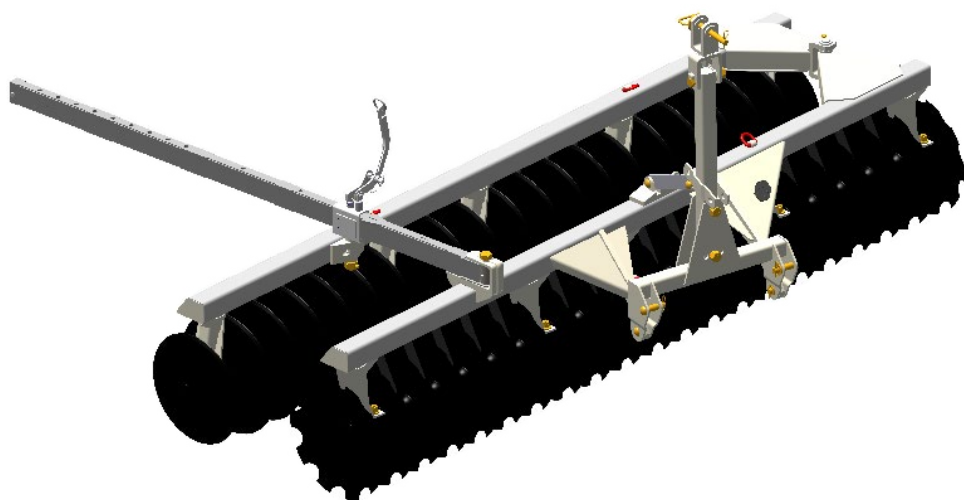


Instruction Manual



SP

Drag Type Offset Levelling Disc Harrow

 **BALDAN**

■ Presentation

We thank you for your preference and we want to congratulate you for the excellent choice you have just made, because you have acquired a product manufactured with **BALDAN IMPLEMENTOS AGRÍCOLAS S/A.**

This manual will guide you in the procedures that are necessary from its acquisition to the operational procedures of use, safety, and maintenance.

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

The dealer took responsibility for its safekeeping and conservation during the period it was in his possession, and also for the assembly, retightening, lubrication, and general overhaul.

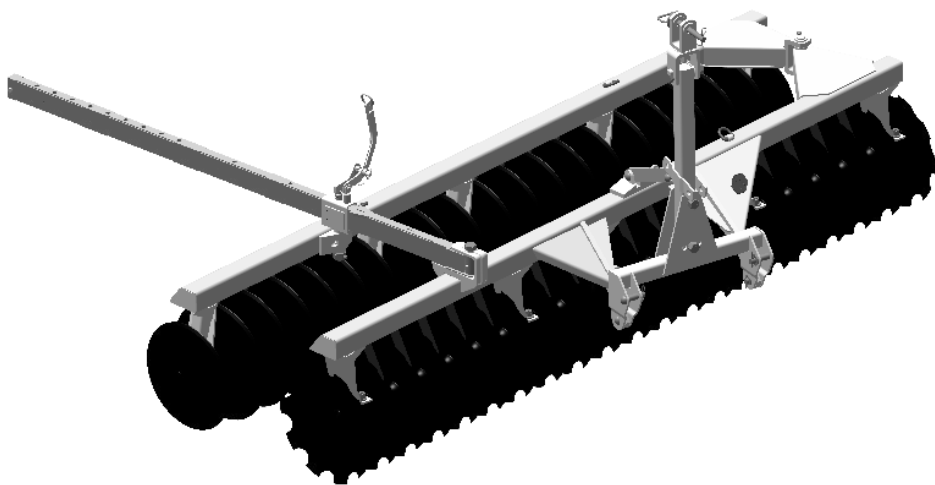
In the technical delivery, the dealer must guide the user customer about maintenance, safety, his obligations in eventual technical assistance, the strict observance of the warranty term and the reading of the instruction manual.

Any request for warranty service should be made to the dealer where it was purchased.

We reiterate the need to read carefully the warranty certificate and the observance of all items in this manual, because by doing so you will be increasing the life of your implement.



Instruction Manual



SP

Drag Type Offset Levelling Disc Harrow

BALDAN IMPLEMENTOS AGRÍCOLAS S/A.

CNPJ: 52.311.347/0009-06

Insc. Est.: 441.016.953.110



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

 **BALDAN**

▪ Index

BALDAN WARRANTY	07
GENERAL INFORMATION	08
<i>To the owner</i>	<i>08</i>
SAFETY RULES	09
<i>To the operator.....</i>	<i>09 - 12</i>
WARNINGS	13 - 14
COMPONENTS.....	15
<i>SP - Drag Type Offset Leveling Disc Harrow (With mechanical opening)</i>	<i>15</i>
<i>SP - Drag Type Offset Leveling Disc Harrow (With hydraulic opening)</i>	<i>16</i>
DIMENSIONS	17
<i>SP - 20 / 24 / 28 / 32 / 36 / 42 Discs (Spacing 175 mm)</i>	<i>17</i>
<i>SP - 20 / 24 / 28 / 32 / 36 / 42 Discs (Spacing 200 mm)</i>	<i>18</i>
SPECIFICATIONS	19
<i>SP - Drag Type Offset Leveling Disc Harrow (With mechanical opening)</i>	<i>19</i>
<i>SP - Drag Type Offset Leveling Disc Harrow (With hydraulic opening)</i>	<i>20</i>
ASSEMBLY	21
<i>Wrenches set.....</i>	<i>21</i>
<i>Assembling the disc section</i>	<i>22</i>
<i>Assembling the disc sections</i>	<i>23 - 24</i>
<i>Assembling the disc sections on the frames</i>	<i>25</i>
<i>Assembling the front and rear frames</i>	<i>26</i>
<i>Assembling the wipers</i>	<i>27</i>
<i>Assembling the adjustment lock (With mechanical opening)</i>	<i>28</i>
<i>Assembling the adjustment bar (With hydraulic opening)</i>	<i>29</i>
<i>Assembling the hydraulic opening system (With hydraulic opening)</i>	<i>30</i>
<i>Assembling the hose support (With hydraulic opening)</i>	<i>31</i>
<i>Assembling the hitch header</i>	<i>31</i>
HITCH.....	32
<i>Harrow hitch to tractor drawbar</i>	<i>32</i>
TRANSPORT	33
<i>SP transport procedure</i>	<i>33 - 34</i>
ADJUSTMENTS	35
<i>Adjusting the cutting depth</i>	<i>35 - 38</i>
OPERATIONS	39
<i>Recommendations for operation</i>	<i>39 - 40</i>
<i>Direction of maneuvers</i>	<i>40</i>
<i>How to start harrowing</i>	<i>41</i>
<i>Harrowing from outside to inside</i>	<i>41</i>
<i>Harrowing from the inside to the outside.....</i>	<i>42</i>
<i>Fields with contour lines</i>	<i>42</i>

▪ Index

CALCULATIONS	43
<i>Approximate hourly production</i>	<i>43 - 44</i>
MAINTENANCE	45
<i>Lubrication.....</i>	<i>45</i>
<i>Table of greases and equivalents</i>	<i>45</i>
<i>Lubricate every 24 hours of work</i>	<i>46 - 47</i>
<i>Disc section bearing adjustments</i>	<i>48</i>
<i>Grease bearing</i>	<i>49</i>
<i>Oil bearing</i>	<i>49</i>
<i>Axial bearing</i>	<i>50</i>
<i>Contact bearing</i>	<i>50</i>
<i>Periodic maintenance</i>	<i>51</i>
<i>Operation maintenance</i>	<i>52 - 53</i>
<i>Cares.....</i>	<i>54</i>
<i>General cleaning</i>	<i>54 - 55</i>
<i>Disc harrow conservation</i>	<i>55 - 56</i>
LIFTING.....	57
<i>Warnings for lifting</i>	<i>57 - 58</i>
<i>Inspection of locking hooks, chains and slings.....</i>	<i>59</i>
<i>Storage</i>	<i>59</i>
<i>Lifting points</i>	<i>60</i>
OPTIONAL.....	61
<i>Optional accessories</i>	<i>61</i>
IDENTIFICATION.....	62
<i>Identification plate</i>	<i>62</i>
<i>Product identification</i>	<i>63</i>
NOTES.....	64 - 65
CERTIFICATE.....	66
<i>Certificate of warranty</i>	<i>66 - 72</i>

▪ Baldan warranty

BALDAN IMPLEMENTOS AGRÍCOLAS S/A, guarantees the normal operation of the implement to the reseller 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 repair defects in material and or workmanship of its responsibility, with labor, freight and other expenses being the responsibility of the dealer.

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

When such a procedure is not possible and the dealer's capacity for resolution has been exhausted, the dealer will request support from **BALDAN's** Technical Assistance, through a specific form distributed to the dealers.

After **BALDAN's** Technical Assistance has analyzed the replaced items and concluded that they are not under warranty, then the dealer will be responsible for the costs related to the replacement, as well as the costs of material, travel including lodging and meals, accessories, lubricants used, and other expenses arising from the call to Technical Assistance, and **BALDAN** is authorized to make the respective billing on behalf of the dealer.

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

It is excluded from this term the product that undergoes repairs or modifications in officials that 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 warranty will become void when it is found that the defect or damage is the result of improper use of the product, failure to follow instructions, or inexperience of the operator.

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

The manufacturing and or material defects, object of this warranty term, will not constitute, under any hypothesis, reason for rescission of the purchase and sale contract, or for indemnity of any nature.

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

▪ General information

• To the owner

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

Only people who have full knowledge of the tractor and the implement should transport and operate them.

BALDAN is not responsible for any damage caused in unforeseeable situations or outside the normal use of the implement.

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 that the operator has read and understood the product's instruction manual.



ATTENTION

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

This Regulating Norm has the objective of establishing the precepts to be observed in the organization and in the work environment, in a way that is compatible with the planning and development of the activities of agriculture, livestock, forestry, forest exploration, and aquiculture with the safety and health and environment of the work.

MR. OWNER OR OPERATOR OF THE EQUIPMENT.

Carefully read and comply with the provisions of NR-31.

For more information, visit the site and read NR-31 in its entirety.
<http://portal.mte.gov.br/legislacao/normas-regulamentadoras-1.htm>

▪ Safety rules

- To the operator



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



ATTENTION



Read the instruction manual carefully for recommended safety practices



ATTENTION



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



ATTENTION



Do not carry people on the tractor, or in or on the equipment.



ATTENTION



There is a risk of serious injury from tipping over when working on sloping ground. 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 ballast to the front or front wheels.



ATTENTION



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

▪ Safety rules

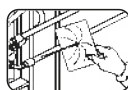
! ATTENTION FOLLOW ALL RECOMMENDATIONS, WARNINGS AND SAFE PRACTICES RECOMMENDED IN THIS MANUAL, UNDERSTAND THE IMPORTANCE OF YOUR SAFETY. ACCIDENTS CAN LEAD TO DISABILITY OR EVEN DEATH. REMEMBER, ACCIDENTS CAN BE AVOIDED!

! ATTENTION



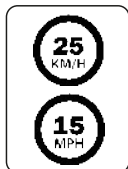
Do not make adjustments while the SP is running. When doing any work on the SP, turn off the tractor first. Use appropriate tools.

! ATTENTION



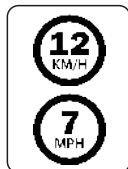
When looking for a possible leak in the hoses, use a piece of cardboard or wood, never use your hands. Avoid incising fluid into the skin.

! ATTENTION



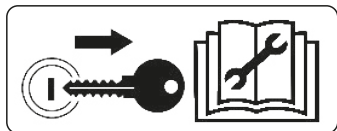
When transporting the SP, do not exceed a speed of 25 km/h or 15 MPH, avoiding the risk of damage and accidents.

! ATTENTION



When working with the SP, 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 SP. Protect yourself from possible injury or death caused by an unforeseen departure of the SP.

If the SP 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 rules **ATTENTION**

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

 **ATTENTION**

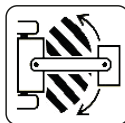
Before starting work or transporting the SP, check for people or obstructions near it.

 **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 SP 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 SP (discs), they are sharp and can cause accidents.

When carrying out any service on the discs, wear safety gloves on your hands.

 **ATTENTION**

Improper waste disposal affects environment and ecology, because it will be polluting rivers, canals or soil polluting rivers, canals or the soil.

Inform yourself about the correct way to recycle or dispose of waste.

PROTECT THE ENVIRONMENT!

▪ Safety Standards

• PPE Equipment

! ATTENTION | DO NOT WORK WITH THE SP 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 SP, put the following PPE (Safety Equipment) below:





















! IMPORTANT

The safety practice must be carried out at all stages of work with the SP, thus avoiding accidents such as impact from objects, falls, noise, cuts and ergonomics; that is, the person responsible for operating the SP 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 SP, do not allow people to stand too close or on top of it.
-  Never stand near the SP 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 very loose clothing, as they may get tangled up in the SP.
-  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 SP. 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 SP 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 SP 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 SP.
-  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 SP hitched to the tractor in the raised position of the hydraulic system.
-  Any and all maintenance on the SP 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 you need to travel with SP on the highways, consult the traffic authorities.

