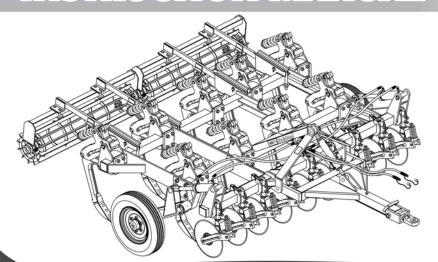
INSTRUCTION MANUAL





INTRODUCTION

e thank you for the preference and congratulate your excellent choice in acquiring an implement of outstanding quality, manufactured in accordance with the advanced technology of *BALDAN IMPLEMENTOS AGRÍCOLAS S/A*.

This manual will assist you, in proceeds necessaries, since when you bought until the operational proceeds application, security and maintenance.

The **BALDAN** guarantees that deliver this implement to the dealer, working properly, and in perfect conditions.

The dealers it's under the responsibility to keep the protection and conservation while keep the implement in your stock, and than, to assembly, tighten, lubrication and overhaul.

ISO 9001: 2008

On time of the technical deliver, the dealer must to have conducted the user customer about the manutentation, safety, and your obligations in a possible technical assistance, the obligation to see the warranty terms and read the instruction manual. Any solicitation of warranty, please contact our Baldan technical service, by your Baldan dealer that you bought our implement.

Reaffirm the necessity to read carefully of warranty certificate and note all of items from this manual, therefore you will increase the working life of your equipment.



Instruction Manual



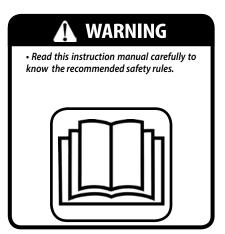
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01. SAFETY RULES



THIS ALERT SYMBOL INDICATES IMPORTANT SAFETY NOTES. WHENEVER YOU FIND IT IN THIS MANUAL, READ THE MESSAGE WITH ATTENTION TO AVOID ANY ACCIDENT.









- There are risks of serious injury by tipping when working on slopes
- Never use excessive speed.



WARNING

- Before any equipment maintenance, make sure that is properly stopped
- · Avoid getting hit



WARNING

• Do not work with the tractor if the front bee without enough weight to the rear equipment. There is tendency to lift, add weights at front or front wheels.





ALCOHOL AND DRUGS MAY GENERATE LOSS OF REFLEX AND CHANGING OF OPERATOR FISICAL CONDITIONS. SO DO NOT WORK WITH THIS EQUIPMENT, IN USE OF THIS SUBSTANCE.



WARNING

- The hydraulic system operate with a high pressure fluid, existing risk of serious injuries or death, search for damaged hose every day and replace it.
- Before coupling or uncouple the hoses relief the pressure, using the tractor's control when it is turned off.



WARNING

- Keep always away from the machine's active elements (discs), they are sharp and can cause accidents.
- When carrying out any service on the discs, use safety gloves on his hands.





BEBIDAS ALCOHOLICAS O ALGUNOS MEDICAMENTOS PUEDEN GENERAR LA PERDIDA DE REFLEJOS Y ALTERAR LAS CONDICIONES FÍSICAS DEL OPERA-DOR. POR ESTO, NUNCA TRABAJE CON ESTE EQUIPO, CASO ESTEA USANDOS ESTAS SUBSTANCIAS.





The incorrect handling of the tractor engine can result in serious or fatal accidents. Before using the read carefully the instructions in this manual. Be sure that the person responsible for the operation is instructed about the correct handling and safety and has read and understood the instruction manual concerning this machine.

- 01- When operating the implement do not allow people to stand close or on the implement.
- 02- A During assembly or disassembly of the discs section use protective gloves.
- 03- A When coupling or uncoupling the hydraulic hose relieve the hydraulic circuit pressure.
- 04- A Check out periodically the hoses condition. Where there is oil emptying change it immediately because the oil works under high pressure and may cause serious damage.
- 05- A Do not use large or daggy clothes because they can get caught on the implement.
- 06- When you start the tractor engine, be correctly placed at the operator seat and be aware of the correct and safety handling of both tractor and implement. Always place the gearshift crank at the neutral position, turn off the gear of the power command and place the hydraulic commands at the neutral position.
- 07- A Do not turn on the tractor in a closed place without appropriate ventilation because the fumes from the fuel are is bad for health.

