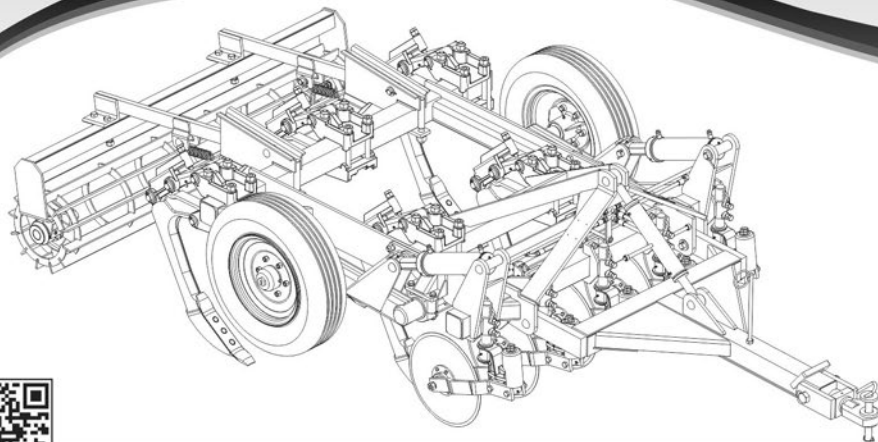


ASDA MP

**Subsoiler plow with
Automatic shank**



www.baldan.com.br

Instruction Manual

INTRODUCTION

We 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 necessities, 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.

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.



WARNING

- Read this instruction manual carefully to know the recommended safety rules.



WARNING

- Only start the tractor operations, when are you properly accommodated and with the seat belt fasted.



WARNING

- Never carry people over the tractor or equipment.





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 end is 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 PHYSICAL CONDITIONS. SO DO NOT WORK WITH THIS EQUIPMENT, 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 EQUIPMENT, IN USE OF THIS SUBSTANCE.



WARNING

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-  During assembly or disassembly of the discs section use protective gloves.
- 03-  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-  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-  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.
- 09-  Do not carry out adjustments with the implement working.
- 10-  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-  When using the tractor on the road, keep the brake pedal connected.
- 13-  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-  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-  Drugs and alcohol will affect an operator's alertness and coordination. Do not operate any engine under these conditions.
- 16-  Explain the operation, inspection and maintenance instructions to those users or operators who can not read.



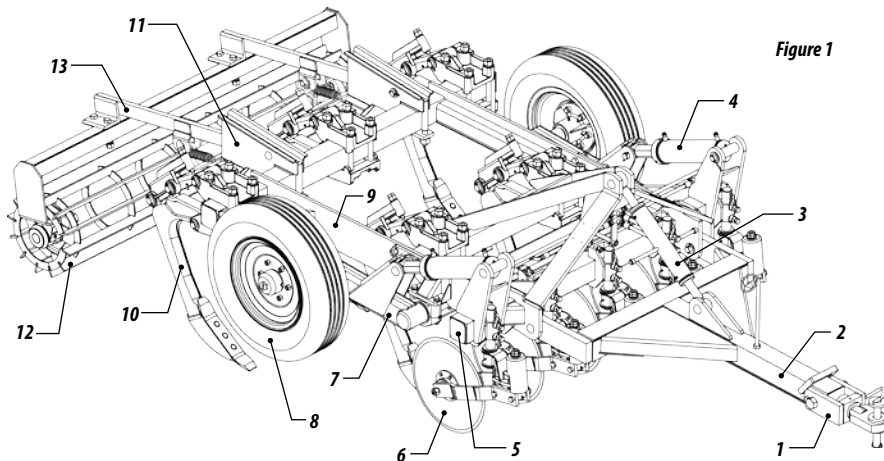
ALCOHOL AND DRUGS MAY GENERATE LOSS OF REFLEX AND CHANGING OF OPERATOR FISICAL CONDITIONS. SO DO NOT WORK WITH THIS EQUIPMENT, IN USE OF THIS SUBSTANCE.