▪ Warnings

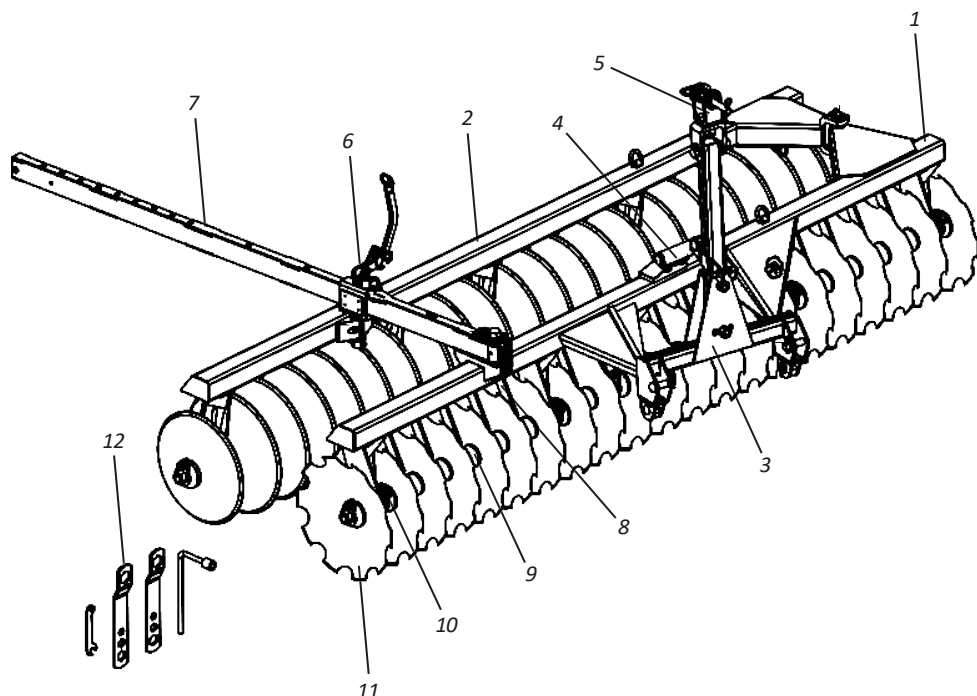
- ⚠ Do not allow the SP to be used by people who have not been trained, that is, who do not know how to operate it correctly.
- ⚠ Do not transport or work with the SP near obstacles, rivers or streams.
- ⚠ The transport of people in self-propelled machines and implements is prohibited.
- ⚠ Alterations of the original characteristics of the SP 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 SP.
- ⚠ Read or explain all procedures in this manual to the operator who cannot read.
- ⚠ Always check that the SP is in perfect working condition. In case of any irregularity that may interfere with the functioning of the SP, arrange for proper maintenance before any work or transport.
- ⚠ The maintenance and especially the inspection in risk areas of the SP, must only be done by a trained or qualified worker, observing all safety guidelines. Before starting maintenance, disconnect all drive systems from the SP.
- ⚠ Periodically check all components of the SP 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 SP.
- ⚠ Check the recommended minimum tractor power for each SP model. Only use tractor with power and ballast compatible with the load and topography of the terrain.
- ⚠ When transporting the SP, travel at speeds compatible with the terrain and never above 25 km/h, this reduces maintenance and consequently increases the life of the SP.
- ⚠ Alcoholic beverages or some medications can cause loss of reflexes and alter the operator's physical condition. Therefore, never operate this SP 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

• SP - Drag Type Offset Leveling Disc Harrow (With mechanical opening)

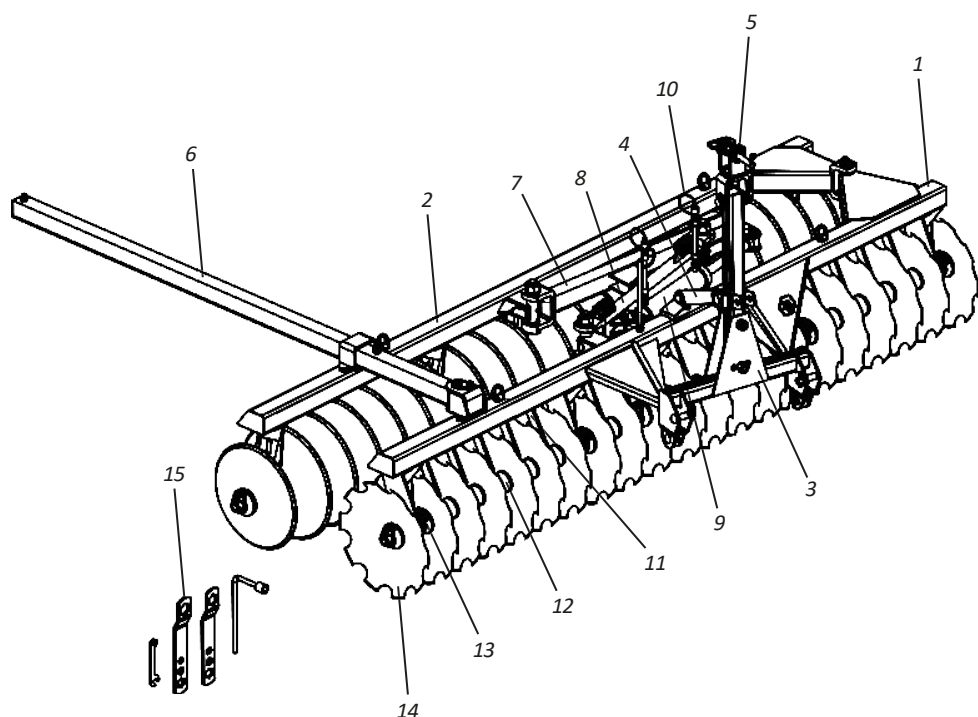
- | | |
|-----------------|--------------------|
| 1. Front frame | 7. Adjustment lock |
| 2. Back frame | 8. Wipers |
| 3. Hitch header | 9. Spool |
| 4. Header lock | 10. Bearing |
| 5. Shackle | 11. Disc |
| 6. Lock handle | 12. Wrenches |



■ Components

• SP - Drag Type Offset Leveling Disc Harrow (With hydraulic opening)

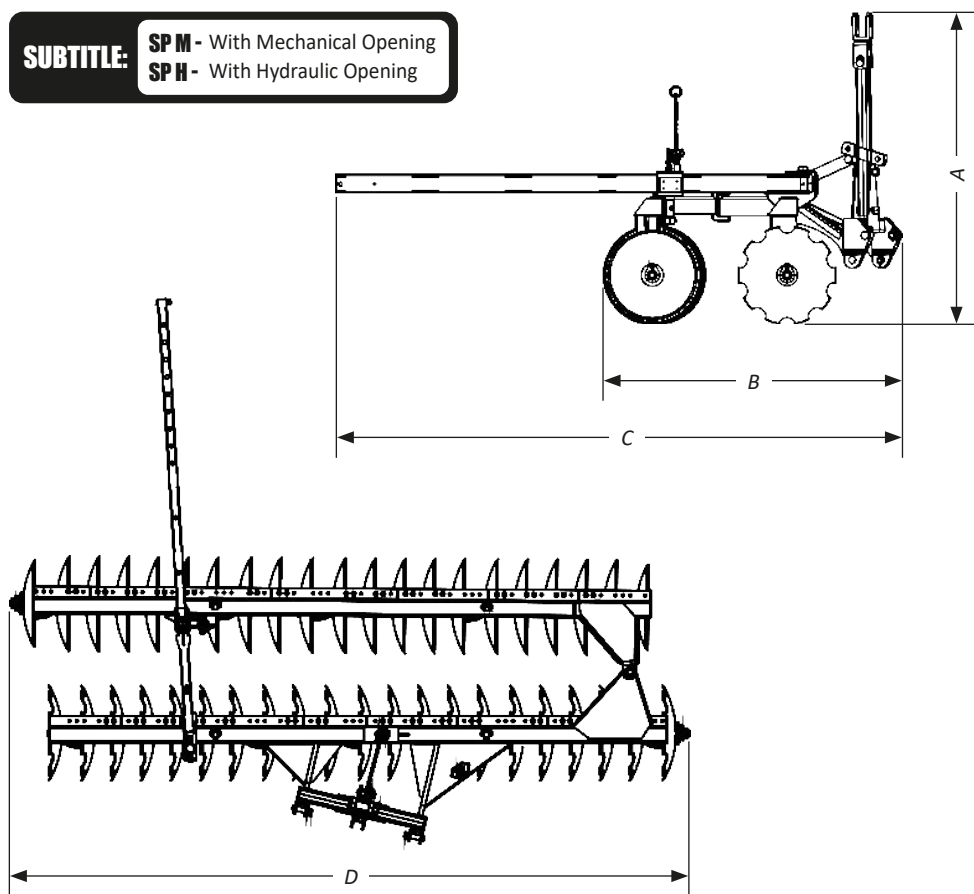
- | | |
|----------------------|-----------------------|
| 1. Front frame | 9. Hydraulic cylinder |
| 2. Back frame | 10. Hydraulic hoses |
| 3. Coupling header | 11. Wipers |
| 4. Header lock | 12. Spool |
| 5. Shackle | 13. Bearing |
| 6. Adjustment bar | 14. Disc |
| 7. Rear opening bar | 15. Wrenches |
| 8. Front opening bar | |



▪ Dimensions

- SP - 20 / 24 / 28 / 32 / 36 / 42 Discs (Spacing 175 mm)

SUBTITLE:
SP M - With Mechanical Opening

SP H - With Hydraulic Opening


Model	Disc Spacing (mm)	Nr of Discs	Measurement A (mm)		Measurement B (mm)		Measurement C (mm)		Measurement D (mm)	
			SP M	SP H	SP M	SP H	SP M	SP H	SP M	SP H
SP	175	20	1761	1761	1695	1673	2452	-	2218	-
		24	1761	1761	1695	1673	2452	-	2406	-
		28	1761	1761	1695	1673	2658	3085	2704	2723
		32	1761	1761	1695	1673	2794	3085	3094	3098
		36	1761	1761	1695	1673	2816	3085	3455	3460
		42	1761	1761	1695	1673	3213	3465	4006	4011

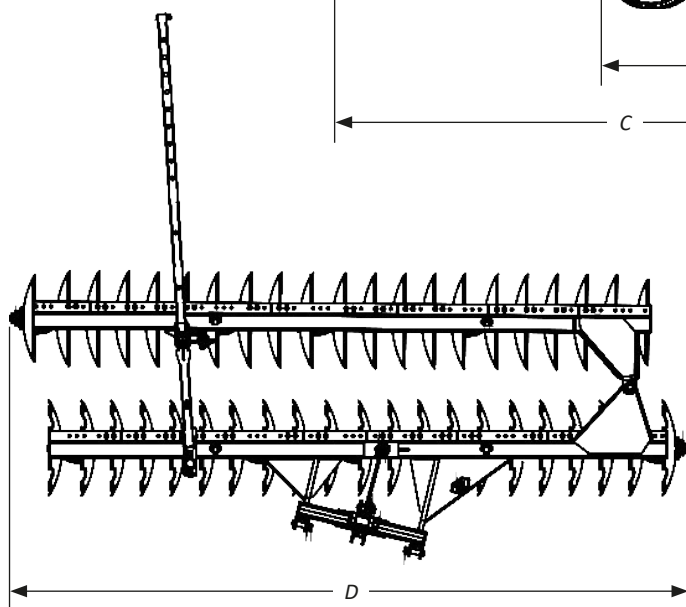
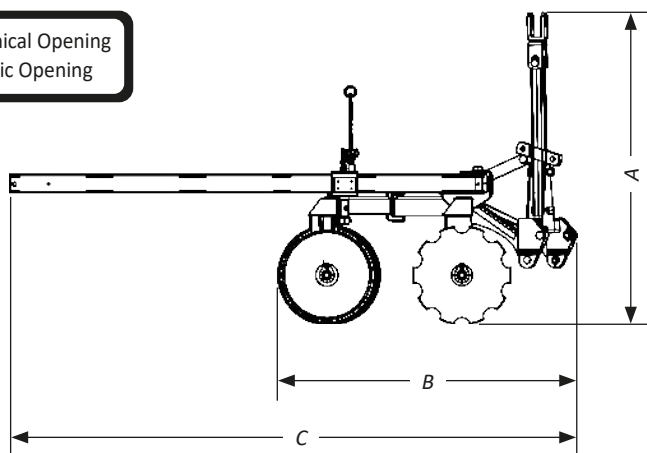
▪ Dimensions

• SP - 20 / 24 / 28 / 32 / 36 Discs (Spacing 200 mm)

SUBTITLE:

SP M - With Mechanical Opening

SP H - With Hydraulic Opening



Model	Disc Spacing (mm)	Nr of Discs	Measurement A (mm)		Measurement B (mm)		Measurement C (mm)		Measurement D (mm)	
			SP M	SP H	SP M	SP H	SP M	SP H	SP M	SP H
SP	200	20	1761	1761	1695	1673	2452	-	2429	-
		24	1761	1761	1695	1673	2616	-	2744	-
		28	1761	1761	1695	1673	2763	3085	3166	3168
		32	1761	1761	1695	1673	2925	3134	3516	3520
		36	1761	1761	1695	1673	3197	3452	3842	3913

▪ Specifications

• SP - Drag Type Offset Leveling Disc Harrow (With mechanical opening)

Model	Disc Spacing (mm)	Nr of Discs	Working Width (mm)	Approximate weight (kg)			Tractor Power (HP)
				18"	20"	22"	
SP	175	20	1700	-	-	551	46 - 51
		24	2100	-	584	-	55 - 61
		28	2350	-	-	-	65 - 70
		32	2700	-	-	762	73 - 80
		36	3000	-	798	-	85 - 90
		42	3600	-	-	971	95 - 105

Model	Disc Spacing (mm)	Nr of Discs	Working Width (mm)	Approximate weight (kg)			Tractor Power (HP)
				18"	20"	22"	
SP	200	20	1900	-	-	595	51 - 55
		24	2300	-	636	-	61 - 65
		28	2700	-	-	720	70 - 75
		32	3100	-	-	-	80 - 85
		36	3500	-	-	-	90 - 100

Shaft diameter (ø) 1.1/4"
 Disc diameter (ø) 18"-20"-22"
 Working depth 50 - 150 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 SP

- **SP** was developed to destroy, level and incorporate agricultural inputs.
- The **SP** must only be driven and activated by a duly instructed operator.

UNAUTHORIZED USE OF SP

- To avoid damage, serious accidents or death, DO NOT transport people on any part of **SP**.
- It is NOT permitted to use the **SP** to couple, tow or push other implements or accessories.
- The **SP** should NOT be used by an inexperienced operator who does not know all driving, command and operation techniques.

▪ Specifications

• SP - Drag Type Offset Leveling Disc Harrow (With hydraulic opening)

Model	Disc Spacing (mm)	Nr of Discs	Working Width (mm)	Approximate weight (kg)			Tractor Power (HP)
				18"	20"	22"	
SP	175	28	2350	-	771	-	65 - 70
		32	2700	-	-	-	73 - 80
		36	3000	-	-	-	85 - 90
		42	3600	-	-	1169	95 - 105

Model	Disc Spacing (mm)	Nr of Discs	Working Width (mm)	Approximate weight (kg)			Tractor Power (HP)
				18"	20"	22"	
SP	200	28	2700	-	-	-	70 - 75
		32	3100	-	-	973	80 - 85
		36	3500	-	-	1080	90 - 100

Shaft diameter (ø) 1.1/4"

Disc diameter (ø) 18"-20"-22"

Working depth 50 - 150 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 SP


- SP was developed to destroy, level and incorporate agricultural inputs.
- The SP must only be driven and activated by a duly instructed operator.


