already harrowed area.

■ Calculations

• Approximate hourly production - Part I

To calculate the approximate hourly production of the **GSPCR-E**, use the following formula:

$$A = \frac{L \times V \times F}{X}$$

WHERE:

A = Area to be worked

L = Grid working width (in meters)

V = Average tractor speed (in meters/hour)

F = Production factor: 0.90

X = Value of the hectare: 10,000 m²

Example: A **24 disc GSPCR-E**, how much Ha it will produce in one hour of work at an average speed of 7 km/h.

A = ?

L = 5,75 m

V = 7.000 m/h

F = 0,90

X = 10.000 m² (Calculated in hectare)

$$A = \frac{5,75 \times 7.000 \times 0,90}{10.000} = 3,62 \text{ Ha/h}$$

Model	Number of discs	Working Width (mm)	Average Speed (m/h)	Production Factor	Approximate Production in Hectares Hour
GSPCR-E	12	2957	7.000	0,90	1,85
	14	3405			2,14
	16	3909			2,45
	18	4371			2,75
	20	4828			3,03
	22	5292			3,33
	24	5759			3,62

The formula for calculating approximate production refers to the calculation of areas to be worked by the **GSPCR-E**. If you want to know the time it will take to work in an area of known value, just divide the value of this area by the hourly production of the **GSPCR-E**.

▪ Calculations

• Approximate hourly production - Part II

Example: How long “X” will it take for a **24 disc GSPCR-E** harrow to produce 35 hectares at an average speed of 7km/h?

$$X = \frac{35 \text{ Ha}}{3.62 \text{ Ha/h}} = 9.66 \text{ hours approximately to work 35 hectares.}$$



ATTENTION

The hourly production of the GSPCR-E can vary due to factors that change the work pace, such as (soil moisture and hardness, terrain slope, inadequate adjustments and work speed).

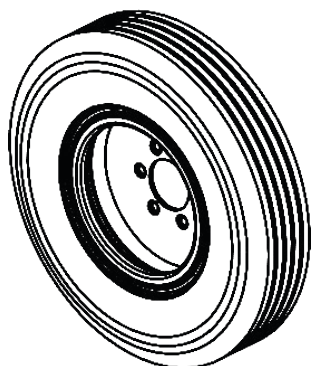
▪ Maintenance

The **GSPCR-E** was developed to provide you with maximum performance over terrain conditions. Experience has shown that periodic maintenance of certain parts of the **GSPCR-E** is the best way to help you get out of trouble, so we suggest checking it ou.

• Tire pressure

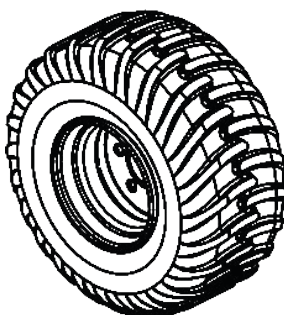
Tires must always be correctly calibrated, avoiding premature wear due to excess or lack of pressure.

STANDARD: TIRES 900 X 20 14 CANVAS



USE: 50 LBS/POL²

OPTIONAL: TIRES 400 X 60 14 CANVAS



USE: 52 LBS/POL²

ATTENTION

Never weld the tire mounted wheel, the heat can cause the air pressure to build up and cause the tire to explode.

When inflating the tire, position yourself beside the tire, never in front of it.

To inflate the tyre, always use a containment device (inflation cage).

Mount the tires with suitable equipment. The service must be carried out only by persons qualified for the work.

IMPORTANT

When calibrating the tires, do not exceed the recommended calibration.

OBSERVATION

The pressure of the tractor tires should be made according to the manufacturer's recommendations.

▪ **Maintenance**

The **GSPCR-E** was developed to provide you with maximum performance over terrain conditions. Experience has shown that periodic maintenance of certain parts of the **GSPCR-E** is the best way to help you get out of trouble, so we suggest checking it out.

• **Lubrication**

Lubrication is essential for a good performance and greater durability of the moving parts of the **GSPCR-E**, contributing to saving maintenance costs.

Before starting the operation, carefully lubricate all grease fittings, always observing the lubrication intervals on the next page. Ensure the quality of the lubricant, regarding its efficiency and purity, avoiding using products contaminated by water, earth and other agents.