ASDA-MP

SUBSOILER PLOW WITH AUTOMATIC SHANK - ASDA-MP

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

ASDAH-MP

MOUNTED SUBSOILER PLOUGH WITH AUTOMATIC SHANK

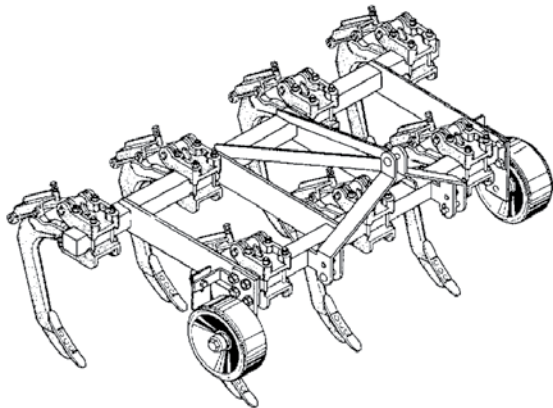


Figure 2

ASDACR-MP

SUBSOILER PLOUGH, REMOTE CONTROL

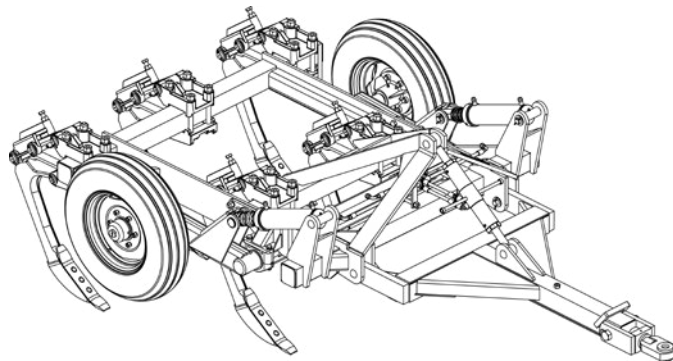


Figure 3

03. TECHNICAL SPECIFICATIONS

Tabela 1

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

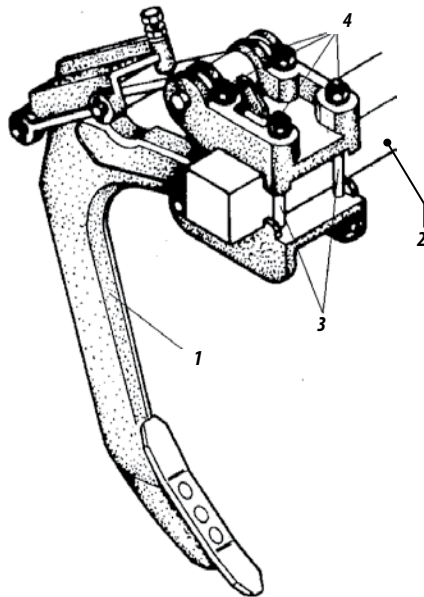
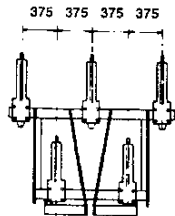
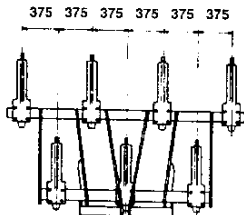


Figure 4

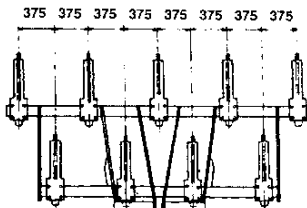
05 - The draws bellow show the right way to assembly and all available versions of subsoilers.



ASDA-MP 5 Tynes



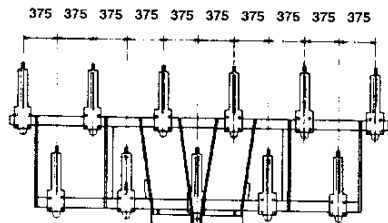
ASDA-MP 7 Tynes



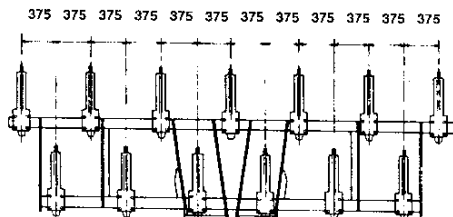
ASDA-MP 9 Tynes

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 spacing.



ASDA-MP 11 Tynes



ASDA-MP 13 Tynes

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).