UNAUTHORIZED USE OF SP


- To avoid damage, serious accidents or death, DO NOT transport people on any part of SP.
- It is NOT permitted to use the SP to couple, tow or push other implements or accessories.
- The SP should NOT be used by an inexperienced operator who does not know all driving, command and operation techniques.

▪ Assembly

The **SP** leaves the factory disassembled. To assemble it, follow the instructions below:

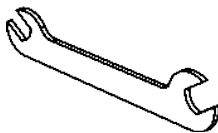
 The assembly of the **SP** must be carried out by reseller, through people trained, qualified and qualified for this work.

 Before starting to assemble the **SP**, look for an ideal location, where it will be easier to identify the parts and assemble it.

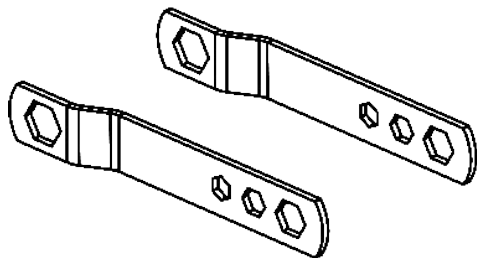
 Do not wear loose clothing, as they may become tangled in the **SP**.

• Wrenches set

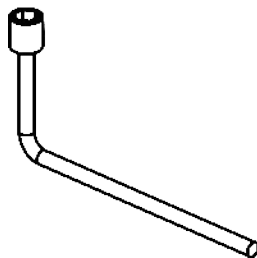
When assembling, disassembling or maintaining the **SP**, use the set of wrenches that come with the grille. The Key Set consists of:



**WRENCH FOR HEX NUT
3/8" AND 1/2"**



**WRENCH FOR HEX NUT OF
1 1/4" - 1" - 3/4" AND 5/8" LARGER**



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



ATTENTION

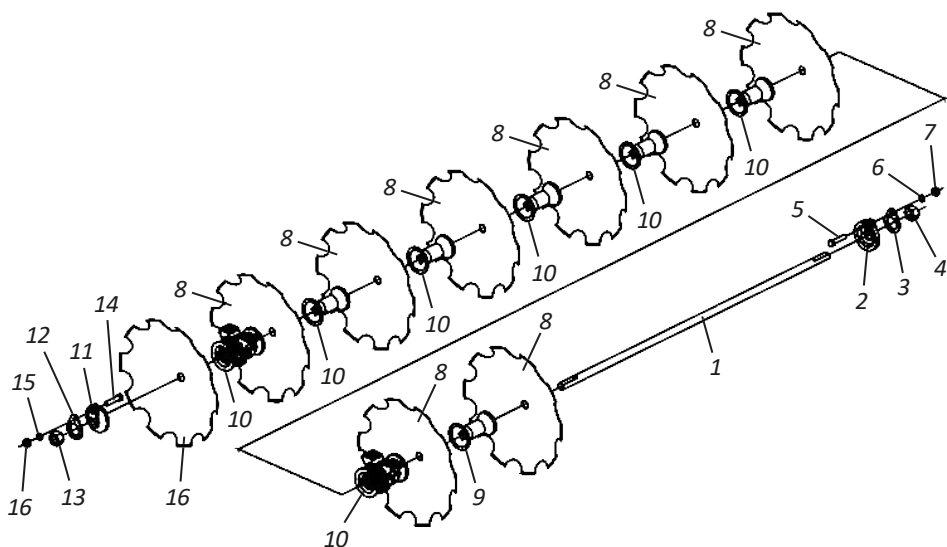
If any key is lost or broken, purchase another one immediately.
Always use original Baldan wrenches.

▪ Assembly

• Assembling the disc section

When starting to assemble the **SP**, always start with the disc set, proceed as follows:

- 01** - Place the concave thrust washer (2), lock (3), nut (4) on the shaft (1), securing it with the screw (5), pressure washer (6) and nut (7).
- 02** - Then, place the disc (8), separator spool (9), another disc (8), bearing (10), another disc (8), separator spool (9) on the shaft (1) and so on.
- 03** - When the set is complete with all discs, bearings, separator spools, place the convex thrust washer (11), lock (12), nut (13), tightening with the wrench until the entire set is firm.
- 04** - Once this is done, fit the disc assembly and tighten the nut (13) using impacts. When you are almost achieving maximum tightness, adjust the lock (12) with the convex washer (11), always tightening the nut until the hole matches, fix it with the screw (14), pressure washer (15) and nut (16).



ATTENTION

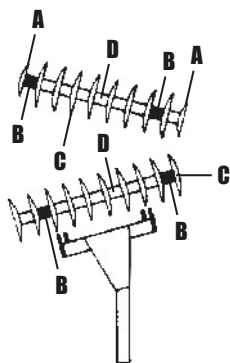
During the first week of using the **SP**, retighten all screws and nuts on the disc sections daily, then retighten them periodically.

IMPORTANT

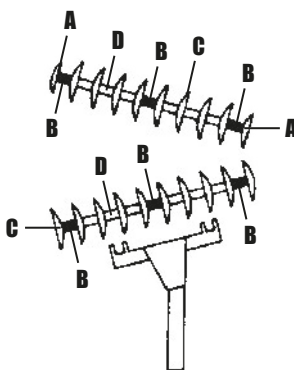
Check the correct side of the separator spools and bearings, according to the concavity of the discs.

▪ Assembly

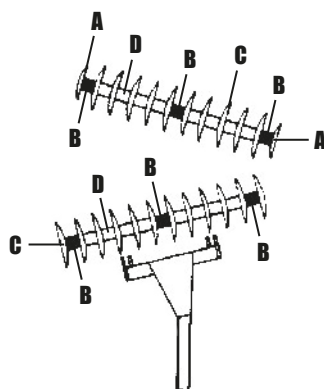
• Assembling the disc sections - Part I



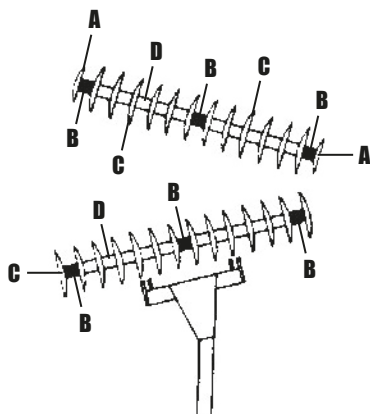
**SP 20 DISCS
SPACING 175 MM**



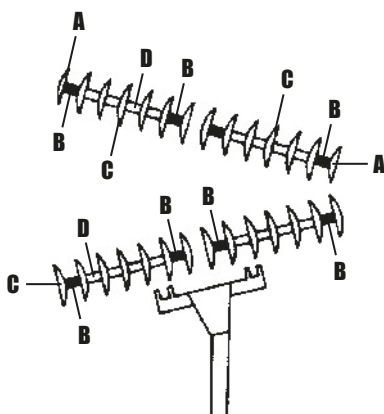
**SP 20 DISCS
SPACING 200 MM**



**SP 24 DISCS
SPACING 175 AND 200 MM**



**SP 28 DISCS
SPACING 175 MM**



**SP 28 DISCS
SPACING 200 MM**

SUBTITLE:

A
 **FINISHING
DISC**

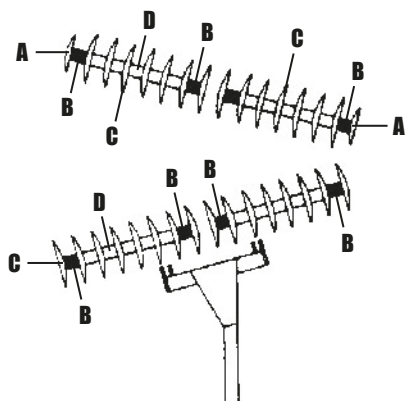
B
 **BEARING**

C
 **DISC**

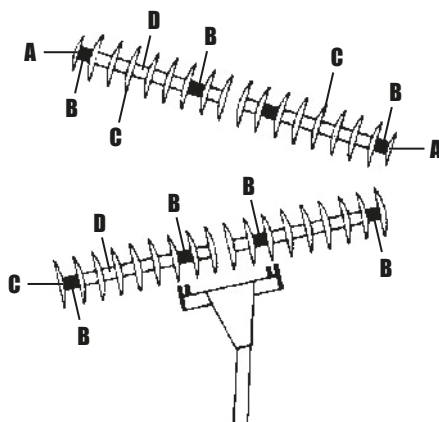
D
 **CARRETEL**

▪ Assembly

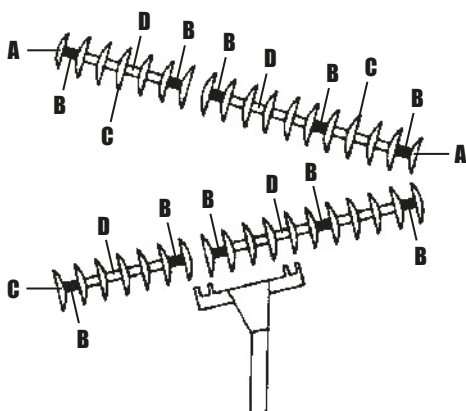
• Assembling the disc sections - Part II



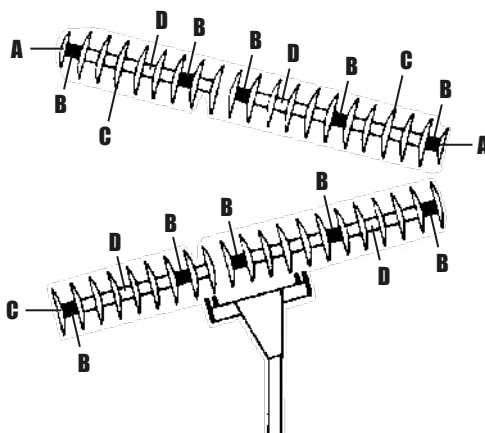
SP 32 DISCS
SPACING 175 AND 200 MM



SP 36 DISCS
SPACING 175 MM



SP 36 DISCS
SPACING 200 MM



SP 42 DISCS
SPACING 175 MM

SUBTITLE:



**FINISHING
DISC**



BEARING



DISC



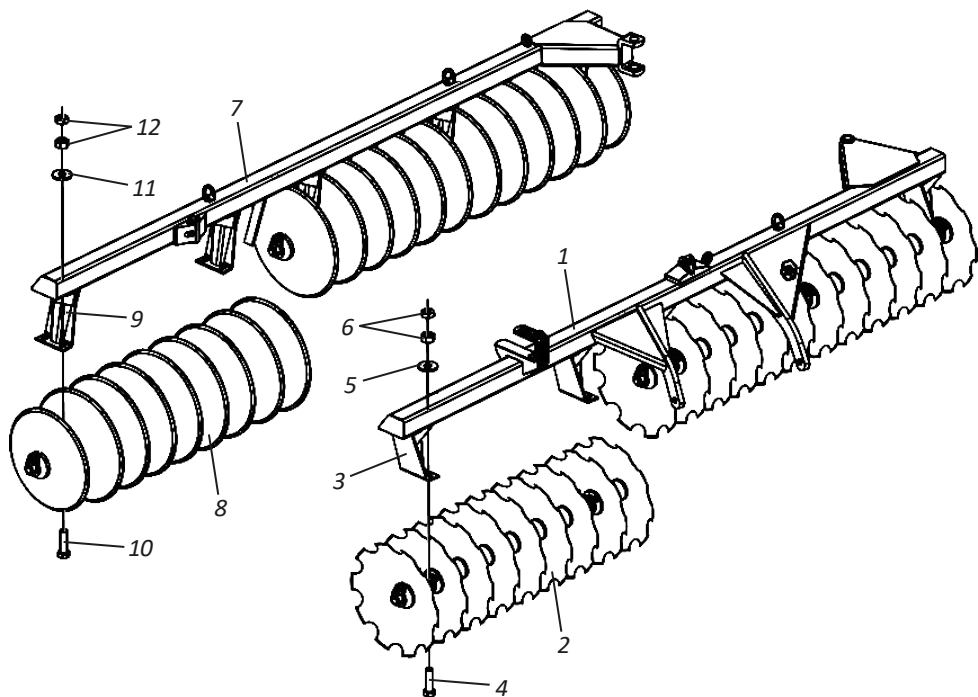
CARREL

▪ Assembly

• Assembling the disc sections on the frames

To mount the disc sections to the front and rear frames, proceed as follows:

- 01** - Lift the front frame (1) and place the disc section (2) in line and match the holes of the shoes (3) with those of the bearings and fix them using screws (4), flat washers (5) and nuts and locknuts (6).
- 02** - Then, lift the rear frame (7) and place the disc section (8) in line and match the holes of the shoes (9) with those of the bearings and fix them using screws (10), flat washers (11) and nuts and locknuts (12).
- 03** - When completing assembly, check that the shoes are facing the disc concavity.



