### Instruction



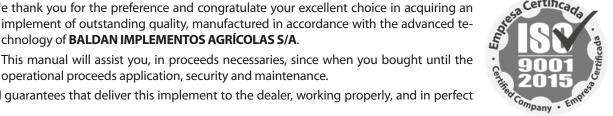
**ASDA** MP

Subsoiler Plow with Automatic Shank



### 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.



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

operational proceeds application, security and maintenance.

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.

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



Subsoiler Plow with Automatic Shank

BALDAN IMPLEMENTOS AGRÍCOLAS S/A.

CNPJ: 52.311.347/0009-06 Insc. Est.: 441.016.953.110



Scan the QR Code on the identification plate of your device and access this Instruction Manual online.



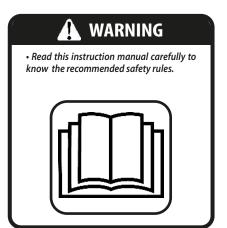
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### 01. SAFETY RULES



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







### WARNING

- 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



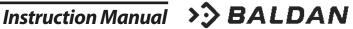
### **WARNING**

• 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 EQUI-PMENT, IN USE OF THIS SUBSTANCE.



### 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.



### **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.





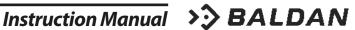
ALCOHOL AND DRUGS MAY GENERATE LOSS OF REFLEX AND CHANGING OF OPERATOR FISICAL CONDITIONS. SO DO NOT WORK WITH THIS EOUI-PMENT, IN USE OF THIS SUBSTANCE.





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- A When operating the implement do not allow people to stand close or on the implement.
- 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- 📤 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- 📤 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.
- A While 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.



- **A** Do not carry out adjustments with the implement working.
- Mhen 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.
- Mhen using the tractor on the road, keep the brake pedal connected.
- 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.
- 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.
- 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.

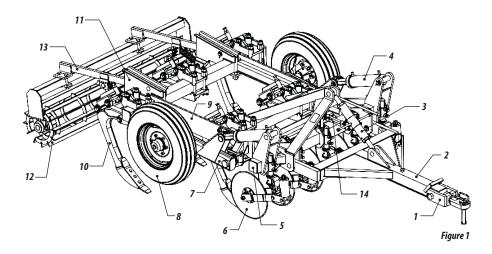


IN USE OF THIS SUBSTANCE.

### **ASDA-MP** SUBSOILER PLOW WITH AUTOMATIC SHANK

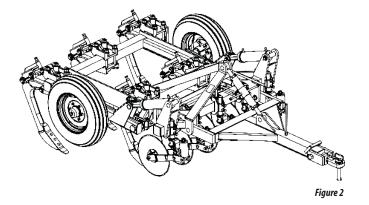
### 02. COMPONENTS

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



ASDADR - MP - Subsoiler plough, remote control, with discs and roller

### ASDA-CR MP - SUBSOILER PLOUGH REMOTE CONTROL



### ASDA-H MP - MOUNTED SUBSOILER LOUGH WITH AUTOMATIC SHANK

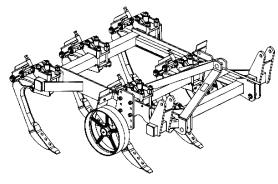


Figure 3

### 03. TECHNICAL SPECIFICATIONS

Table 1

Model	Nr. of Tynes	Tyne Spacing (mm)	Nr. of Discs	Disc Diameter (ø)	Working Width (mm)	Depth (mm)	Approx Weight (Kg)	Req. Tractor Power (HP)
ASDAH - MP	5	375	-	-	1875	450	1070	100 - 125
ASDAH - MP	7	375	-	-	2625	450	1480	140 - 175
ASDAH - MP	9	375	=	=	3375	450	1800	180 - 225
ASDACR - MP	5	375	-	-	1875	450	1420	100 - 125
ASDACR - MP	7	375	-	-	2625	450	1825	140 - 175
ASDACR - MP	9	375	-	-	3375	450	1240	180 - 225
ASDACR - MP	11	375	-	-	4125	450	2700	220 - 275
ASDACR - MP	13	375	-	-	4875	450	3000	260 - 325
ASDADR - MP	5	375	5	18"	1875	450	1850	100 - 125
ASDADR - MP	7	375	7	18"	2625	450	2500	140 - 175
ASDADR - MP	9	375	9	18"	3375	450	2900	180 - 225
ASDADR - MP	11	375	11	18"	4125	450	3760	220 - 275
ASDADR - MP	13	375	13	18"	4875	450	4200	260 - 325
ASDA - MP	5	375	5	18"	1875	450	1290	100 - 125
ASDA - MP	7	375	7	18"	2625	450	1650	140 - 175
ASDA - MP	9	375	9	18"	3375	450	2000	180 - 225
ASDA - MP	11	375	11	18"	3760	450	2300	220 - 275
ASDA - MP	13	375	13	18"	4875	450	2650	260 - 325