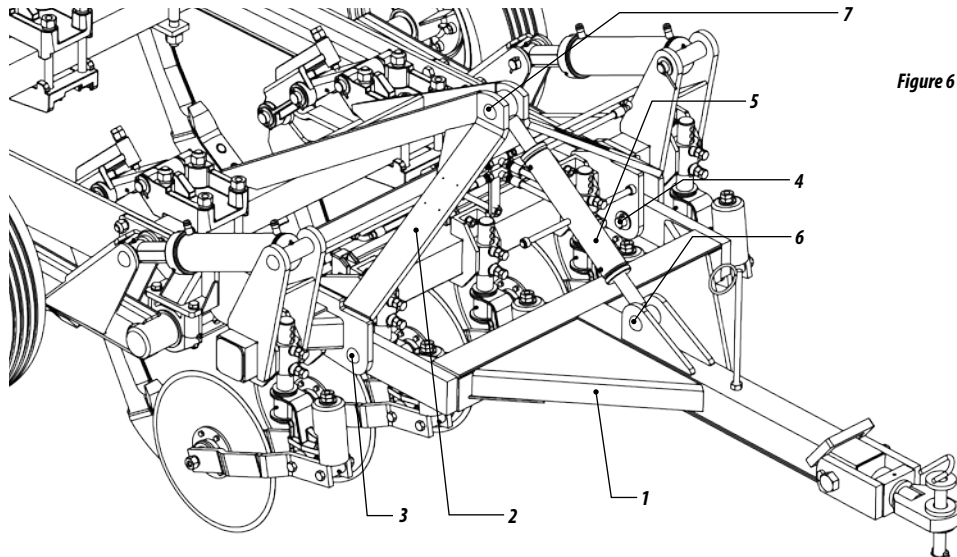


Figure 6

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.

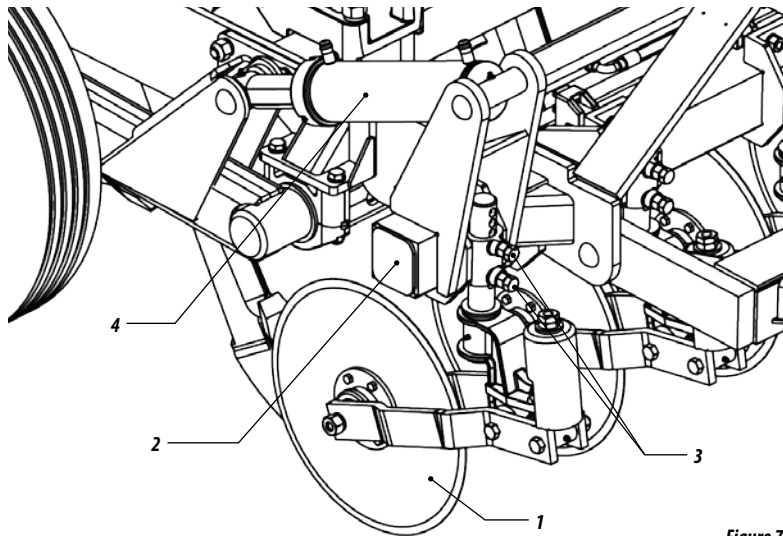


Figure 7

ASSEMBLY THE ROLLER

11 - Introduce the oscillation bars (1) Figure 8 between the fixing brackets (2) and secure them with pins Item 3.

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

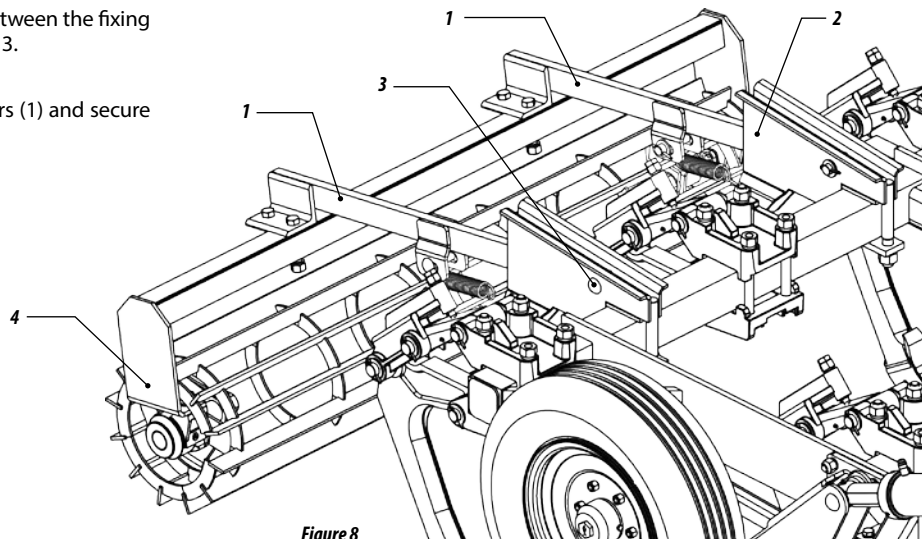


Figure 8

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 quick 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.