• **Table of greases and equivalents**

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

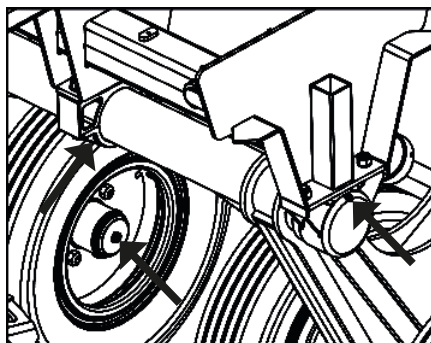
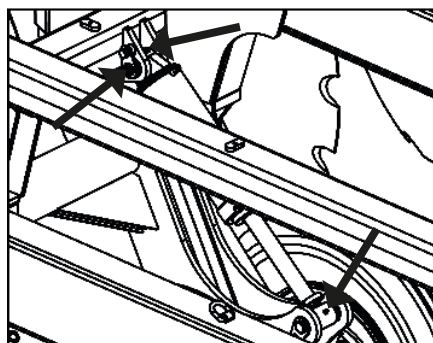
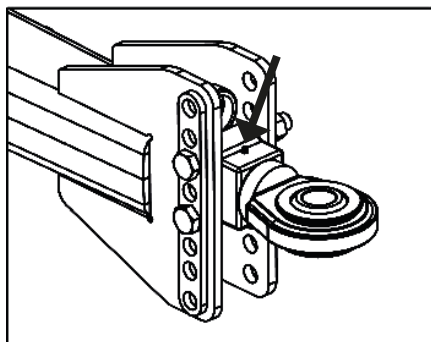
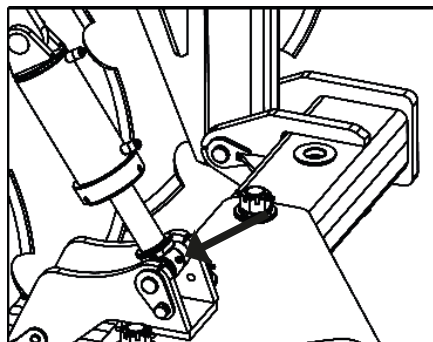


ATTENTION

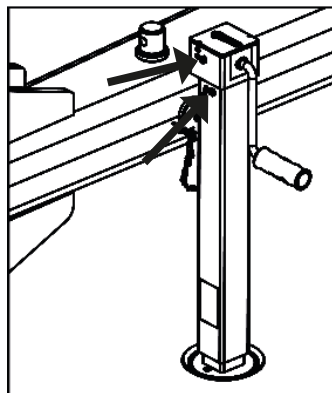
If there are manufacturers and/or equivalent brands that are not listed in the table, consult the manufacturer's technical manual.

▪ Maintenance

- Lubricate every 24 hours of work



- Lubricate every 60 hours of work



ATTENTION

When lubricating the GSPCR-E, do not exceed the amount of new grease. Introduce a sufficient amount.

▪ Maintenance

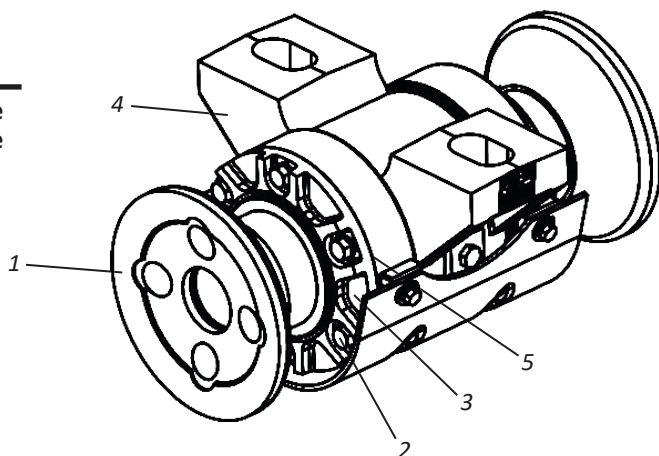
• Disc section bearing adjustments

When the disc section bearings show gaps, proceed as follows to adjust them:

- 01** - Remove the washer (1).
- 02** - Then, loosen the screws (2) and remove the cover (3) from the bearing (4).
- 03** - Then, remove one or two gaskets (5) from the cover (3) of the bearing (4). Replace the cap (3) and retighten it.
- 04** - If the gap persists, you can face the cover (3), to increase the adjustment, then mount it on the bearing with as many joints as necessary.
- 05** - The bearing must rotate free, that is, without gaps.