! ATTENTION

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

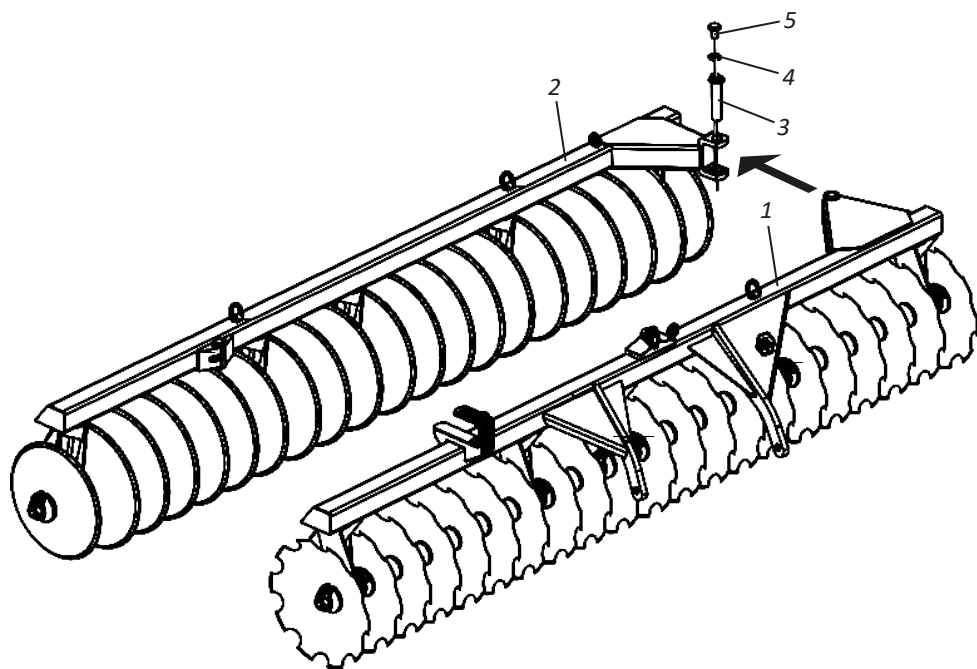
To lift the frames (3), follow the instructions on page 60. Ignoring this warning could cause serious accidents or death.

▪ Assembly

• Assembling the front and rear frames

To attach the front frame to the rear frame, proceed as follows:

- 01** - Attach the front frame (1) to the rear frame (2) securing them using the pin (3), pressure washer (4) and screw (5).

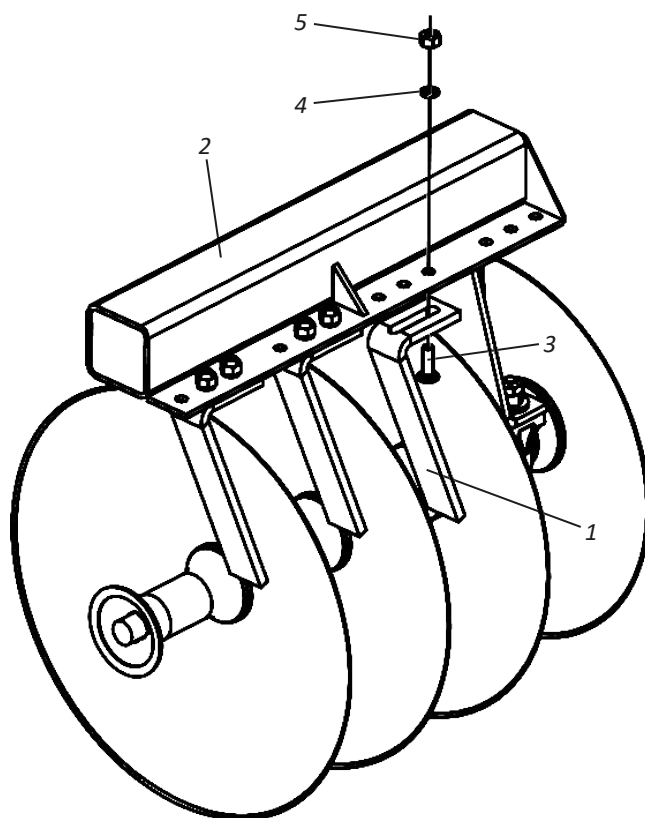


▪ Assembly

• Assembling the wipers

To assemble the wipers, proceed as follows:

- 01** - Attach the wipers (1) to the frames (2), securing them using screws (3), pressure washers (4) and nuts (5).



ATTENTION

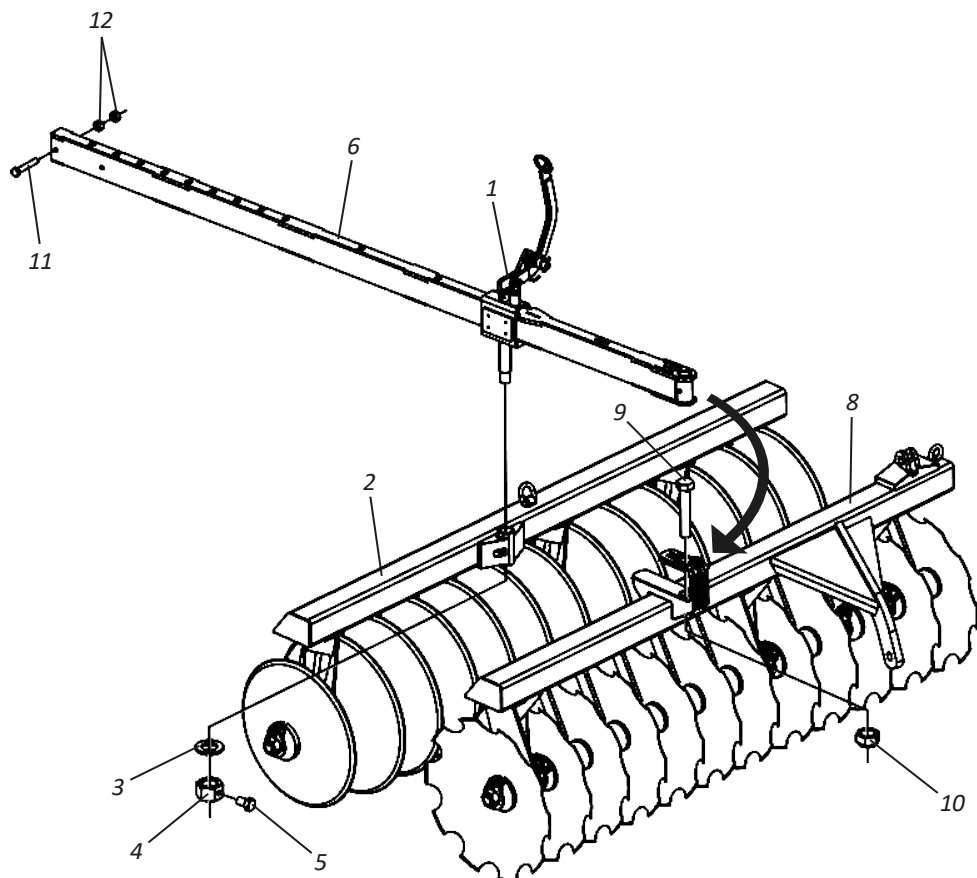
When assembling the wipers (1), they must be 0.5 to 1.0 cm away from the discs.

▪ Assembly

• Assembling the adjustment lock (With mechanical opening)

To assemble the adjustment lock, proceed as follows:

- 01** - Attach the adjustment lock (1) to the rear frame (2), fixing it using the flat washer (3) and nut (4), locking it using the screw (5).
- 02** - Then, pass the bar (6) inside the adjustment lock (1), fixing it to the front frame (8) using the screw (9) and nut (10).
- 03** - Finish by placing the screw (11) in the adjustment lock (1) and securing it through the nut and locknut (12).

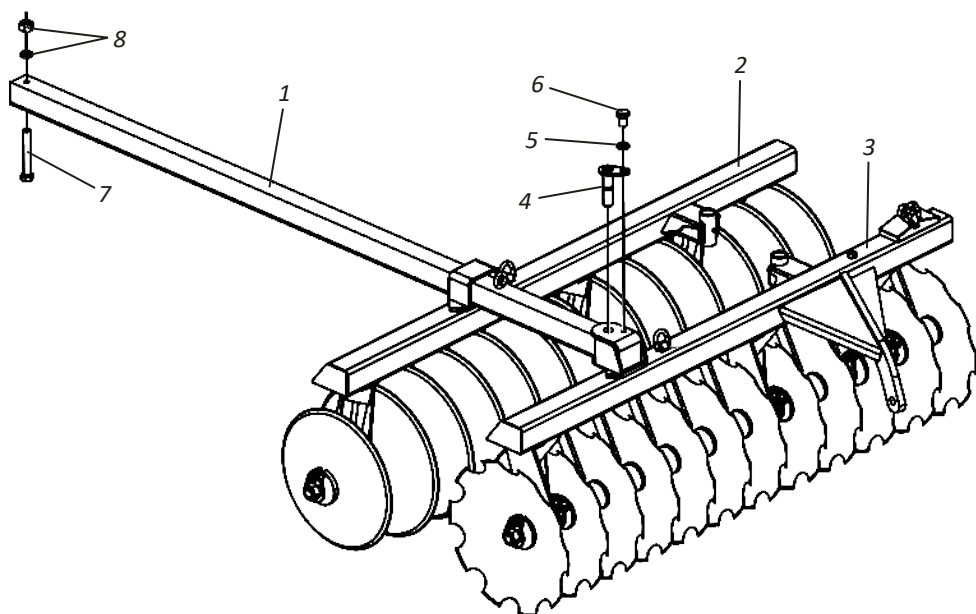


▪ Assembly

• Assembling the adjustment bar (With hydraulic opening)

To assemble the adjustment bar, proceed as follows:

- 01** - Pass the adjustment bar (1) inside the rear frame (2).
- 02** - Then, attach the adjustment bar (1) to the front frame (3) securing it using the pin (4), pressure washer (5) and screw (6).
- 03** - Finish by placing the screw (7) on the adjustment bar (1) and securing it through the nut and locknut (8).

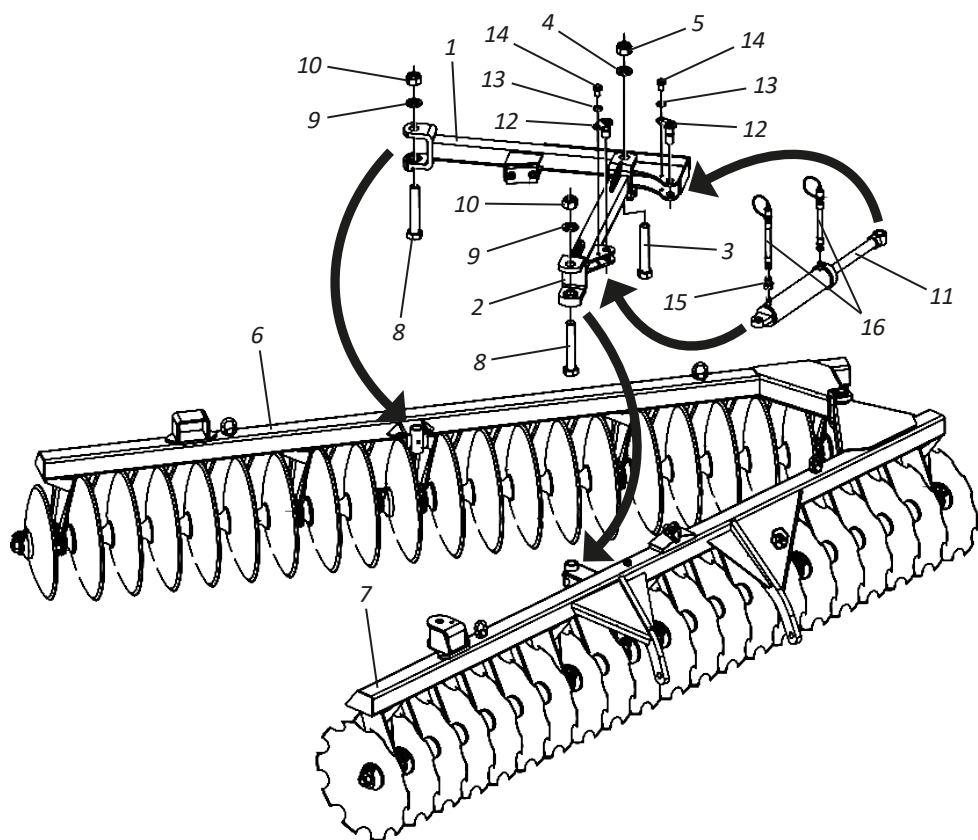


■ Assembly

• Assembling the hydraulic opening system (With hydraulic opening)

To assemble the hydraulic opening system, proceed as follows:

- 01** - Attach the rear stabilizer bar (1) to the front stabilizer bar (2) by securing it using the screw (3), pressure washer (4) and nut (5).
- 02** - Then, attach the rear stabilizer bar (1) to the rear frame (6) and the front stabilizer bar (2) to the front frame (7), securing it using screws (8), spring washers (9) and nuts (10) .
- 03** - Then, attach the hydraulic cylinder (11) to the rear stabilizer bar (1) and the front stabilizer bar (2), securing it using pins (12), pressure washers (13) and screws (14).
- 04** - Finish by attaching the reduction nipple (15) and the hydraulic hoses (16) to the hydraulic cylinder (11).

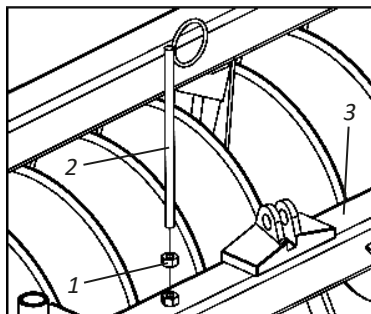


▪ Assembly

• Assembling the hose support (With hydraulic opening)

To assemble the hose support, proceed as follows:

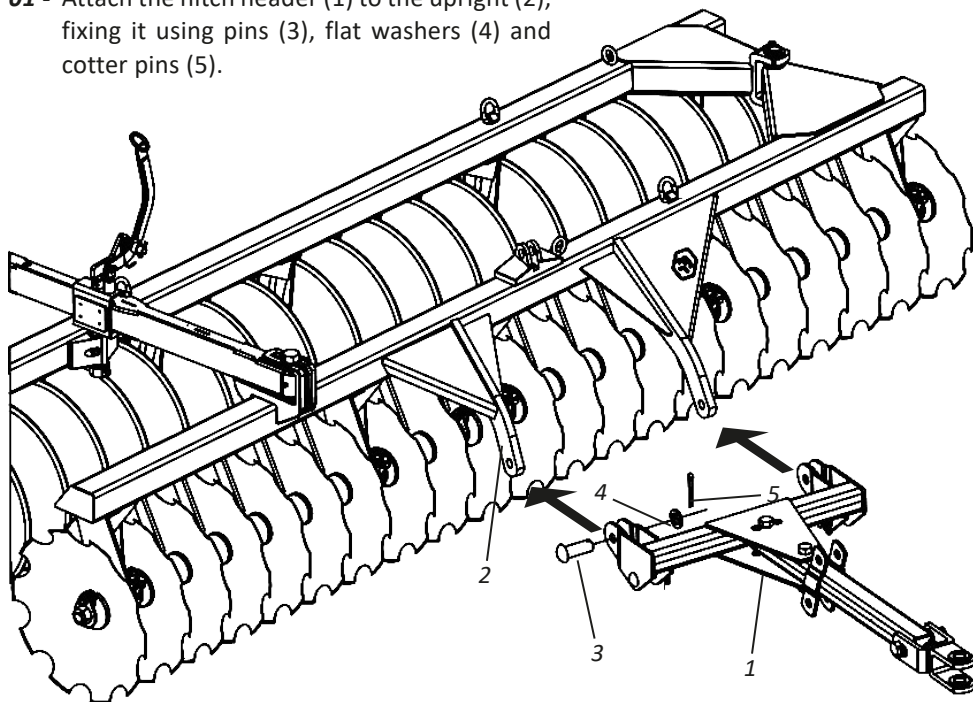
- 01** - Screw the nut (1) onto the hose support (2).
- 02** - Next, I screwed the hose support (2) onto the front frame (3).
- 03** - Then, i screwed the nut (1) until it touched the front frame locknut (3).