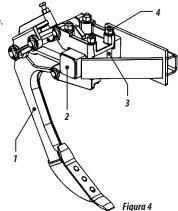
Baldan reserves the right to modify any technical specifications without prior notice. The technical specifications it's approximate and informed by regular conditions of work.

### 04. MONTAGEM

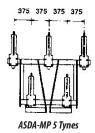
- 01 Check if all the components are into the box.
- 02 The safest and easier way to assemble the equipment is have wooden horses or similar supports available.

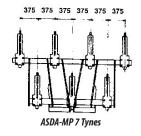
### TYNE ASSEMBLY

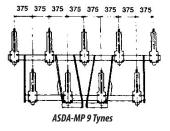
- 03 Notice the frame the marked spots where the tyne assembly will be attached on.
- 04 Introduce the tyne assembly (1) onto the bar (2) put the bolts (3) and tighten with the washers and nuts (4).



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

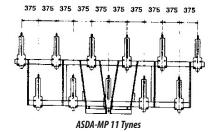


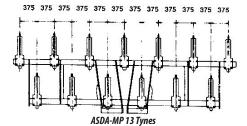




Figures 5

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.

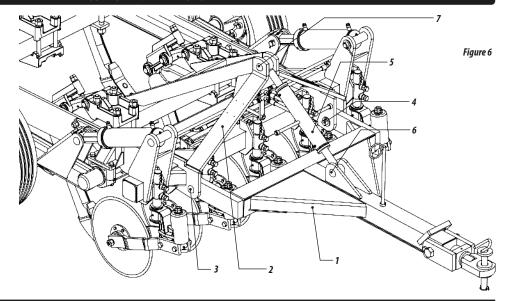




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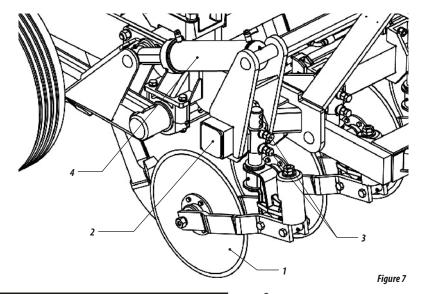
### **ASSEMBLING THE HITCH BEAM**

- 07-Fix the complete header (1) in the 3rd hitch point (2) through the pins (3 and 4).
- 08-Then fix the 3rd point regulator (5) in the header through the pin (6) and in the hitch frame through the pin (7).



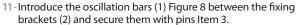
### **ASSEMBLY THE DISCS**

- 09 Fix the cutting discs (1) on the discs clamping bar (2) using the screws (3).
- 10 Attach the hydraulic hoses on the piston (4), taking care not to let their extremities touch the ground.

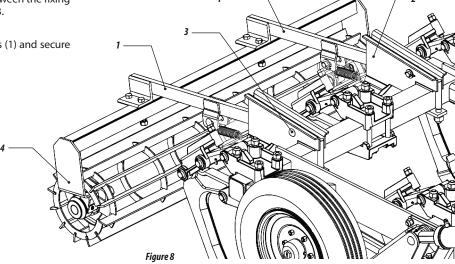


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### **ASSEMBLY THE ROLLER**



12 - Place the rollers (4) under the oscillation bars (1) and secure them with the screws (5) and nuts (6).





### 05. COUPLING SUBSOILER

- 01 Before attaching the subsoiler on the tractor, make sure it is prepared to work as follows:
- 02 Check if the tractor is equipped with front counterweights;
- 03 Ballast wheels, according to the manufacturer of the tractor.