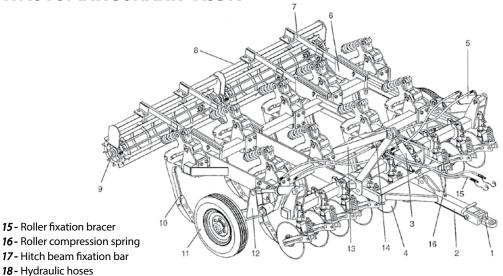


- 08- Mhile maneuvering the tractor to clamp the implement be sure that there is enough space and nobody is too close, maneuver always in slow gear and be ready to brake in case of emergency.
- 09- A Do not carry out adjustments with the implement working.
- 10- A When working over hilly areas try to keep the necessary stability. In case of instability reduce the acceleration, turn the wheels to the inclined side of the land and never lift the implement.
- 11- Always use the tractor at safe speeds, especially when working in irregular or inclined areas, make sure the tractor is always in gear.
- 12- A When using the tractor on the road, keep the brake pedal connected.
- 13- A Do not work with the front tractor light. If there is a tendency to lift up add more weight in the front of the tractor at the front wheels.
- 14- A When leaving the tractor, place the gearshift at the neutral position and apply the park brake. Never let clamped implements be hitched to the tractor with the hydraulic system at the lifted position.
- 15- A Drugs and alcohol will affect an operator's alertness and coordination. Do not operate any engine under these conditions.
- 16- A Explain the operation, inspection and maintenance instructions to those users or operators who can not read.

SUBSOILER PLOW WITH AUTOMATIC SHANK - ASDA

02. COMPONENTS

- 01 Hitch Shackle
- 02 Hitch beam
- 03 Hitch beam adjuster
- 04 Hydraulic piston
- 05 Beam extender
- **06** Disc gang frame bar
- **07 -** Coulter disc blade
- 08 Wheel axle
- **09 -** Wheel
- 10 Central frame
- 11 Tyne with release assembly
- 12 Roller fixation support
- 13 Roller oscilation bar
- 14 Complete roler assembly

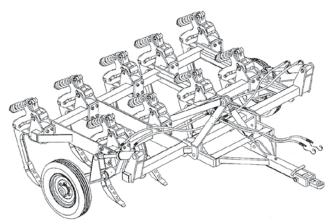




ASDACR SUBSOILER PLOUGH, REMOTE CONTROL

ASDAH

MOUNTED SUBSOILER PLOUGH WITH AUTOMATIC SHANK



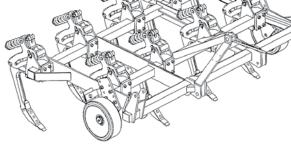


Figure 2

Figure 3

03. TECHNICAL SPECIFICATIONS

Model	Nr of Tynes	Tynes Spacing (mm)	Nr. of Discs	Disc Diameter (ø)	Working Width (mm)	Depth (mm)	Approx. Weight (Kg)	Req. Tractor Power (HP)
ASDAH	5	375	-	-	1875	450	1070	100 - 125
ASDAH	7	375	-	-	2625	450	1480	140 - 175
ASDAH	9	375	-	-	<i>3375</i>	450	1800	180 - 225
ASDACR	5	375	-	-	1875	450	1420	100 - 125
ASDACR	7	375	-	-	2625	450	1825	140 - 175
ASDACR	9	375	-	-	3375	450	1240	180 - 225
ASDACR	11	375	-	-	4125	450	2700	220 - 275
ASDACR	13	375	-	-	4875	450	3000	260 - 325
ASDADR	5	375	5	18"	1875	450	1850	100 - 125
ASDADR	7	375	7	18"	2625	450	2500	140 - 175
ASDADR	9	375	9	18"	<i>3375</i>	450	2900	180 - 225
ASDADR	11	375	11	18"	4125	450	3760	220 - 275
ASDADR	13	375	13	18"	4875	450	4200	260 - 325

ASDAH - Mounted subsoiler plough ASDACR - Subsoiler plough, remote control ASDADR - Subsoiler plough, remote control, with discs and roller BALDAN reservase el derecho de cambiar las características técnicas de este producto sin prévio aviso. Las especificaciones técnicas són aproximadas y informadas en condiciones normales de trabajo.