• Assembling the hitch header

To assemble the coupling header, proceed as follows:

- 01** - Attach the hitch header (1) to the upright (2), fixing it using pins (3), flat washers (4) and cotter pins (5).

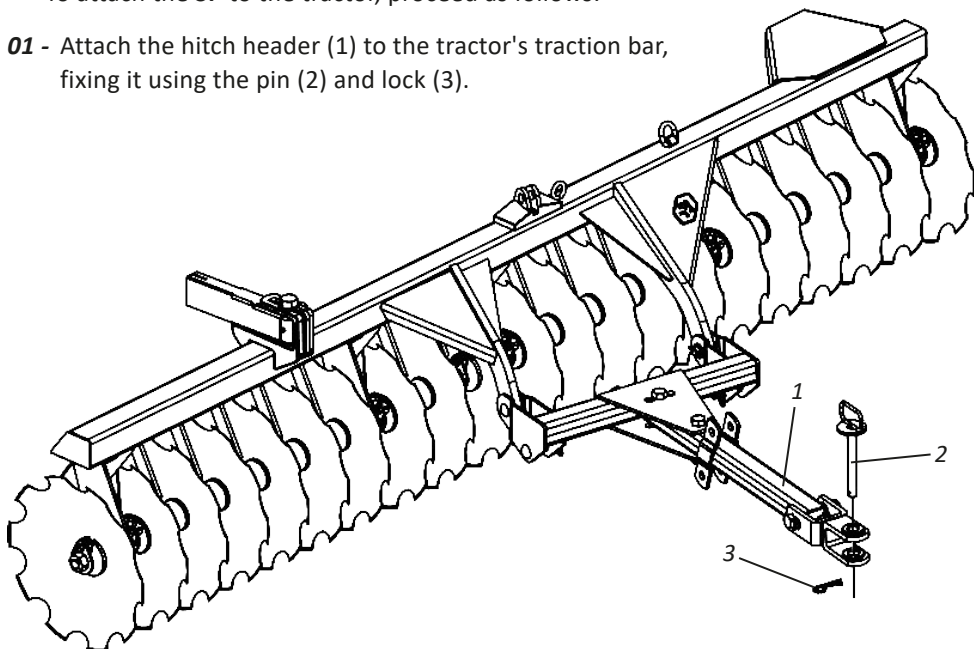


▪ Hitch

• Harrow hitch to tractor drawbar

To attach the **SP** to the tractor, proceed as follows:

- 01** - Attach the hitch header (1) to the tractor's traction bar, fixing it using the pin (2) and lock (3).

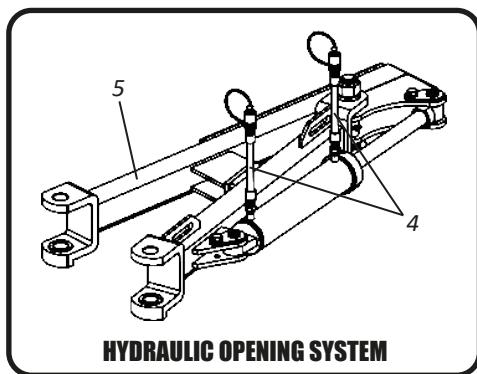


⚠ ATTENTION

If the **SP** has hydraulic opening, attach the hydraulic hoses 4 of the opening system 5 to the tractor after attaching the grid.

❗ IMPORTANT

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



🔍 OBSERVATION

Note the type of hitch bar on your tractor. To hitch the **SP**, it is necessary to use the tractor's drawbar.

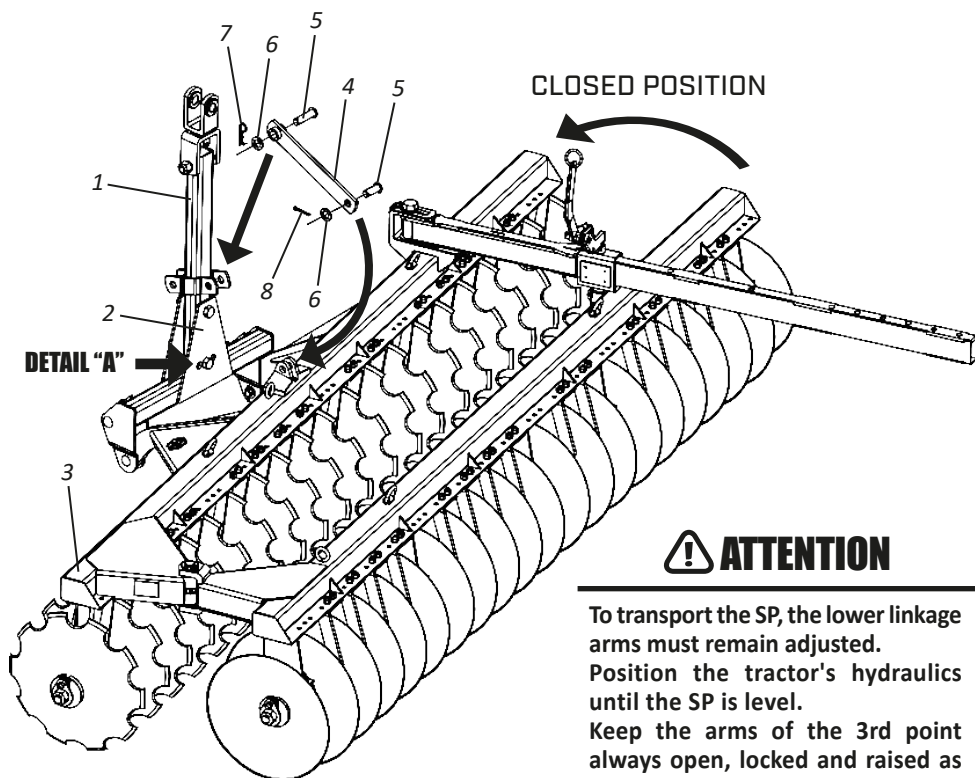
▪ Transport

• SP transport procedure - Part I

SP has a transport system through the 3rd point. To transport the **SP**, proceed as follows:

HARROW PREPARATION

- 01** - Close **SP** completely.
- 02** - Then, position the coupling header (1) in the central hole of the upper and lower plates (2), as shown in **detail "A"**.
- 03** - Then, articulate the hitch header (1) by locking it to the front frame (3) using the transport bar (4), securing it with the pins (5), flat washers (6), lock (7) and cotter pin (8).
- 04** - Then, connect the **SP** to the tractor according to the instructions on the following page.



⚠ ATTENTION

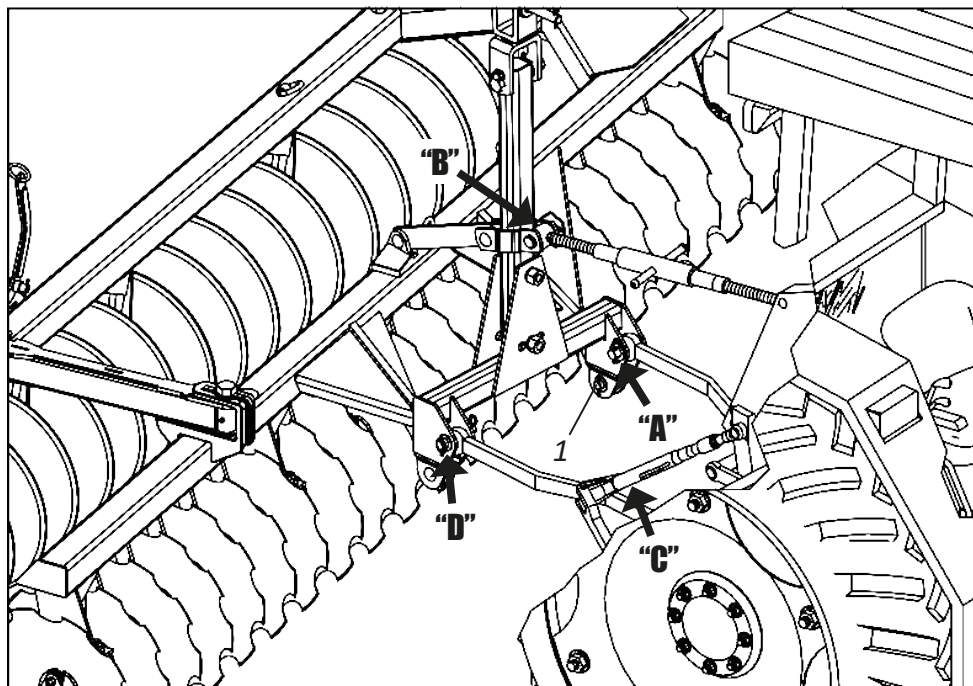
To transport the **SP**, the lower linkage arms must remain adjusted. Position the tractor's hydraulics until the **SP** is level. Keep the arms of the 3rd point always open, locked and raised as much as possible.

▪ Transport

• SP transport procedure - Part II

HITCH TO TRACTOR

- 05 - Slowly approach the **SP** tractor in reverse gear, paying attention to applying the brakes. Use the hydraulic position control lever when approaching the **SP**, leaving the lower left arm at the **SP** coupling level.
- 06 - Hitch the lower left arm of the tractor using the coupling pin (1) on the **SP** support "**A**".
- 07 - Hitch the 3rd point of the tractor to the **SP** support "**B**".
- 08 - Finally, with the help of the adjusting lever "**C**", hook the lower right arm of the tractor to the **SP** support "**D**".



ATTENTION

To transport the SP, the lower linkage arms must remain adjusted.
Position the tractor's hydraulics until the SP is level.
Keep the arms of the 3rd point always open, locked and raised as much as possible.

▪ Adjustments

• Adjusting the cutting depth - Part I

The cutting depth of the SP is determined by the following points:

1 - OPENING AND CLOSING OF DISK SECTIONS

The opening and closing of the **SP** varies according to the type of soil.

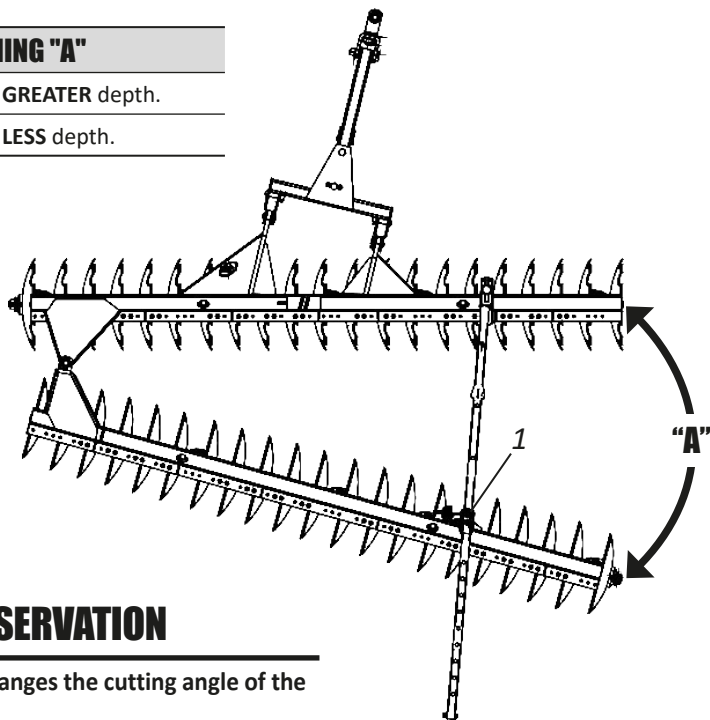
LANDS OF GREATEST PENETRATION DIFFICULTY:	The harrow opening must be INCREASED .
LIGHT AND LOOSE LAND:	The harrow opening must be DECREASED .

To increase or decrease the harrow opening, proceed as follows:

SP [WITH MECHANICAL OPENING]

- 01** - To **OPEN** or **CLOSE** the **SP** (with mechanical opening) activate the adjustment lock lever (1) and move the grille forward or backward until the desired opening point.

OPENING "A"	
INCREASING	GREATER depth.
DECREASING	LESS depth.



OBSERVATION

Opening the SP only changes the cutting angle of the rear frame.