### COUPLING THE ASDACR-MP / ASDADR-MP

- 04 Before attaching the subsoiler to the drawbar of the tractor, it should be noted the alignment of the tractor, set the exact height of jumelo (1) through the regulator and use the pin(2).
- 05 Attaching the hoses (3) on the tractor guick hitch.



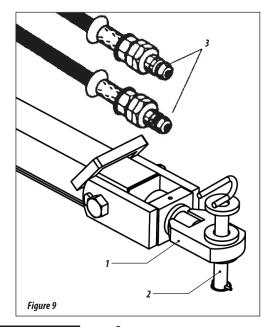
WARNING

To attaching the subsoiler, find a safe place and easily accessible, always use low gear with low acceleration.



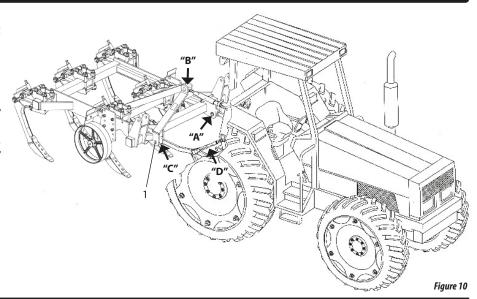
### **WARNING**

Before connecting or disconnecting the hydraulic hoses, stop the tractor engine and relieve pressure circuit, triggering the control levers totally. Make sure that the system pressure relieve no one suffers an accident due to movement of equipment.



### **COUPLING THE ASDAH-MP**

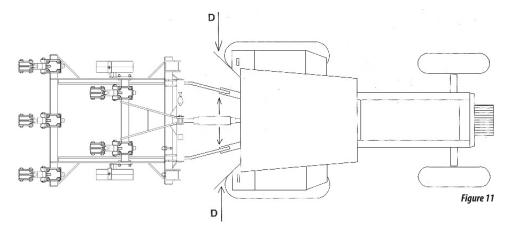
- 06-To hitch the mounted model proceed the usual way using the 3 point hitch arms, first the bottom left, then the adjustable bottom right and at last the top link.
- 07-Hitch the bottom left arm with the pin (1) figure 10 into the support "A" of the subsoiler.
- 08 Hitch the 3rd point of the tractor 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.





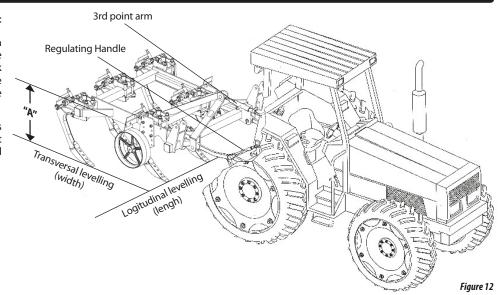
### **CENTRALIZATION ASDAH-MP**

- To center the subsoiler in relation to the longitudinal axis of the tractor, proceed as follows:
- 10-Align the upper hitch of the subsoiler with the 3rd hitch point of the tractor, checking the distances "D" of the hydraulic lower arms are equal in relation to tractor tires as Figure 11. The lower arms must be level with each other.



### **LEVELLING OF THE ASDAH-MP**

- To level the subsoiler proceed as follows:
- 11-The tractor must be on flat place, then level the subsoiler in the transverse (width) through the lower right crank arm of the hydraulic coupling. Observe the measures "A" which should be the same as Figure 12.
- 12-The leveling longitudinal (length) is made by the 3rd point arm. Note that the rods must be parallel to the ground as Figure 12.



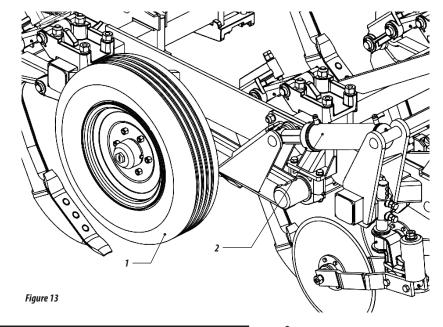


### 06. ADJUSTMENTS AND OPERATIONS

01-The operational depth is regulated by the depth wheel setting (1) figure 13 that are controlled by the piston stroke (2).