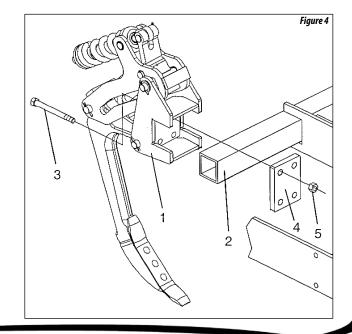


04. ASSEMBLY

- 01 Check if all the components are into the box.
- 02-The safest and easier way to assemble the equipment is have wooden horses or similar supports available.

TYNE ASSEMBLY

- 03 Notice the frame the marked spots where the tyne assembly will be attached on.
- 04 Introduce the tyne assembly (1) onto the bar (2) put the bolts (3) and tighten with the washers and nuts (4).

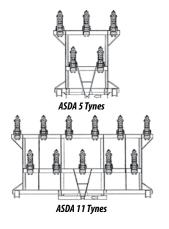




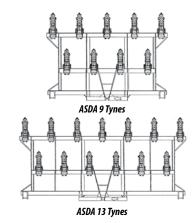
05 - The draws bellow show the right way to assembly and all available versions of subsoilers.

Figures 5

06 - Notice that all models have an odd number of tyne assemblies. Start mounting the center unit first and work your way out laterally. Observing the 375 mm spacement.



ASDA 7 Tynes





ASSEMBLING THE HITCH BEAM

07-Place the coupling header (1) on the frame hitch (2) using the lock pins (3) washer and cotter pin (4), assemble the regulator (5) in the header, fixing it with the lock pin (6), washer and cotter pin (7) and in the frame with the lock pin (8) washer and cotter pin (9).

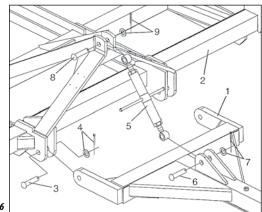


Figure 6

ASSEMBLING THE WHEEL

- 08 Insert the piston (1) on the frame (2) with the lock pin (3) washer and cotter pin (4) and on the wheel support with the lock pin (5) washer and cotter pin (6).
- 09 Mount the complete wheel (7) on the axle and fix with the nuts (8).

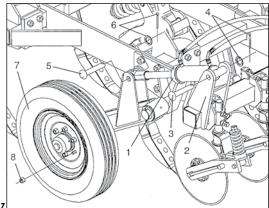
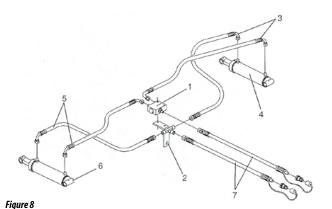


Figure 7

ASSEMBLING THE HYDRAULIC SYSTEM

10-Couple the valve (1) to the support (2), connect the hoses (3) between the valve and the left piston (4), the hoses (5) on the right piston (6) and the hoses (7) for the remote control. (Note the connection diagram next on figure 08). Do not reverse the hose connections. Make sure the hoses ends do not touch the ground).



ASSEMBLING THE CUTTING DISCS

- 11-Couple the complete cutting disc (1) to the frame (2) using the screws (3) braces (4) washer and nut (5).
- 12 The cutting discs must be assembled in alignment with the rods.

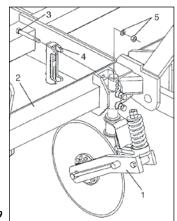
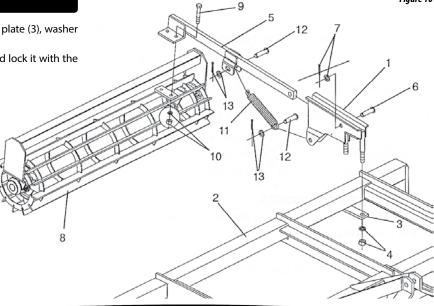


Figure 9



ASSEMBLING THE CRUSHING ROLL

- 13 Place the support (1) on the structure (2) with the plate (3), washer and nut (4).
- 14-Place the sway bar (5) between the support (1) and lock it with the pin (6), washer and lock (7).
- 15 Couple the crushing roll (8) to the sway bar (5) with the screw (9), washer and nut (10).
- 16-Then, place the spring (11) between the sway bar (5) and the support (1) using the pins (12), washers and locks (13).



05. HITCHING TO THE TRACTOR

01-Before hith the subsoiler, make sure if the tractor is ready to operation:

02 - Make sure if the tractor has the front and wheel weights.