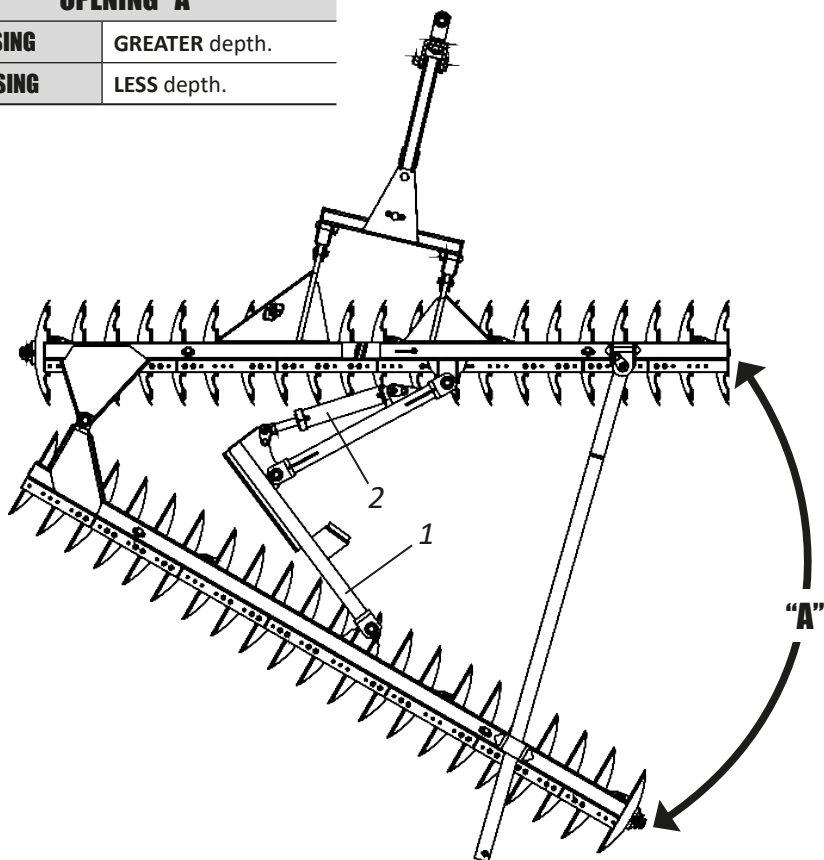
▪ Adjustments

• Adjusting the cutting depth - Part II

SP (WITH HYDRAULIC OPENING)

02 - To OPEN or CLOSE the **SP** (with hydraulic opening) activate the hydraulic opening assembly (1) through the hydraulic cylinder (2) to open or close the harrow.

OPENING "A"	
INCREASING	GREATER depth.
DECREASING	LESS depth.



OBSERVATION

Opening the SP only changes the cutting angle of the rear frame.

▪ Adjustments

• Adjusting the cutting depth - Part III

The **SP** (with hydraulic opening) has 4 limiting rings:

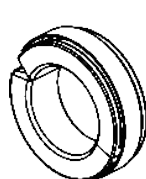
- 2 limiting rings **25 mm**.
- 2 limiting rings **50 mm**.

These different combined sizes offer various opening and closing adjustments for the harrow.

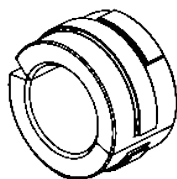
To maintain the opening adjustment during work, attach the limiting rings to the hydraulic cylinder rod. To do this, proceed as follows:

01 - Remove the limiting rings (1) from the support (2) of the right front frame.

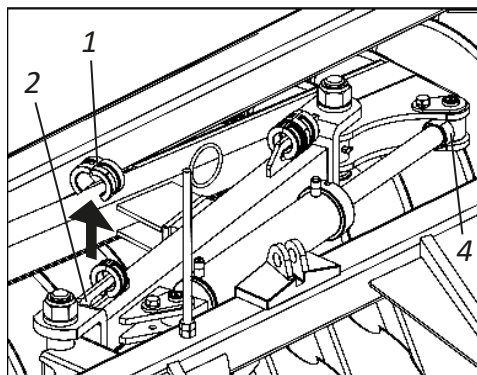
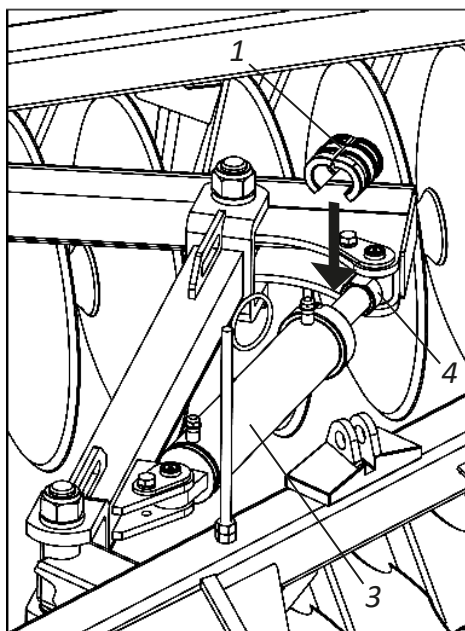
02 - Then, attach the limiting rings (1) to the hydraulic cylinder rod (3).



**LIMITING RING
25 MM**



**LIMITING RING
50 MM**



OBSERVATION

The area of application of the limiting rings (1) on the rod (3) is up to the washer (4).



ATTENTION

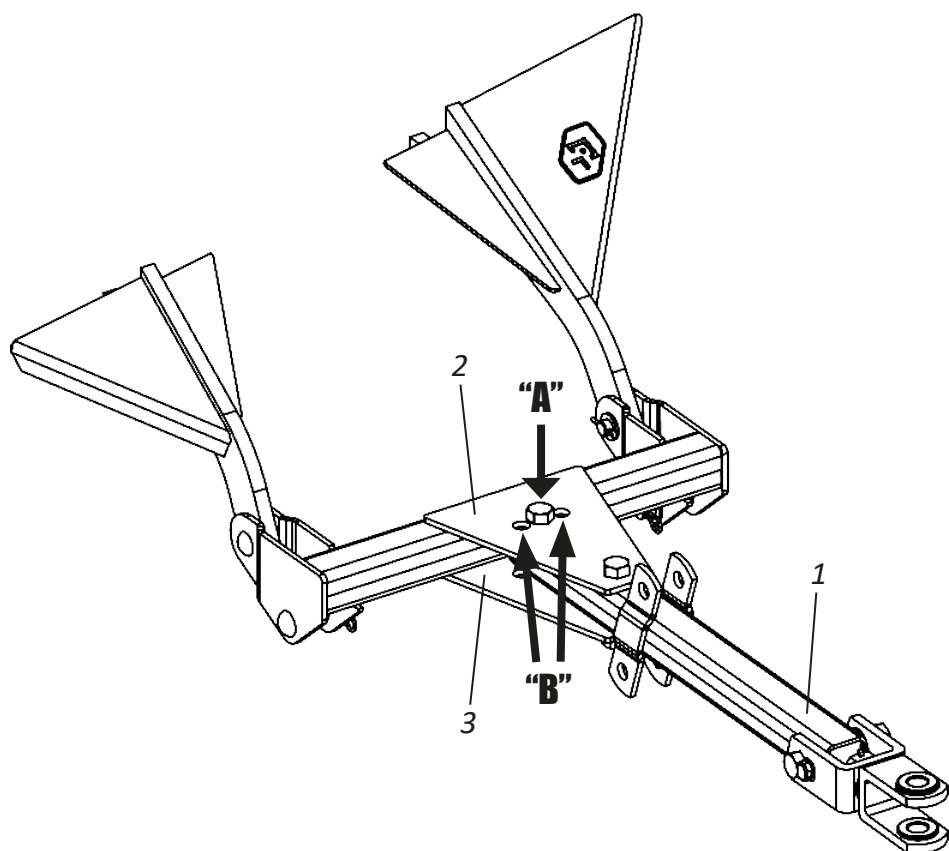
After attaching the limiting rings (1), the **SP** will maintain the opening adjustment during work, because the limiting rings (1) are limiting the travel of the hydraulic cylinder rod (3).

▪ Adjustments

• Adjusting the cutting depth - Part IV

2 - HITCH HEADER BAR ANGLE

Under normal working conditions and during transport, the coupling header (1) must remain in the central hole "A" of the upper (2) and lower (3) plates. By changing the coupling header (1) to the other holes "B", small lateral displacements of the SP are obtained.



! IMPORTANT

The two adjustments (opening and closing of the disc sections and the angle of the hitch header bar) determine the cutting depth, and it is necessary to maintain agreement between them for good performance of the SP.

▪ Operations

• Recommendations for Operation - Part I

Preparing the **SP** 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 **SP**, 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 **SP** 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 **SP** 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 **SP**.
- 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 **SP**.
- 07** - 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.
- 08** - Remove sticks or any other object that can get stuck on the discs.
- 09** - 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.

▪ Operations

• Recommendations for Operation - Part II

- 10** - During work or transport, the tractor's drawbar must remain fixed.
- 11** - When carrying out any maintenance on the **SP**, it must be lowered to the ground and the engine turned off.
- 12** - The **SP** has several settings, but only local conditions can determine the best setting for it.

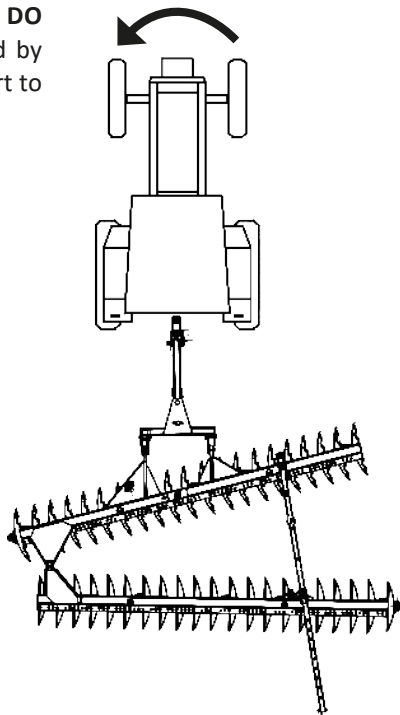
In case of doubt, never operate or handle the SP, consult After Sales.
Telephone: 0800-152577 / E-mail: posvenda@baldan.com.br

• Direction of maneuvers

During harrowing (with the discs on the ground), **DO NOT maneuver to the right**, as the angles formed by the sections of records begin to transmit great effort to the equipment, mainly the traction components.

ATTENTION

With the disc sections on the ground, it is necessary to maneuver on the left (closed side of the SP) avoiding overloads and the formation of large undesirable ruts at the maneuver locations.



▪ Operations

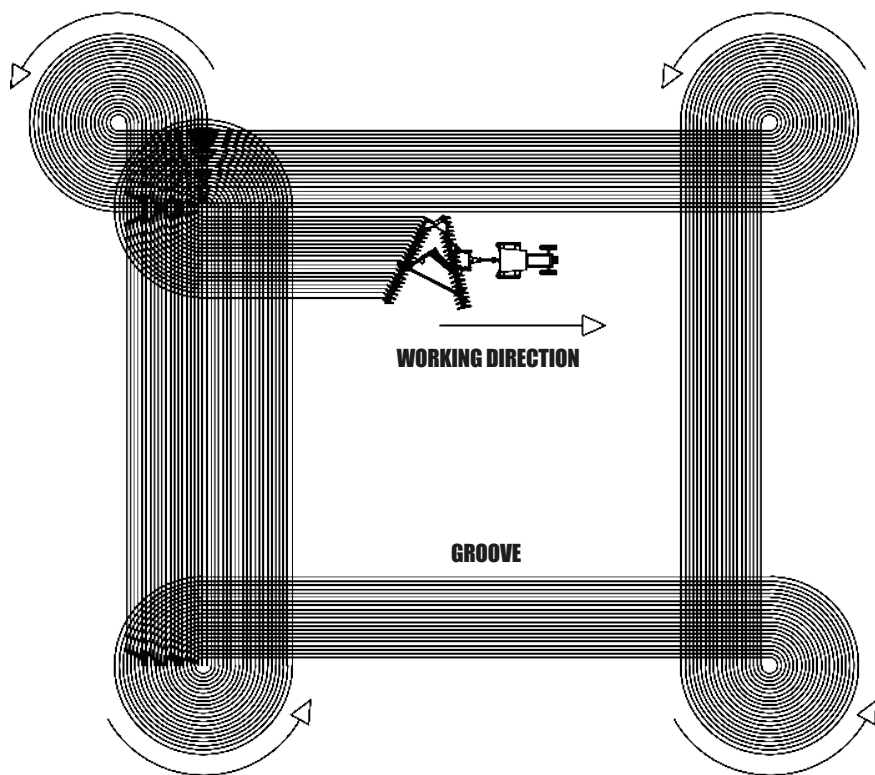
• How to start harrowing

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 SP, check it completely, retightening all screws, nuts, hose terminals, shafts and especially the disc sections.

• Harrowing from outside to inside



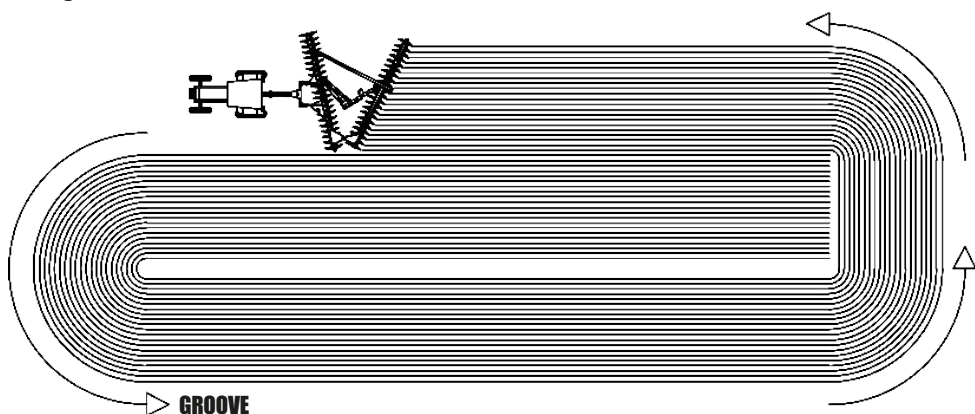
IMPORTANT

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

▀ Operations

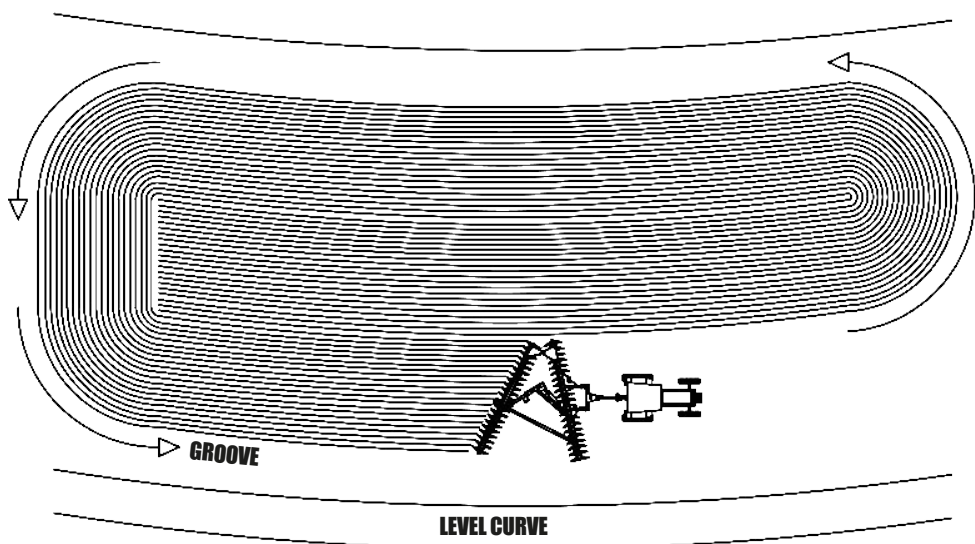
• Harrowing from the inside to the outside

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.