ATTENTION

Do not assemble the bearing without the joints (5).



• Bearing oil

In the first days of working with the **GSPCR-E**, check the oil level in the bearings daily, then check every 120 hours of work.

ATTENTION

Replace the oil every 1200 hours of work using 0.900 liters.

Use transmission oil: 90 API GL4, MIL-L-2105; SAEJ306, May/81: SAE 80W,90 and 140.

OBSERVATION

The ideal oil level is when it reaches the plug hole. To check the bearing oil level, find a flat place.

■ Maintenance

• Periodic Maintenance

Description of parts	Number of grease fittings						Oil change	Lubricate with grease	Re-tighten	Replace	Check	Maintenance interval
	GSPCR-E 12	GSPCR-E 14	GSPCR-E 16	GSPCR-E 18	GSPCR-E 20	GSPCR-E 24						
Shackle	1	1	1	1	1	1		X				24 hours
Lift Cylinder Base	2	2	2	2	2	2		X				
Lift Cylinder Rod	2	2	2	2	2	2		X				
Header Cylinder Rod	1	1	1	1	1	1		X				
Hub	2	2	4	4	4	4		X				
Wheel support bearing	2	2	3	3	3	3		X				
Mechanical monkey	2	2	2	2	2	2		X				60 hours
Bearings	-	-	-	-	-	-	X					1200 hours
Hydraulic system	-	-	-	-	-	-					X	40 hours
Bearings	-	-	-	-	-	-			X		X	120 hours
Axle Bolts and Nuts	-	-	-	-	-	-			X			50 hours
Bolts and nuts	-	-	-	-	-	-			X			100 hours
Retainers	-	-	-	-	-	-				X		1500 hours
Bearings	-	-	-	-	-	-				X		
Discs	-	-	-	-	-	-				X		When necessary
Tires	-	-	-	-	-	-				X		

▪ Maintenance

• Operational Maintenance - Part I

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
Tires are damaged.	Work area with stones, stumps or crop residues with stems that cause the tires to shred.	Eliminate the elements that cause damage to the tires before the period of use of the GSPCR-E .
	Tires are not properly inflated, causing deformation.	Maintain proper tire pressure.
Strange noise on wheels.	Loose wheels or wheel hub with play.	Retighten wheel nuts and adjust wheel hub bearings.
	Bearing breakage.	Identify the occurrence and replace the damaged parts.
Quick hitch does not fit.	Couplings of different types.	Exchange them for males and females of the same type.
Leakage in hydraulic hoses.	Lack of sealing material on the thread.	Use thread sealing tape and carefully retighten.
	Insufficient tightening.	Carefully retighten.
	Damaged terminals.	Replace terminals.
Leakage in quick couplings.	Lack of sealing material on the thread.	Use thread sealing tape and carefully retighten.
	Insufficient tightening.	Retighten carefully without excess.
	Repairs damaged.	Replace repairs.
Hydraulic cylinder leak.	Repairs damaged.	Replace repairs.
	Damaged stem.	Replace rod.
	Oil with impurities.	Replace oil, repairs and filter elements.
	Working pressure higher than recommended.	Adjust the command through the relief valve with the help of a pressure gauge. Normal pressure 180 Bar.

■ Maintenance

• Operational Maintenance - Part II

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
Quick couplers do not engage.	Couplings of different brands.	Use quick couplers of the same brand.
	Mixture of needle-type couplings with ball-type couplings.	Always use quick couplers of the same type.
	Pressure on the system.	Relieve pressure to engage.
Tractor pulling to the right.	Angle too large in front section or too small in rear section.	Reduce the angle of the front section or increase the angle of the rear section.
	Oscillating drawbar touching the stop to the left.	Move the drawbar to the left.
Groove being left open on the left side	Speed too low for ground conditions.	Increase speed.
	Tractor being positioned too far to the right.	Position the tractor so the left front disc is on the edge of the furrow.
	Incorrect adjustment of the disc sections laterally.	Move rear section left or front right.
Windrow formation on the left side.	Insufficient overlap. Incorrect rear section adjustment.	In case of windrows, move the front section to the left or the rear to the right.
Sections are not at harrow level.	Front and rear section are not operating at the same depth.	Adjust the angle of the disc sections.
Locked sections.	Very wet field.	Allow the field to dry or penetrate the disc superficially to aid in drying.
	Adjustment of sections with maximum angle.	Reduce the angle.
	Very deep harrowing in moist soil.	Use cappers to decrease depth. Raise disc to reduce penetration.
	Wipers worn or incorrectly adjusted.	Adjust or change wipers as needed.