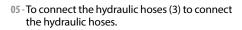
03-Ballast the wheels according to the manufactures specifications.



Before turning on/off the hidraulic hoses, stop the tractor engine and release the pressure by the tractor commands. Beware for accidents with surround people when releasing the pressure with the equipment movement.

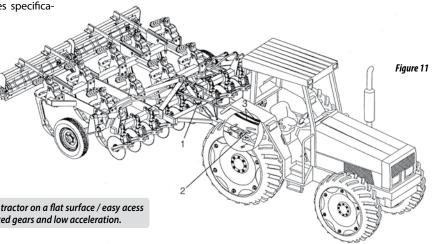
HITCHING ASDA-CR / ASDA-DR

04-Adjust the height of the coupling header through the regulator (1). Couple the subsoiler to the tractor drawbar using the pin (2).





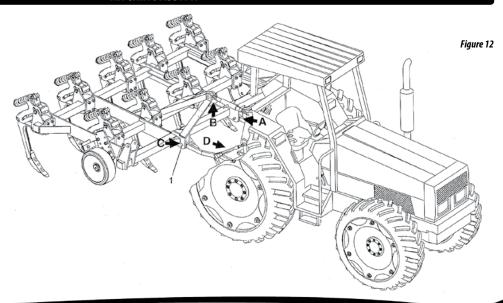
Always hook up implements to the tractor on a flat surface / easy acess and manouverability, use the reduced gears and low acceleration.





HITCHING ASDA-H

- 06-To hitch the mounted model proceed the usual way using the 3 point hitch arms, first the bottom left, then the adjustable bottom right and at last the top link.
- 07 Hitch the bottom left arm with the pin (1) figure 12 into the support of the subsoiler.
- 08-Hitch the 3rd point of the tractor into the "B" support of the subsoiler.
- 09-Finally, using the "D" height regulator leveler, hitch the inferior right arm into the "C" support according to the figure.





CENTRALIZATION ASDA-H

- 10-The centralize the implement behind the tractor measure the distance between the bottom arms of the point hitch and the wheel. They must be adjusted to be the same. Both arms should be also at the same level between each other, figure 13.
- 11-The top link will be now in line with the tractor center line.

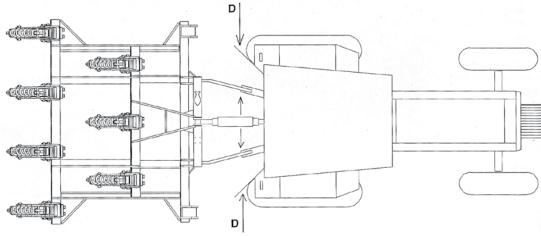
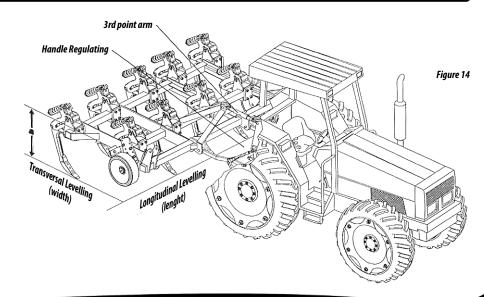


Figure 13



LEVELLING OF THE SUBSOILER

- 12 To level the equipment proceed as follow:
- 13-The tractor must be on a flat place and level the subsoiler in the transversal direction(wifth).
- 14-The longitudinal levelling (lenght) is done through the 3rd point arm.
- 15 Note that the rods should be parallel to the ground according to figure 12.





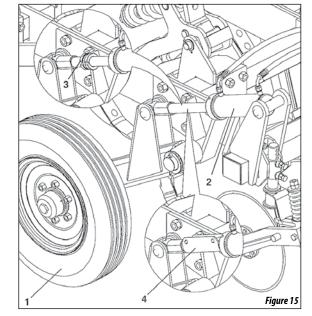
06. ADJUSTMENTS AND OPERATIONS

DEPTH ADJUSTMENTS ASDA-CR AND ASDA-DR

- **01**-The working depth of the strips is limited by the wheels (1) which are activated by the hydraulic cylinders (2).
- 02 Determine the working depth of the strip, immediately lift the wheels via hydraulic cylinders up to the extent determined, place the rings limiters (3) in the cylinder rods.
- 03 After adjustment, the depth is constant, because the rings are limiting the course of the cylinder, preventing the oscillation of the wheels, carrying on always the same depth.