▪ Calculations

• Approximate hourly production - Part I

To calculate the approximate hourly production of **SP**, 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: An **SP 36 discs**, with a spacing of **175 mm**, how much Ha will it produce in one hour of work at an average speed of 7 km/h.

A = ?

L = 3,00 m

V = 7.000 m/h

F = 0,90

X = 10.000 m² (Calculated in hectare)

$$A = \frac{3,00 \times 7.000 \times 0,90}{10.000} = 1,89 \text{ Ha/h}$$

Model	Spacing Discs (mm)	Number of discs	Working Width (mm)	Average speed (m/h)	Production Factor	Approximate Production in Hectares Hour
SP	175	20	1700	7.000	0,90	1,07
		24	2100			1,26
		28	2350			1,48
		32	2700			1,70
		36	3000			1,89
		42	3600			2,26

Model	Spacing Discs (mm)	Number of discs	Working Width (mm)	Average speed (m/h)	Production Factor	Approximate Production in Hectares Hour
SP	200	20	1900	7.000	0,90	1,20
		24	2300			1,45
		28	2700			1,70
		32	3100			1,95
		36	3500			2,20

▪ Calculations

• Approximate hourly production - Part II

The formula to calculate approximate production refers to the calculation of areas to be worked or worked by **SP**. If you want to know the time it will take to work an area of known value, simply divide the value of this area by the hourly production of **SP**.

Example: How much time “X” will it take for an **SP 36 disc harrow**, with a spacing of **175 mm**, to produce 35 hectares, at an average speed of 7km/h?

$$X = \frac{35 \text{ Ha}}{1,89 \text{ Ha/h}} = 18 \text{ hours approximately to work 35 hectares.}$$



The hourly production of the SP 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 **SP** was developed to provide you with maximum performance over terrain conditions. Experience has shown that periodic maintenance of certain parts of the **SP** 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 **SP**, 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



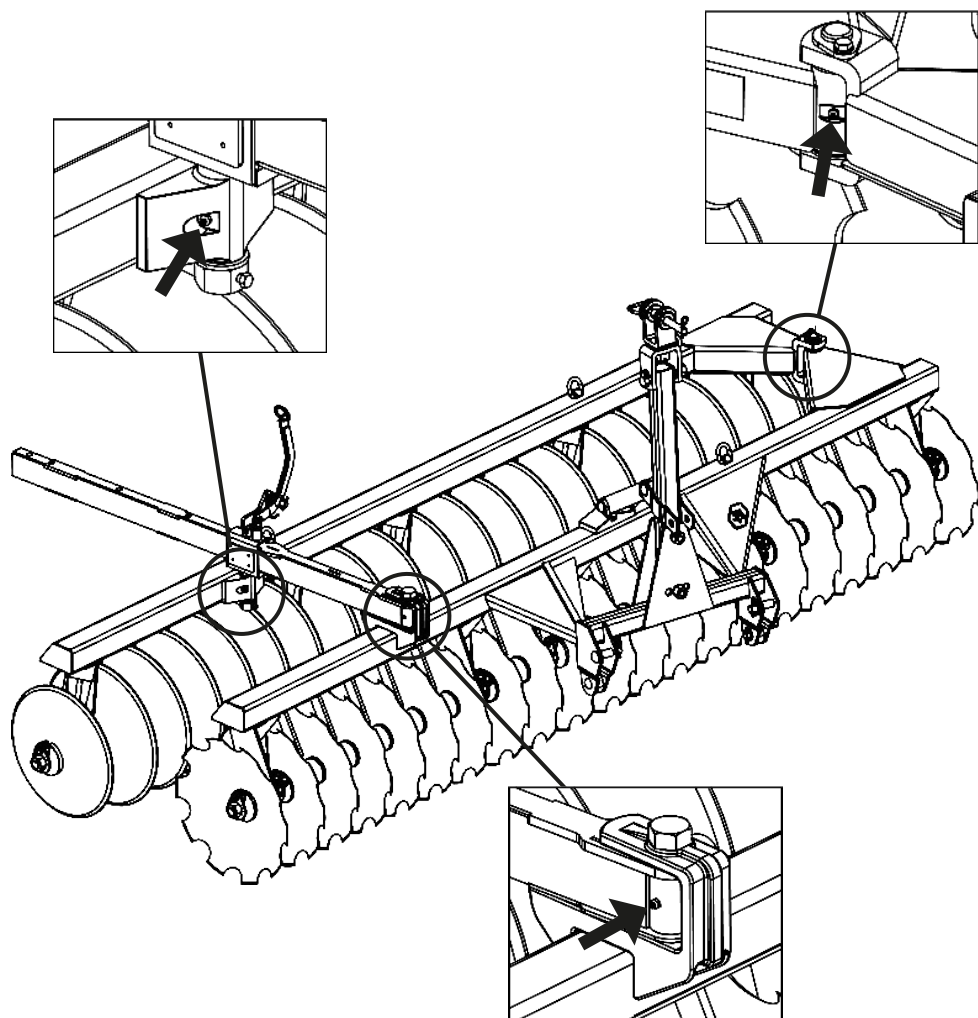
ATTENTION

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

SP (WITH MECHANICAL OPENING)



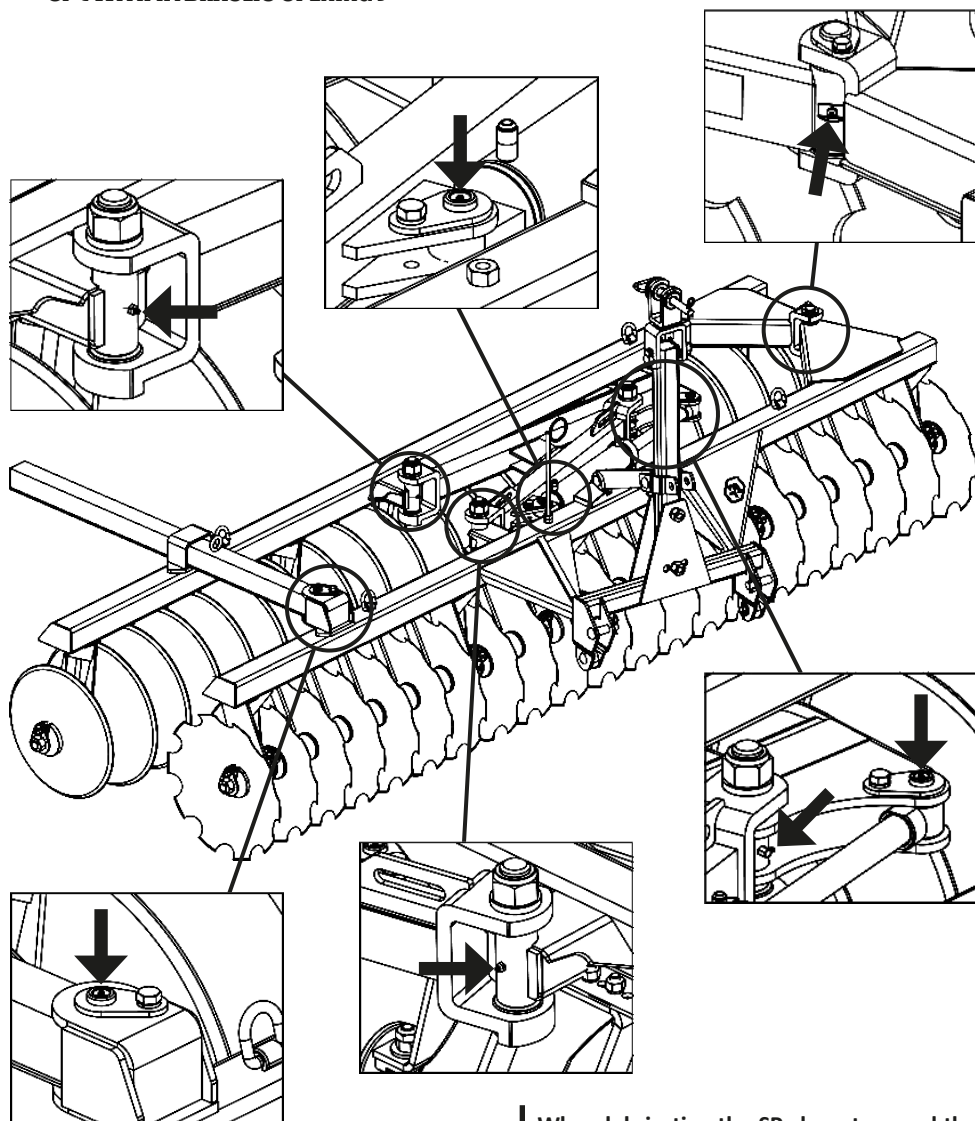
ATTENTION

When lubricating the SP, do not exceed the amount of new grease. Introduce a sufficient amount.

▪ Maintenance

- Lubricate every 24 hours of work

SP (WITH HYDRAULIC OPENING)



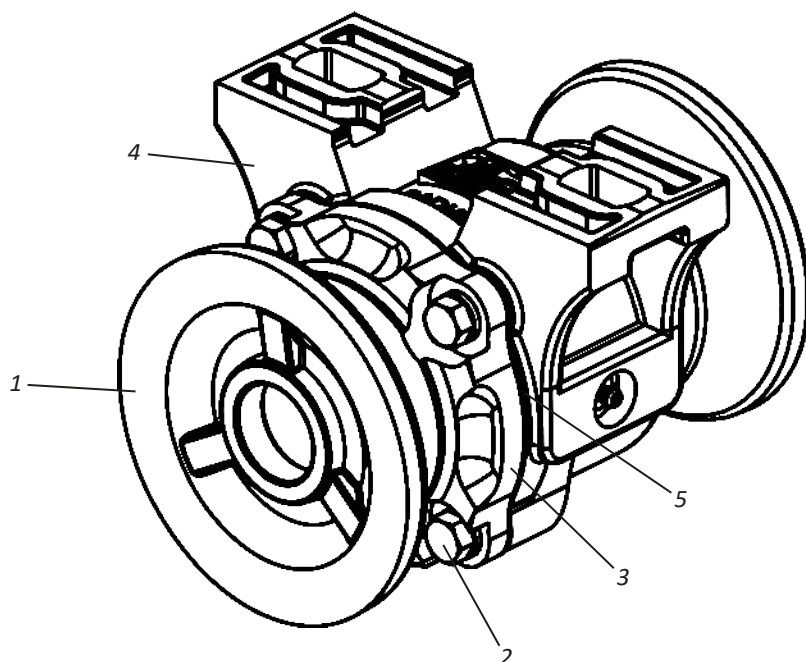
When lubricating the SP, do not exceed the amount of new grease. Introduce a sufficient amount.

▪ Maintenance

• Disc section bearing adjustments

When the disc section bearings show play, 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 play 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 freely, that is, without play.



ATTENTION

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

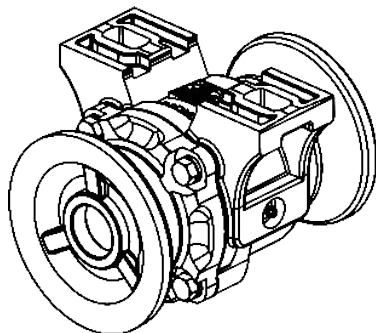
▪ Maintenance

• Grease bearing

Grease bearings must be lubricated every 12 hours of work, using the grease specified below.

OBSERVATION

Before lubricating the bearing, clean the grease fitting with a clean, lint-free cloth. Replace damaged grease fittings.



ATTENTION

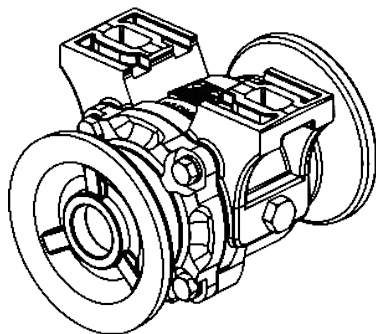
The amount of grease in each bearing is 120 grams.
Use only grease: EP (Specification DIN51825 KP00K Consistency NLGI 2/3).

• Oil bearing

In the first few days of working with the **SP**, check the bearing oil level daily, then check it every 120 hours of work.

OBSERVATION

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



ATTENTION

Replace the oil every 1200 hours of work using 0.160 liters.
Use transmission oil: 90 API GL4, MIL-L-2105; SAEJ306, may/81: SAE 80W/90 and 140.

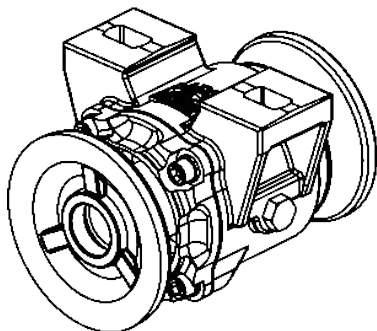
■ Maintenance

• Axial bearing

In the first few days of working with the **SP**, check the bearing oil level daily, then check it every 120 hours of work.

OBSERVATION

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



ATTENTION

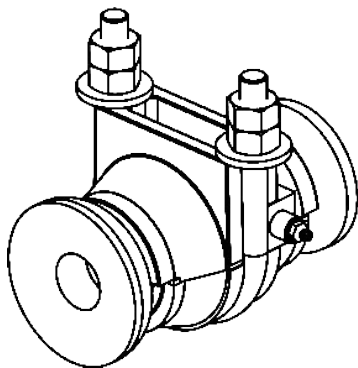
Replace the oil every 1200 hours of work using 0.100 liters.
Use transmission oil: 90 API GL4, MIL-L-2105; SAEJ306, may/81: SAE 80W,90 and 140.