▪ Maintenance

• Cares

- 01** - Before each job, check the condition of all hoses, pins, screws, bearings, discs and sections. When necessary, retighten them.
- 02** - The displacement speed must be carefully controlled according to the terrain conditions.
- 03** - The **GSPCR-E** is used in several applications, requiring knowledge and attention during its handling.
- 04** - Only local conditions will be able to determine the best way of operating the **GSPCR-E**.
- 05** - When assembling or disassembling any part of the **GSPCR-E**, use suitable methods and tools.
- 06** - Carefully observe the lubrication intervals at the various lubrication points of the **GSPCR-E**. Respect the interval intervals.
- 07** - Always check if the parts show wear. If replacement is required, always demand genuine Baldan parts.
- 08** - Keep **GSPCR-E** discs always sharp.

IMPORTANT

Proper and periodic maintenance is necessary to ensure the long life of the **GSPCR-E**.

• General cleaning - Part I

- 01** - When storing the **GSPCR-E**, do a general cleaning and wash it completely with water only. Check that the paint has not worn away, if it has, apply a general coat, apply protective oil and completely lubricate the **GSPCR-E**. Do not use burnt oil or other type of abrasive.
- 02** - Check all the moving parts of the **GSPCR-E**, if they show wear or looseness, make the necessary adjustment or replace the parts, leaving the grid ready for the next job.
- 03** - After all maintenance care, store the grid in a covered and dry place, properly supported.

Avoid: - That the discs are directly in contact with the ground.
- Spring compression.
- That the hydraulic hoses are properly capped.

■ Maintenance

• General cleaning - Part II

- 04** - When connecting or disconnecting the hydraulic hoses, do not let the ends touch the ground. Before connecting the hydraulic hoses, clean the connections with a clean, lint-free cloth. Do not use cotton waste!
- 05** - Replace all stickers, especially the warning ones that are damaged or missing. Make everyone aware of their importance and the dangers of accidents when instructions are not followed.
- 06** - After all maintenance care, store your **GSPCR-E** on a flat surface, covered and dry, away from animals and children.
- 07** - We recommend washing the **GSPCR-E** only with water at the beginning of the work.



ATTENTION

Do not use chemical or abrasive products to wash the **GSPCR-E**, as this could damage the paint and adhesives on it.

• Disc Harrow Conservation - Part I

To extend the life and appearance of the **GSPCR-E** for longer, please follow the instructions below:

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

• Disc Harrow Conservation - Part II

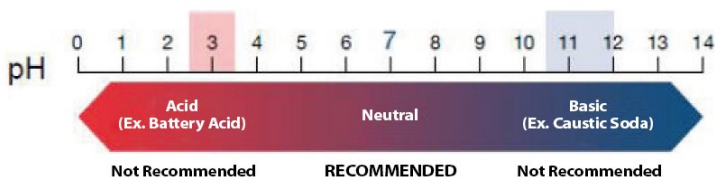
The practices and precautions below, if adopted by the owner or operator, make a difference to the conservation of the **GSPCR-E**.

- 01** - Be careful when washing with high pressure; do not direct the water jet directly on connectors and electrical components. Isolate all electrical components;
- 02** - Use only water and NEUTRAL detergent (pH equal to 7);
- 03** - Apply the product, strictly following the manufacturer's instructions, on the wet surface and in the correct sequence, respecting the application and washing time;
- 04** - Stains and dirt not removed with the products must be removed with the aid of a sponge.
- 05** - Rinse the machine with clean water to remove all chemical residues.