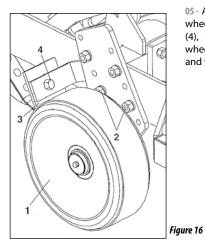
To place subsoiler transport barriers (4) on the stem of the cylinders and rings limiters (3).





DEPTH ADJUSTMENT

04-The depth control of the mounted ASDAH is done by adjusting the wheels (1). To do this, loosen bolts (2) move the wheel up or down and fasten the bolts.



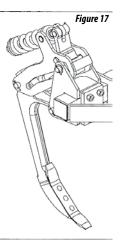
05 - At this time also adjust the wheel scraper (3) by loosen bolts (4), Keep a free space between wheel and scraper of 10-20 mm and fasten the bolt (4).

ADJUSTMENT OF THE AUTOMATIC TYNE RELEASE

06-The automatic tyne disarming are shipped with determined resistance regulation, ie with 33.5 cm in width of the spring.



No need for regulations in other disarmament system for the tynes. They begin disarming, check soil conditions, which must be very hard or high degree of compaction.





NOTE

For better use of a vibratory operation, operate with the lowest possible pressure, since in normal working conditions, do not disassemble the tyne.





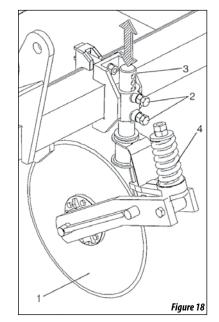


CUTTER DISC BLADE ADJUSTMENTS

- 07-To adjust the depth of the cutting blade (1), loosen the bolts (2) and scroll the shaft (3) to a desired regulation. Then tighten the screws (2).
- **08**-The spring (4) leaves the factory with calibrated pressure, no more pressure on it to neutralize no joint action cutting blades.



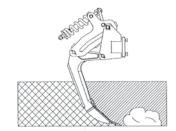
Note that the cutting blade should always be aligned with the tyne. The depth adjustment of the discs must be equal for all sets.

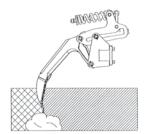




07. OPERATION

- 01-The operation must be done subsolar relatively dry land, with the aim of breaking the litter (layer) compacted soil, generally known as double layer, topsoil or compacted layer only.
- 02 Such guarantee this layer below the soil surface layer, ie, in approximately 10 to 15 cm deep, and has thickness variation of between 5 to 15 cm.
- 03 Verify the depth of the compacted layer of soil through a penetrometer and appropriate regulation of the working depth of the tyne.
- 04 The tynes have a unique security system auto disarmament, bumping into obstacles that come apart, and return to the normal operating position only lifting equipment.
- 05 When operating with subsoiler, locate a gear that allows the tractor to maintain a certain reserve of power, ensuring against unforeseen efforts.
- 06 The operating speed varies according to ground conditions, recommend an average of 4.5 to 5 km / hour.





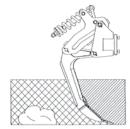


Figure 19



08. PREPARING THE SUBSOILER FOR TRANSPORTATION

- 01 Before transporting the subsoiler, must prepare as follows:
- 02 Remove the bolt (1), washer (2) setting in the spring (3) swing bar (4), leaving open the spring, under "Detail A".
- 03 Then move the clod roller (5) in the up position so that the roller is on the subsoiler, "Detail B".

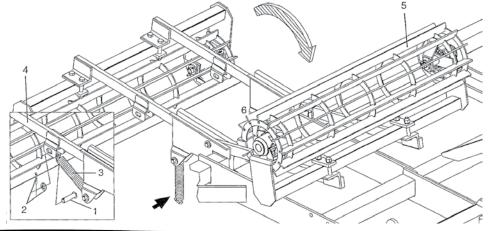
Figure 20



If there is a need to raise a roller, use proper equipment.



Before performing the operation lift the roller, release the springs between the bars and swing support rods, as shown in figure 20.





09. MAINTENANCE

- 01 Check daily the fixation of bolts, nuts and pins.
- 02 The tyne points are reversible, observe periodically the wear-out points when necessary.
- 03 Check the cutting edge of the discs.