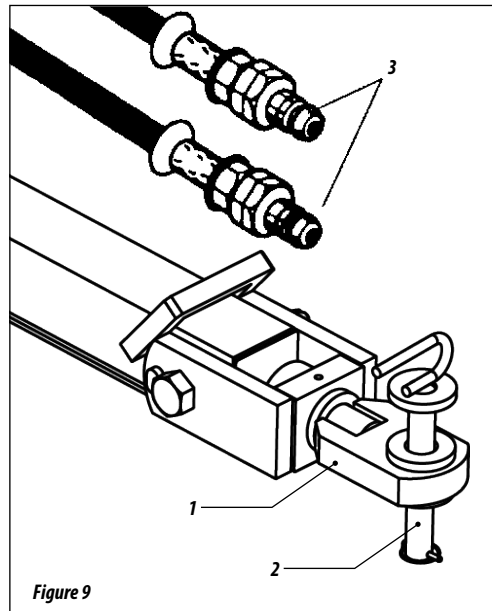
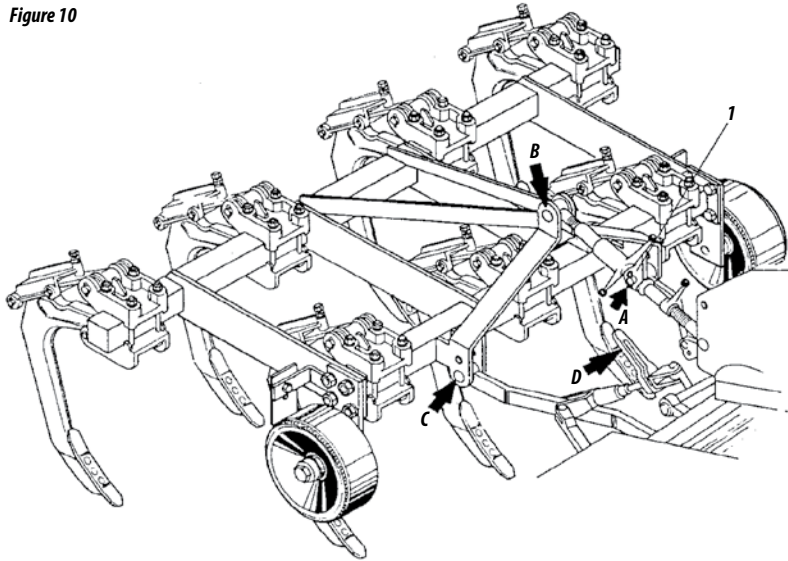


Figure 9

COUPLING THE ASDAH-MP

Figure 10

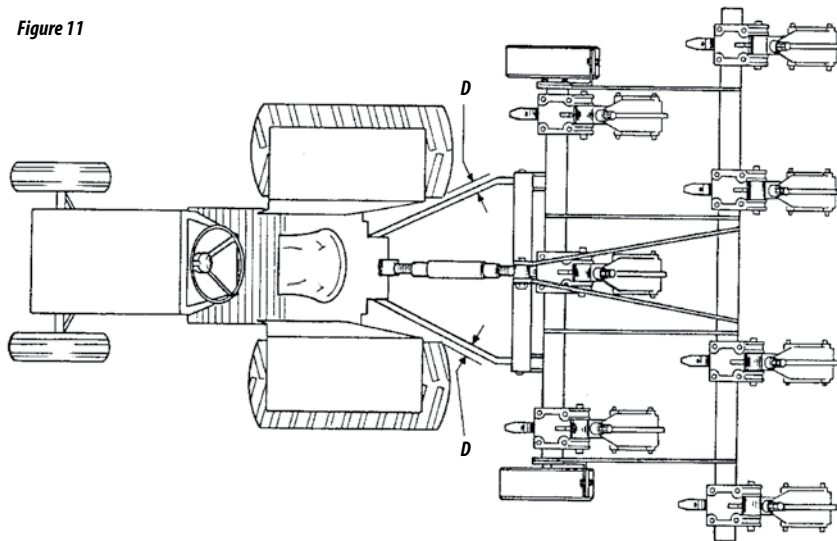


- 06 - To hitch the mounted model proceed the usual way using the 3 point hitch arms, first the bottom left, then the adjustable bottom right and at last the top link.
- 07 - Hitch the bottom left arm with the pin (1) figure 10 into the support of the subsoiler.
- 08 - Hitch the 3rd point of the tractor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

- 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.