▪ Maintenance

• Disc Harrow Conservation - Part III

- 06** - Do not use: - Detergents with a basic active principle (pH greater than 7) can attack/ stain the grid paint.
- **Detergents with acidic active principle (pH less than 7), act as a stripper/ zinc remover (protection of parts against oxidation).**



- 07** - Let the machine dry in the shade, so that water does not accumulate in its components. Drying too quickly can cause stains on your paint.
- 08** - After drying, lubricate all chains and grease fittings according to the recommendations in the operator's manual.
- 09** - Spray the entire machine, especially the zinc-coated parts, with protective oil, following the manufacturer's application guidelines. The protector also prevents the adherence of dirt in the machine, facilitating subsequent washing.
- 10** - Observe the curing time (absorption) and application intervals as recommended by the manufacturer.



ATTENTION

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



IMPORTANT

We recommend the following protective oils:

- Bardahl: Protective Agro 200 or 300
- ITWChemical: Zoxol DW - Series 4000



OBSERVATION

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

▪ Lifting

• Warnings for lifting - Part I

 Carefully read all the information contained on pages 66 to 68 before starting the GSPCR-E lifting procedure as instructed on page 69.

 Before starting the lifting of the GSPCR-E, look for a safe and easily accessible location that is clean and free of oil, grease, and that is not wet, as there is a danger of accidents.

 When lifting and moving the GSPCR-E and/or its components, pay full attention to the workplace, the surroundings and always isolate the work area when there is movement by third parties.

 Ensure the capacity of the muck and load lifting machines before lifting the GSPCR-E and/or components; imminent risk of accidents;

 To avoid serious injury or death while lifting the GSPCR-E, use PPE (Personal Protective Equipment).

 Do not drag hooks, chains or slings as they can cause damage which must be avoided.

 When lifting the GSPCR-E, prevent it from screwing in somewhere. Do not subject the equipment to unnecessary effort.

 Never secure the load on the end of the hook. Use large eyebolts or fasten with a suitable shackle.

 Never try to force the attachment of a large ring on a smaller hook, use a hook with a suitable opening.

 Raise the GSPCR-E a few inches off the ground and check that the attachment is secure and that the angles and tensions in the sling legs are correct, before starting to move.

 Move the GSPCR-E with due care. Gently lower it to avoid bumps or bumps.

 If necessary, move the hook only with your fingertips; never put your hand inside it, as your fingers may be pinched by the load.

 For attachments with lifting eyes, ensure that the eyes are properly positioned.

 The hook ends should be positioned to the outside of the load.

 Before lifting the GSPCR-E, make sure the weight of the GSPCR-E is evenly distributed.

 Never lift the GSPCR-E using a strap that is used to secure the load. These materials are only sized for securing cargo and cannot support its weight. For lifting, use only GRADE 8 or 10 chains with a load capacity compatible with the weight of the GSPCR-E being lifted.

 The accessories must have the same load capacity as the chain; Do not repair broken chains with wires, screws or welding. Replace any chain that shows any damage.

 Do not twist securing a chain link with a hook, always use a load ring.

▪ Lifting

• Warnings for lifting - Part II

 When lifting with multiple slings on a single hook, the lifting angle must not exceed 90°. The hook can be damaged and there is a risk of opening the hook latch.

 Never move the GSPCR-E with the chain twisted.

 Make sure the responsible person is instructed in the correct lifting of the GSPCR-E. Read or explain all procedures to the person who cannot read.

 Baldan is not responsible for any damage caused in unpredictable situations or situations outside the normal lifting of the GSPCR-E.

 Improperly lifting the GSPCR-E can result in serious or fatal accidents and damage to the GSPCR-E.

 Alcoholic beverages or some medications can cause loss of reflexes and change the physical condition of the person responsible and the people involved in the lifting of the GSPCR-E, so never lift it under the use of these substances.

▪ Lifting

• Inspection of locking hooks, chains and slings

- 01** - A periodical in-depth examination must be done at least every 12 months or more frequently according to the rules and the type of use of hooks, chains and slings.
- 02** - Regular inspection includes both operational checks and periodic maintenance.
- 03** - Inspections of hooks, chains and slings must be carried out by people who have knowledge of the design, use and maintenance of these materials.
- 04** - Before inspecting a chain, clean it completely, removing the subject and oil. All cleaning methods that do not attack the base material of the chain are acceptable.
- 05** - Chains and slings that have been overloaded must be discarded. Permanent stretching is not allowed.
- 06** - Chains that have cracks or cavities must be discarded.
- 07** - When a twisted chain is overloaded, it develops permanent deformations. In this case, this chain must be replaced immediately.
- 08** - If the chain contains deformed links or deep corrosion, it must be replaced immediately.
- 09** - Damage or wear on hooks, chains and slings must be reported to your superior, who in this case must remove them from use for repair or replacement.
- 10** - Hooks, chains and slings that remain unused for a period of time must be inspected before being used again.