LUBRICATION

- **04**-Lubrication is essential for good performance and durability of moving parts of the subsoiler saving maintenance costs.
- 05 Before starting work, carefully lubricate all grease fittings, observing the lubrication intervals, ensuring the quality of the lubricant, efficiency and purity, avoiding using products contaminated by water, dirt, etc...
- **06**-Before starting lubrication, clean all grease fittings with a clean, lint-free cloth and replace any that are damaged.

TABLE OF EQUIVALENT AND GREASES

Manufacturer	Grease Type		
Petrobrás	Lubrax GMA 2		
Atlantic	Litholine MP 2		
Ipiranga	Super Grasa Ipiranga Ipiranga Super Grasa 2 Ipiflex 2		
Castrol	LM 2		
Mobil	Mobilgrease MP 77		
Техасо	Marfak 2 Agrotex 2		
Shell	Retinax A Alvania EP 2		
Esso	Multipurpose grease H		
Bardahl	Maxlub APG 2 EP		

Table 3

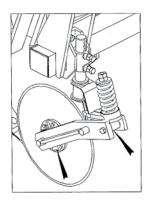


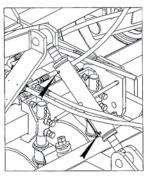
If there were other manufacturers or and other. Equivalent trends that are not listed in this. Table, consult the manufacturer's technical manual.

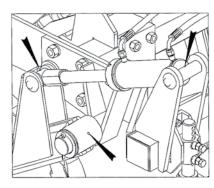


LUBRICATION POINTS

Lubricate every 10 hours







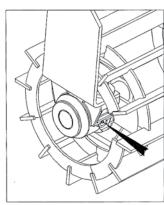
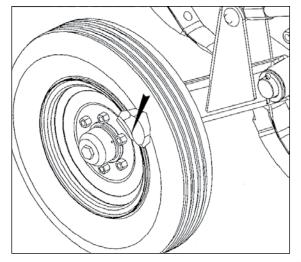


Figure 21

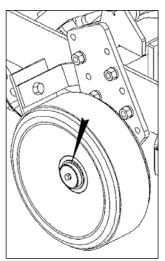


LUBRICATION POINTS

Lubricate every 60 hours



Lubricate every 100 hours



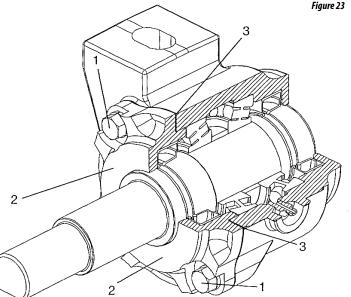
- 01 Lubricate the depth wheel ASDA -H as follows:
- 02 Remove the cap (1);
- 03 Clean the existing grease (used);
- 04-Insert new grease in the hub;
- 05 Reattach the cap on the wheel.





BEARINGS ADJUSTMENTS

- When the bearings submit clearances, adjust them as follows:
- 07 Loosen the screws (1);
- 08 Remove the joint (3), the bearing cover and replace it again.
- 09 If the gap persists, it can be facemills the cover (2) to increase the tuning then mount the same on the bearing with many joints as required.
- 10 The bearing must rotate freely, ie without axial or radial clearances.
- 11 Grease the bearing again. The amount of grease used is 150 grams.





TIRE PRESSURE

- 12-Tires should always be properly calibrated avoiding premature wear due to excess or lack of pressure.
- 13-A tire pressure 7.50 x 16 should be (55lb/pol2) and 900 x 16 tires must be (60lb/pol2) for each.

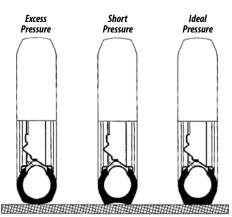


Figure 24

10. CLEANING

- **01**-When assembling or disassembling any portion of the subsoiler, use proper tools.
- 02-Check all moving parts of the subsoiler, present themselves wear or looseness, make the necessary adjustment or replacement of parts, leaving the equipment ready for the next use. Use original parts Baldan.
- 03 Make a clean sweep in the subsoiler, check where the paint is worn, a full coat.
- 04 Lubricate the machine completely.
- 05-When the implement is not going to be used for a longer period we recommend to store it in good conditions for conservation. Clean and grease, patch up paint, spray oil over the implement and points before storage.



11. IDENTIFICATION

01-In order to refer parts catalogues or apply technical support from Baldan, always indicate model (1), serial number (2), manufacture date (3) located on the identification tag.