### **DEPTH ADJUSTMENTS**

- 02-To adjust the regulator is necessary to determine the working depth of the subsoiler, then lift the wheels through hydraulic piston until the extent determined, make the adjustment on the regulator, threading the valve until it touches the piston connection.
- 03 After adjustment, the depth is constant, this is because the regulator is limiting the stroke of the piston, preventing the oscillation of the wheels, keeping the same depth.

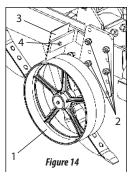


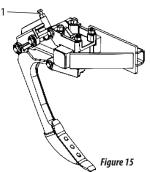
### **DEPTH ADJUSTMENT OF ASDAH-MP**

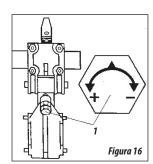
- 04-The depth control of the mounted ASDAH-MP is done by adjusting the wheels (1) Fig 14. To do this, loosen bolts (2), move the wheel up or down and fasten the bolts.
- 05 At this time also adjust the wheel scraper (3) by loosen bolts (4). Keep a free space between wheel and scraper of 10-20 mm and fasten the bolt (4) Figure 14.

### ADJUSTMENT OF THE AUTOMATIC TYNE RELEASE

• The automatic disarm of the tynes come standard with adjustable precharge determined. To decrease or increase the charge, turn the screw (1) Figure 15 to the right or left as follows:







- 06 Note the screw Item 1 Figure 16 turning it 90 degrees (1/4 turn) to the right (clockwise) will decrease 5 kgs in charge of the disarming;
- 07-Turning to the left (counterclockwise) will increase the charge on 5 kgs as Figure 16.
- 08 Make the adjustment of the charge always 1/4 to 1/4 turn, that is, 5kg in 5kg until stop the disarming.



Adjust only if you are disarming at all times.



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**ASDA-MP** - 22

### **DEPTH ADJUSTMENT OF THE DISCS**

- 09 To adjust the depth of the cutting disc (1), proceed as follows:
- 10-Loosen the screws (2) and slide the axle (3) to the desired setting. Then retighten the screws (2).

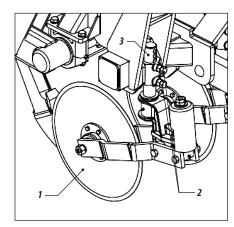


Figure 17

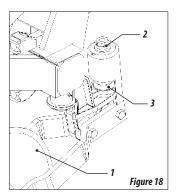
### PRESSURE ADJUSTMENT OF THE DISCS

- 11 To control the pressure of the cutting discs (1), proceed as follows:
- 12 Turn the nut (2) clockwise for higher pressure in the spring (3). For lower pressure in the spring (3), turn the nut (2) in a counterclockwise direction.



### WARNING

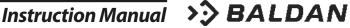
By regulating the pressure of the disc, be careful not to undo the articulation action of the discs.





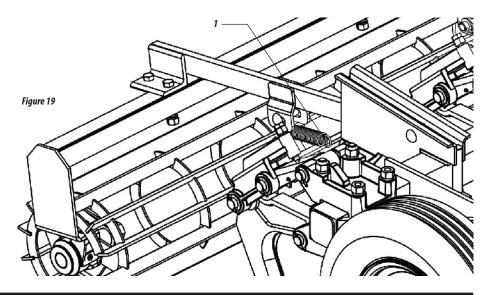
### **IMPORTANT**

This adjustment giving higher or lower pressure in the spring should be done in the field before starting the work, noting the type of soil to be worked to get better performance.



### PRESSURE OF THE ROLLER

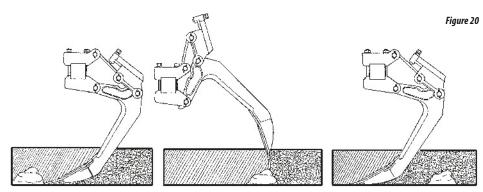
13-The roll is provided with pressure spring (1) which automatically adjusts itself in accordance with the depth adjustment.



### **OPERATIONS**

- 14-The subsoiling should be in relatively dry ground in order to break up the compacted soil, commonly known as double cover, foot plow or simply compacted layer.
- 15-This layer is immediately below the topsoil, ie approximately 10 to 15 cm depth, and this compressed layer varies from 5 to 15 cm thick.
- 16-Check the depth of the compacted layer of soil using a penetrometer or trench (these are methods used) and proceed to setting the working depth of the tynes.