• Storage

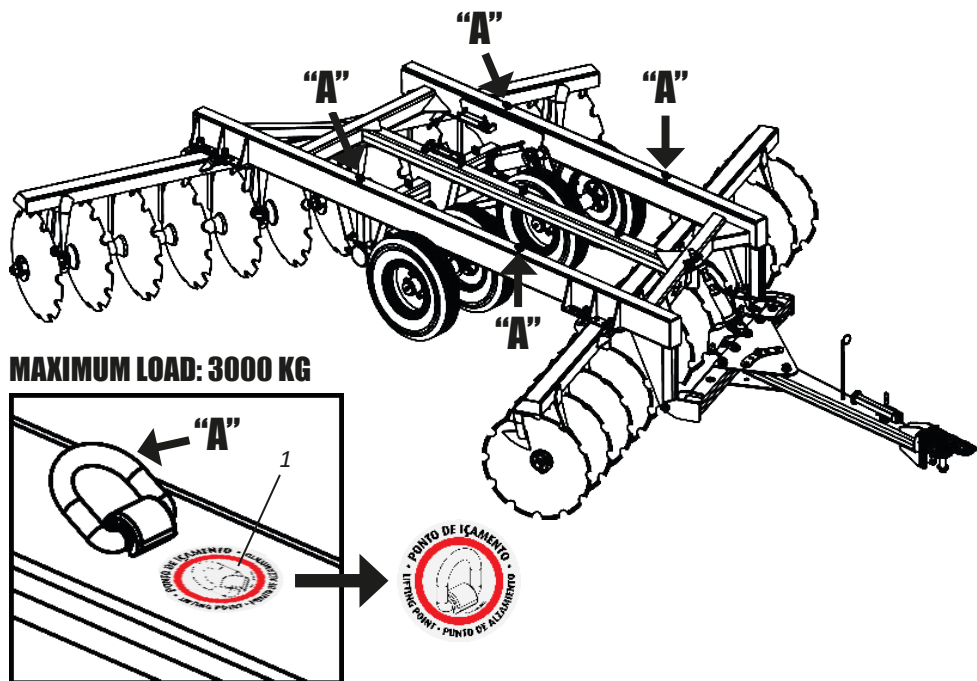
- 01** - Adequate storage must be provided, preferably at room temperature. Good storage preserves hooks, chains and slings and makes them easy to locate.
- 02** - Hooks, chains and slings stored for a long time must be protected against corrosion.
- 03** - Hooks, chains and slings that remain unused for a period of time must be inspected before being used again.

If you have any questions about inspection and storage of hooks, chains and slings, consult the manufacturer's manual.

▪ Lifting

• Lifting points

The **GSPCR-E** has 4 “A” lifting points located on the upstream and identified through the sticker (1) attached to the side of these points. When mounting, loading, unloading or servicing the **GSPCR-E**, if you need to lift with a winch, it is essential to attach the chains to the 4 lifting points “A”.



MAXIMUM LOAD: 3000 KG

ATTENTION



Before you begin lifting the **GSPCR-E**, check the weight of the **GSPCR-E** (page 17) for proper hook, chain, and sling. Make sure when engaging the hook that the weight of the **GSPCR-E** is evenly distributed.



Use standard hooks and chains ie that meet safety standards. Hooks and chains used for lifting the **GSPCR-E** must be GRADE 8 or 10 with a load capacity compatible with the weight of the **GSPCR-E** to be lifted.

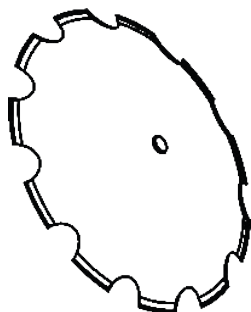


Before you start lifting the **GSPCR-E**, make sure there are no people near, on or under the **GSPCR-E**. **DO NOT** stand on or under the suspended **GSPCR-E**. Ignoring these warnings could cause serious injury or death.