• Contact bearing

Contact bearings must be lubricated daily, using the grease specified below.

OBSERVATION

Before lubricating the bearing, clean the grease fitting with a clean, lint-free cloth. Replace damaged grease fittings.



ATTENTION

The amount of grease in each bearing is 80 grams.
Use only grease: EP (Specification DIN51825 KP00K Consistency NLGI 2/3).

■ Maintenance

• Periodic maintenance

Description of parts	Number of grease fittings						Oil change	Lubricate with grease	Re-tighten	Replace	Check	Maintenance interval (hours)
	SP 20	SP 24	SP 28	SP 32	SP 36	SP 42						
	Spacing 175 mm Spacing 200 mm	Spacing 175 mm Spacing 200 mm	Spacing 175 mm Spacing 200 mm	Spacing 175 mm Spacing 200 mm	Spacing 175 mm Spacing 200 mm	Spacing 175 mm Spacing 200 mm						
Opening cylinder base (SP with hydraulic opening)	1	1	1	1	1	1		X				24
Opening cylinder rod (SP with hydraulic opening)	1	1	1	1	1	1		X				
Hydraulic system	-	-	-	-	-	-					X	40
Axle bolts and nuts	-	-	-	-	-	-			X			50
Bolts and nuts	-	-	-	-	-	-			X			100
Bearings	-	-	-	-	-	-					X	120
Bearings	-	-	-	-	-	-	X					1200
Retainers	-	-	-	-	-	-				X		1500
Bearings	-	-	-	-	-	-				X		
Discs	-	-	-	-	-	-				X		When necessary

■ Maintenance

• Operational maintenance - Part I

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
Quick coupling does not fit.	Different types of couplings.	Exchange them for males and females of the same type.
Leak in hydraulic hoses.	There is no sealing material on the thread.	Use thread sealing tape and retighten carefully.
	Insufficient tightness.	Retighten carefully.
	Damaged terminals.	Replace terminals.
Leak in quick couplings.	There is no sealing material on the thread.	Use thread sealing tape and retighten carefully.
	Insufficient tightness.	Retighten carefully without excess
	Damaged repairs.	Replace repairs.
Leak in the hydraulic cylinder.	Damaged repairs.	Replace repairs.
	Damaged stem.	Replace the stem.
	Oil with impurities.	Replace oil, repairs and filter elements.
	Working pressure higher than recommended.	Adjust the command through the relief valve using a pressure gauge. Normal pressure 180 Bar.
Quick couplers do not engage.	Different brand couplings.	Use quick couplers from the same brand.
	Mixture of needle type couplings with ball type couplings.	Always use quick couplers of the same type.
	Pressure in the system.	Release the pressure to engage.
Tractor pulling to the right.	Angle too large in the front section or too small in the rear section.	Reduce the angle of the front section or increase that of the rear section.
	Oscillating drawbar leaning against the stop to the left.	Move the drawbar to the left.

▪ Maintenance

• Operational maintenance - Part II

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
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 that the left front disc is at the edge of the furrow.
	Incorrect lateral adjustment of disc sections.	Move the rear section to the left or front to the right.
Formation of windrows on the left side.	Insufficient overlap. Incorrect rear section adjustment.	If windrows are formed, 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 **SP** 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 **SP**.
- 05** - When assembling or disassembling any part of the **SP**, use suitable methods and tools.
- 06** - Carefully observe the lubrication intervals at the various lubrication points of the **SP**. Respect the interval intervals.
- 07** - Always check if the parts show wear. If replacement is required, always demand genuine Baldan parts.
- 08** - Keep **SP** discs always sharp.



Proper and periodic maintenance is necessary to ensure the long life of the **SP**.

• General cleaning - Part I

- 01** - When storing the **SP**, 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 **SP**. Do not use burnt oil or other type of abrasive.
- 02** - Fully lubricate the **SP**. Check all moving parts of the **SP**, 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 harrow 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 **SP** on a flat surface, covered and dry, away from animals and children.
- 07** - We recommend washing the **SP** only with water at the beginning of the work.



ATTENTION

Do not use chemical products to wash the soil **SP**, as this could damage its paintwork.

• Disc harrow conservation - Part I

To extend the life and appearance of the **SP** for longer, follow the instructions below:

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

• Disc harrow conservation - Part II

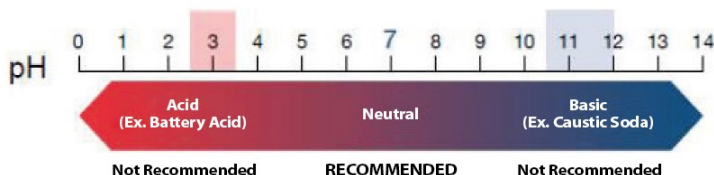
The practices and care below, if adopted by the owner or operator, make a difference to the conservation of **SP**.

- 01** - Be careful when washing with high pressure;
- 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 help of a sponge.
- 05** - Rinse the machine with clean water to remove all chemical residue.

▪ Maintenance

• Disc harrow conservation - Part III

- 06** - Do not use: - Detergents with a basic active principle (pH greater than 7) can attack/ stain the harrow 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 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 dirt from adhering to the machine, facilitating subsequent washing.
- 10** - Observe curing (absorption) time and application intervals as recommended by the manufacturer.

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



















! IMPORTANT | We recommend the following protective oils:

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

🔍 OBSERVATION | Ignoring the conservation measures mentioned above can result in the loss of warranty for painted or galvanized components that present eventual oxidation (rust).







▪ Lifting

• Warnings for lifting - Part I

-  Carefully read all the information contained on pages 57 to 59 before starting the SP lifting procedure as instructed on page 60.
-  Before starting the lifting of the SP, 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 SP 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 munck and load lifting machines before lifting the SP and/or components; imminent risk of accidents;
-  To avoid serious injury or death while lifting the SP, use PPE (Personal Protective Equipment).
-  Do not drag hooks, chains or slings as they can cause damage which must be avoided.
-  When lifting the SP, 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 SP 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 SP 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 SP, make sure the weight of the SP is evenly distributed.
-  Never lift the SP 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 SP 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 SP with the chain twisted.
-  Make sure the responsible person is instructed in the correct lifting of the SP. 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 SP.
-  Improperly lifting the SP can result in serious or fatal accidents and damage to the SP.
-  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 SP, 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.

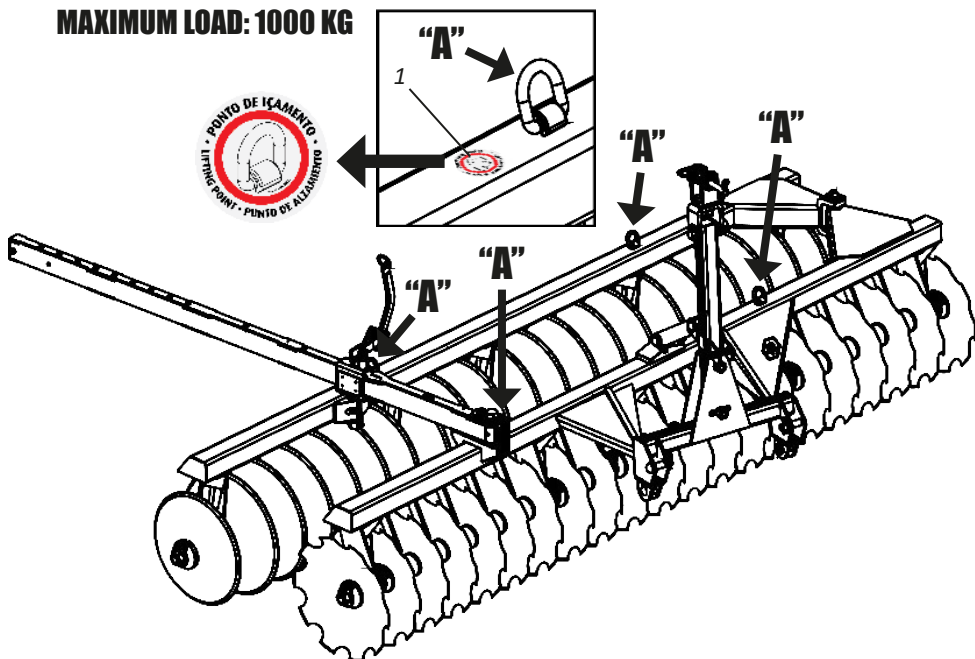
If you have any questions about inspection and storage of hooks, chains and slings, consult the manufacturer's manual.

▪ Lifting

• Lifting points

The SP has 4 lifting points "A" located on the front and rear frames and identified through the sticker (1) attached next to these points. When assembling, loading, unloading or maintaining the SP, if you need to lift it with a winch, it is essential to hook the chains to the 4 lifting points "A".

MAXIMUM LOAD: 1000 KG



ATTENTION



Before starting to lift the SP, check its weight (pages 19 and 20) to use a suitable hook, chain and sling. Make sure when engaging the hook that the weight of the SP is evenly distributed.



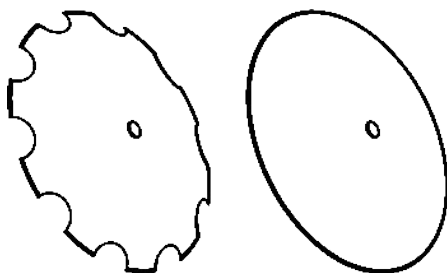
Use standard hooks and chains ie that meet safety standards. Hooks and chains used for lifting the SP must be GRADE 8 or 10 with a load capacity compatible with the weight of the SP to be lifted.



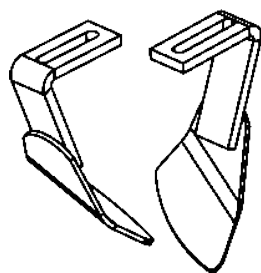
Before you start lifting the SP, make sure there are no people near, on or under the SP. DO NOT stand on or under the suspended SP. Ignoring these warnings could cause serious injury or death.

▪ Optional**• Optional Accessories**

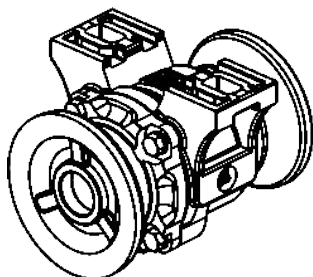
The **SP** has options that can be purchased according to the work need.



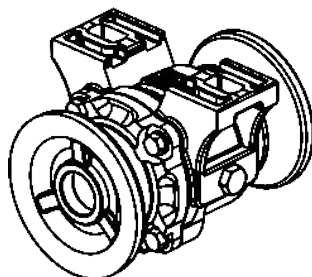
DISC TRIMMED OR SMOOTH
18" / 20" / 22"



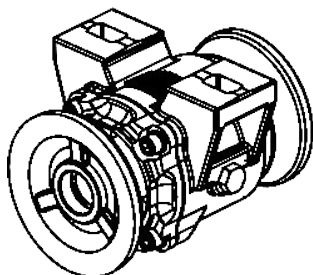
WIPERS



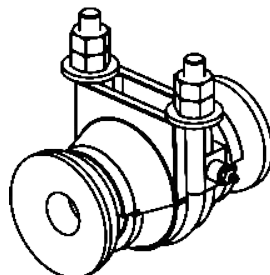
GREASE BEARING



OIL BEARING



AXIAL BEARING



CONTACT BEARING

■ Identification

• Identification plate

To consult the parts catalog or request Baldan technical assistance, always indicate the model (01), serial number (02) and manufacturing date (03), which is on the identification plate of your **SP**.

 BALDAN BALDAN IMPLEMENTOS AGRÍCOLAS S/A. AV. BALDAN, 1500 NOVA MATÃO CEP 15.993-900 MATÃO-SP BRASIL FONE: (16) 3221-8500 CNPJ: 52.311.347/0009-06 CREA/SP 0170977		
01 — Modelo / Model	Data / Date — 03	
02 — N° de Série / Serial Number	Tipo / Type	
Capacidade / Load Capacity	Peso / Weight	



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 After Sales.
 Phone: 0800-152577
 email: posvenda@baldan.com.br



PUBLICATIONS

Code: 60550201308 | CPT: SP02423A



▪ 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: _____

Status: _____

Warranty cert. no: _____

Implement: _____

Serial No: _____

Date of purchase: _____

Invoice: _____

This image shows a single sheet of white paper with horizontal blue or grey 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.

■ 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, guarantees the normal operation of the implement to the reseller 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 repair defects in material and or workmanship of its responsibility, and the labor, freight and other expenses are the responsibility of the dealer.

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

When such a procedure is not possible and the dealer's capacity for resolution has been exhausted, the dealer will request support from **BALDAN's** Technical Assistance, through a specific form distributed to the dealers. After review of the replaced items by Baldan Technical Assistance, and the conclusion that this is not a warranty claim, then the dealer will be responsible for the costs related to the replacement; as well as the costs of material, travel including lodging and meals, accessories, lubricant used and other expenses arising from the call to Technical Assistance, and Baldan is authorized to make the respective billing on behalf of the dealer. Any repairs made to the product that is within the warranty period by the dealer will only be authorized by **BALDAN** upon prior presentation of a budget describing the parts and labor to be executed.

It is excluded from this term the product that undergoes repairs or modifications in officials that 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 warranty will become void when it is found that the defect or damage is the result of improper use of the product, failure to follow instructions, or inexperience of the operator.

It is agreed that the present warranty does not cover tires, polyethylene tanks, cardans, hydraulic components, etc., which are equipment guaranteed by their manufacturers. The manufacturing and or material defects, object of this warranty term, will not constitute, under any hypothesis, reason for rescission of the purchase and sale contract, or for indemnity of any nature.

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

▪ Inspection and Delivery Certificate

SERVICE BEFORE DELIVERY: This implement has been 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 care of maintenance.

I confirm that I have been informed about the warranty terms in effect and instructed about the correct use and maintenance of the implement.

Implement: _____ Serial No: _____

Date: _____ Tax No: _____

Resale: _____

Phone: _____ ZIP: _____

City: _____ State: _____

Owner: _____

Phone: _____

Address: _____ Number: _____

City: _____ State: _____

E-mail: _____

Date of sale: _____

Signature/Stamp of Reseller _____

1st copy - 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 _____

2nd copy - 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

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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baldan.com.br