ALWAYS REQUIRE BALDAN ORIGINAL PARTS

Look in your local, a reseller BALDAN, he will have in stock genuine parts.





MARKETING Edition of **Catalogs and Manuals**

Revision: 01 CPT: ASDA00615

Code: 6055010081-1



WARNING

The draws contained in this instruction manual are merely illustrative.



In case of doubt do not operate the equipment, please contact our After-sales Service.

Phone: 08000-152577 e-mail: export@baldan.com.br



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I ROBOCI IDENTIFICATION	
Do the identification below to always have the properly informations about your equipment life time.	
Owner:	
Dealer:	-
Farm:	
City: Country:	
Model:	-
Warranty certified number:	
Serial number:	-
Purchase date: / / Invoice.	Nr:

NOTE:



WARRANTY CERTIFICATE

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

During this period **BALDAN** is committed to repairing material and/or manufacturing defects under its responsibility, which means that manpower, freights and other expenses are under dealer responsibility.

During the warranty period, the request and replacement of eventual defective parts should be executed by the regional dealer, who will send the defective part to **BALDAN** for analysis.

When this procedure is not possible and the problem solving capacity of the dealer is exhausted, the dealer must request the support from **BALDAN** Technical Assistance through the specific form distributed to dealers.

After Baldan Technical Assistance analyzes the replaced items and concludes that it is not a warranty issue, the dealer becomes responsible for the costs related to the replacement as well as the expenses with material, trip including accommodation and meals, accessories, lubrication used and other expenses resulting from calling Technical Assistance, and Baldan is authorized to make the respective billing in the name of the dealer.

Any repair made by the dealer on the product during the warranty period will only be authorized by **BALDAN** through prior presentation of the budget describing the parts and manpower to be executed.

The product subjected to repairs or modifications at official dealers not belonging to the network of BALDAN dealers as well as the application of non-genuine parts or components to the user product are not included in this deed.

The present warranty becomes void when it is confirmed that the defect or damage is the result of undue use of the product, non-observation of the instructions or the inexperience of the operator.

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

The manufacturing and/or material defects subject to this warranty deed will not include, under any circumstance, reason for termination of purchase and sales contract or for indemnification of any kind.

BALDAN reserves the right to change and/or improve the technical characteristics of its products without prior warning and without obligation of doing so with the previously manufactured products.



CERTIFICATE OF INSPECTION AND DELIVERY

- **SERVICE BEFORE DELIVERY:** This implement was carefully prepared by the sales organization, inspected in all its parts according to the prescriptions of the manufacturer.
- DELIVERY SERVICE: The user was informed on the effective warranty deeds and instructed on the use and maintenance precautions.
- · I confirm that I was informed on the effective warranty terms and instructed on the correct use and maintenance of the implement.

Implement:			Serial Number:	
Date:	Invoice Number:			
City:		State:		Zip Code:
Owner:		Phone:		
Address:				Number:
E-mail:			Date of sale:	
1st Owner		Dealer Signature / S	Stamp	

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Implement:			Serial Number:	
Date:	Invoice Number:			
City:		State:		_Zip Code:
		Phone:		
Address:				Number:
E-mail:			Date of sale:	
2 nd Dealer		Dealer Signature / S	Stamp	

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Implement:	Serial Number:	
Date: Invoice Number:	Dealer:	_
City:	State: Zip Code:	_
Owner:	Phone:	_
Address:	Number:	_
City:		_
E-mail:	Date of sale:	
3 rd - Manufacturer	Dealer Signature / Stamp	
Please send this filled out copy to BALDAN within a maximum of 15 days.		

Instructions Manual



1.74.05.0059-5 ECT/DR/SP AC MATÃO

CARD

NO NEED TO SEAL

THE STAMP WILL BE PAID BY:



Av. Baldan, 1500 | Nova Matão | CEP [Zip Code]: 15993-000 | Matão-SP | Brazil

BALDAN IMPLEMENTOS AGRÍCOLAS S/A

Phone number: (0"16) 3221-6500 | Fax: (0"16) 3382-6500 Home Page: www.baldan.com.br | e-mail: sac@abidan.com.br Export: Phone number: 55 16321-6500 | Fax: 55 16 3382-4212 | 3382-2480 E-mail: export@ baldan.com.br









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