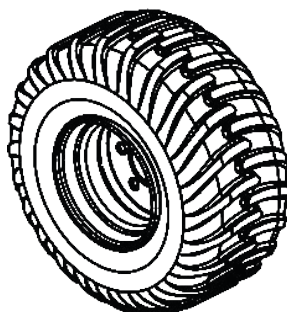
▪ Optional

• Optional Accessories

The GSPCR-E has options that can be purchased according to the work need.



CUT OUT DISK
36" / 38" / 40"



TIRE 400 X 60 14 CANVAS

▪ Identification

• Identification plate

To see the parts catalog or to request technical assistance from Baldan, always inform model (1), serial number (2) and date of manufacture (3), which is on your **GSPCR-E** nameplate.



ATTENTION

The drawings contained in this Instruction Manual are for illustrative purposes.



CONTACT

In case of doubt, never operate or handle your equipment without consulting the After Sales.

Telephone: 0800-152577

e-mail: posvenda@baldan.com.br



PUBLICATIONS

Code: 60550109142 | CPT: GSPCRE12322A



▪ Identification

• Product Identification

Make the correct identification of the data below, to always have information about the life of your equipment.

Owner: _____

Resale: _____

Farm: _____

City: _____

State: _____

Certificate No. of warranty: _____

Implement: _____

Serial No.: _____

Purchase date: _____

Invoice: _____

■ Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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

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

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

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

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

▪ Inspection and Delivery Certificate

SERVICE BEFORE DELIVERY: This implement was carefully prepared by the sales organization, inspected in all its parts according to the manufacturer's prescriptions.

DELIVERY SERVICE: The user has been informed of the current warranty terms and instructed on the use and maintenance precautions.

I confirm that I was informed about the terms of existing warranty and instructed on the use and proper maintenance of the implement.

Implement: _____ Serial number: _____

Date: _____ Invoice no.: _____

Resale: _____

Phone: _____ CEP: _____

City: _____ State: _____

Owner: _____

Phone: _____

Address: _____ Number: _____

City: _____ State: _____

E-mail: _____

Date of Sale: _____

Signature / Stamp of Resale _____

1st counterpart - Owner

▪ Inspection and Delivery Certificate

SERVICE BEFORE DELIVERY: This implement was carefully prepared by the sales organization, inspected in all its parts according to the manufacturer's prescriptions.

DELIVERY SERVICE: The user has been informed of the current warranty terms and instructed on the use and maintenance precautions.

I confirm that I was informed about the terms of existing warranty and instructed on the use and proper maintenance of the implement.

Implement: _____ Serial number: _____

Date: _____ Invoice no.: _____

Resale: _____

Phone: _____ CEP: _____

City: _____ State: _____

Owner: _____

Phone: _____

Address: _____ Number: _____

City: _____ State: _____

E-mail: _____

Date of Sale: _____

Signature / Stamp of Resale _____

1st counterpart - Resale

▪ Inspection and Delivery Certificate

SERVICE BEFORE DELIVERY: This implement was carefully prepared by the sales organization, inspected in all its parts according to the manufacturer's prescriptions.

DELIVERY SERVICE: The user has been informed of the current warranty terms and instructed on the use and maintenance precautions.

I confirm that I was informed about the terms of existing warranty and instructed on the use and proper maintenance of the implement.

Implement: _____ Serial number: _____

Date: _____ Invoice no.: _____

Resale: _____

Phone: _____ CEP: _____

City: _____ State: _____

Owner: _____

Phone: _____

Address: _____ Number: _____

City: _____ State: _____

E-mail: _____

Date of Sale: _____

Signature / Stamp of Resale _____

3rd counterpart - Manufacturer (Please send completed within 15 days)

1.74.05.0059-5

AC MATÃO
ECT/DR/SP

RESPONSE CARD

NOT REQUIRED SEAL

SEAL WILL BE PAID BY:



BALDAN IMPLEMENTOS AGRÍCOLAS S/A.

Av. Baldan, 1500 | Nova Matão | CEP: 15993-900 | Matão-SP | Brasil

Phone: (16) 3221-6500 | Fax: (16) 3382-6500

www.baldan.com.br | email: sac@baldan.com.br

Export: Phone: +55 (16) 3221-6500 | Fax: +55 (16) 3382-4212 | 3382-2480

email: export@baldan.com.br



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