- 17-The tynes are equipped with an exclusive system of automatic disarm when they meet obstacles, return to normal working position by simply lifting the implement as Figure 20.
- 18 When operating with the subsoiler, choose a gear that allows the tractor to maintain a certain reserve of power, ensuring against unexpected efforts.
- 19-The working speed varies depending on the ground conditions, we recommend an average of 4.5 to 5Km/h.







### 07. 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 a good performance and durability of moving parts subsoiler.
- 05 Before starting work, carefully lubricate all grease nipples, always observing the lubrication intervals, making sure the quality of the lubricant, as its efficiency and purity, avoiding using products contaminated by water, land, etc..

page 22)

06 - Before lubrication, clean all greasing nipples with a clean cloth and lint-free, replace grease nipples that are damaged.

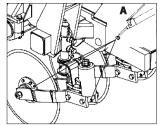


Figure 21 - Cutting disc

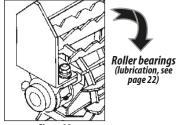


Figure 22

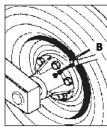


Figure 23 - Wheel

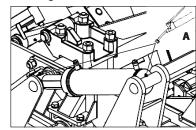


Figure 24 - Hydraulic Piston

- Lubricate grease nipples:
- 07 "A" every 8 hours;
- 08 "B" every 60 hours.

### **LUBRICATION POINTS**

• Lubricate the wheel depth of the ASDAH-MP every 100 hours of work.

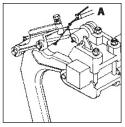


Figure 25 - Tyne

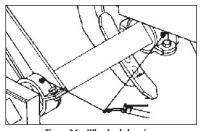


Figure 26 - Wheel axle bearings

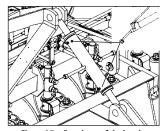


Figure 27 - Regulator of the header

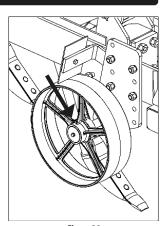


Figure 28

### **LUBRICATION OF THE ROLLER BEARINGS**

- 09 Clean the grease fitting with a clean cloth, lint-free, replace any that are damaged, if any.
- 10 The amount of grease in each bearing is 150 grams.
- 11-The rolling bearing grease should be regreased every 12 hours, using the grease specified in the table below.

### **OIL BATH BEARINGS (OPTIONAL)**

- 12 In the early days of working with the subsoiler, check daily oil level in the bearings and also in retainers.
- 13 Check the oil level every 120 hours.
- 14-The exchange must be made every 1200 working hours. Use mineral oil SAE 90.

### **TABLE OF EQUIVALENT AND GREASES**

Manufacturer	Grease Type
Petrobrás	Lubrax GMA 2
Atlantic	Litholine MP 2
lpiranga	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

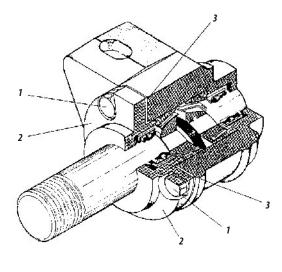
Table 2



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



### **BEARINGS ADJUSTMENTS**



- When the roller bearings present looseness, adjust them on the following way:
- 15 Loosen the screws Item 1 fig. 29.
- 16 Remove 1 or 2 joints item 3, the bearing cover. Replace the cover and retighten it.



### NOTES

Don't assemble the roller bearing without a joint.

- 17 If the looseness is still, turn the lid item 2, to increase the adjustment after assemble the lid on the bearing with as many joints as it is necessary.
- 18 The bearing should turn freely, that is, without radial and axial looseness.

### 08. CLEANING

- 01 When assembling or disassembling any portion of the subsoiler, employing methods and tools appropriate.
- 02 When the subsoil is remain inactive for a long period, do a general cleaning, check where the paint has worn off, take a coat generally spend protective oil and grease completely subsoiler.
- 03 Check the nipples, rollers and discs, make a good cleaning and maintenance on them, then give a coat of paint and pass protective oil.



### 09. IDENTIFICATION

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.







PRODUCT IDENTIFICATION	NOTE:
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:

### WARRANTY CERTIFICATE

- 01 BALDAN IMPLEMENTOS AGRÍCOLAS S/A, guarantees normal operation of the implement to the reseller for a period of 6 (six) months counted from the delivery date on the reseller's bill of sale to the first final consumer.
- 02 During this period **BALDAN** is committed to repair any defects in materials and/or manufacturing at its own responsibility, as labor, shipping, and other expenses are the responsibility of the reseller.
- 03 During the warranty period, the request and replacement of any defective parts will be done at the regional reseller, and thereafter ship the defective part to **BALDAN** for analysis.
- 04-When it is not possible to perform such procedure and the capacity for resolving the problem is exhausted by the reseller, the same shall request support from the **BALDAN** Technical Support Service, by filling out the specific form distributed to resellers.
- 05-After analysis of the replaced items by the **BALDAN** Technical Support Services is concluded and the replacement is not covered by the warranty, then it will be the responsibility of the reseller to pay all the related costs for the replacement; as well as expenses on materials, travel, including lodging and meals, accessories, lubricates used, and other expenses originating from the Technical Support Service call, thereby the **BALDAN** company is authorized to charge for the respective bill to the reseller's name.
- 06 Any repair done on the product within the validity date of the warranty period, will only be authorized by **BALDAN** by previous presentation of the quotation describing the parts and labor charges that will be performed.
- 07-It is excluded from this agreement, whenever the product undergoes official repairs or modifications from service centers that do not belong to the **BALDAN** reseller network, as well as the installation of aftermarket parts or components in the user's product.
- 08-This warranty will be nullified if the defect or damage is the result from improper usage that is noncompliant to the instructions or inexperience of the operator.
- 09-It is agreed to that this present warranty does not cover tires, polyethylene storage compartments, drive shafts, hydraulic components, etc. as the warranty coverage is from their own manufacturers.
- 10-Manufacturing or material defects, as stated in the purpose of this warranty agreement, does not constitute, under any hypothesis, a reason for purchase and sale contract termination, or the payment of indemnities of any nature.
- 11-BALDAN reserves the right to change and or perfect the technical characteristics of its products, and without any obligation to proceed in previously manufactured products.

### **INSPECTION AND DELIVERY CERTIFICATE**

- **SERVICE BEFORE THE DELIVERY:** This equipment was carefully prepared by the sales organization; all its parts were inspected according to the instructions from the manufacturer.
- DELIVERY SERVICE: The user was informed as to the terms of the aplicable warranty and instructed on its usage and maintenance procedures.
- I here by confirm I have been informed on the terms of the applicable warranty and instructed on its usage and maintenance procedures of the implement.

Product:			Serial Number:	
Date:	Bill of sale:		Reseller:	
City:				Zip Code:
Owner:		Phone:		
				Number:
City:				
E-mail:				
1a - Page - Ower		Sianature / Store's	stamp	

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Product:			Serial Number:	
Date:	Bill of sale:		Reseller:	
City:		State:		Zip Code:
		Phone:		
Adress:				Number:
E-mail:			Date of sale:	
2a - Page - Reseller		Signature / Store's	stamp	

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Product:			Serial Number:	
Date:	Bill of sale:		Reseller:	
City:		State:		Zip Code:
Owner:		Phone:		
				Number:
City:		State:		
E-mail:			Date of sale:	
3a - Page - Manufacturer		Sianature / Store's	stamp	

Please send a filled out copy in a maximum period of 15 days to BALDAN.

1.74.05.0059-5 ECT/DR/SP AC MATÃO

# **RESPONSE CARD**

NO STAMPING IS REQUIRED

# THE STAMP WILL BE PAID BY:

## BALDAN IMPLEMENTOS AGRÍCOLAS S/A. >> BALDAN

Av. Baldan, 1500 | Nova Matão | CEP: 15992-900 | Matão-SP | Brasil Phone; (0°116) 3221-6500 | Fax: (0"16) 3382-6500 | Hone Page: www.baldan.com.br | e-mail: sac@baldan.com.br Export: Phone: 55 16 3321-6500 | Fax: 55 16 3382-4212 | 3382-2480 e-mail: export@baldan.com.br

### >\$ BALDAN

15.993-900

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+55 16 3221 6500 baldan.com.br