Figure 11

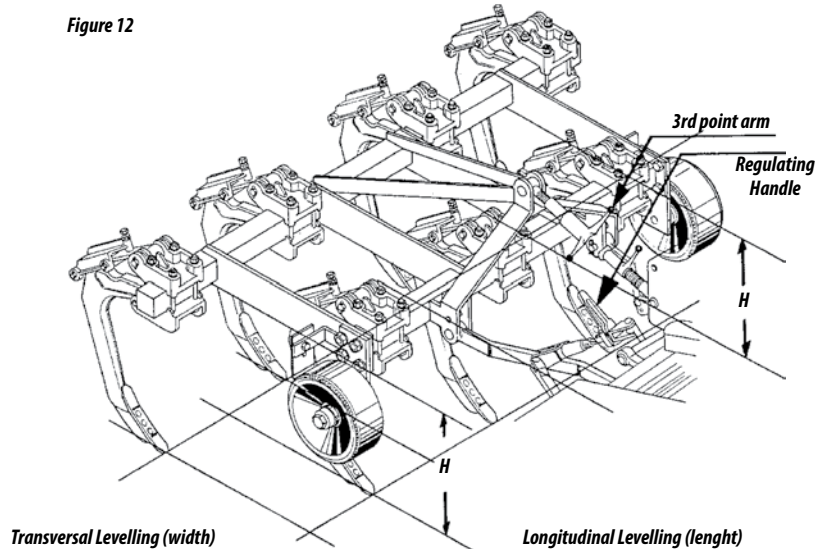


LEVELLING OF THE ASDAH-MP

- 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 "h" 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.

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.

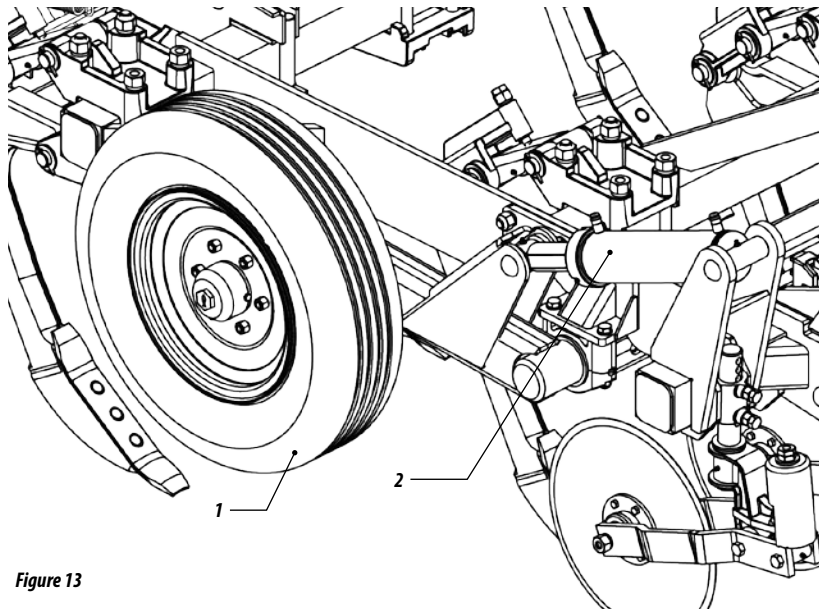


Figure 13

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:

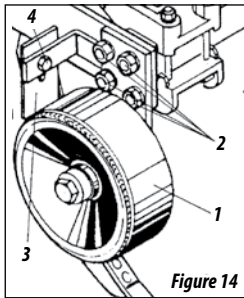


Figure 14

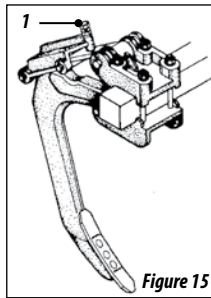


Figure 15

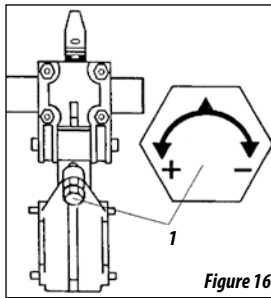


Figure 16

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.



WARNING

Regule somente se estiver desarmando a todo o momento.

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).

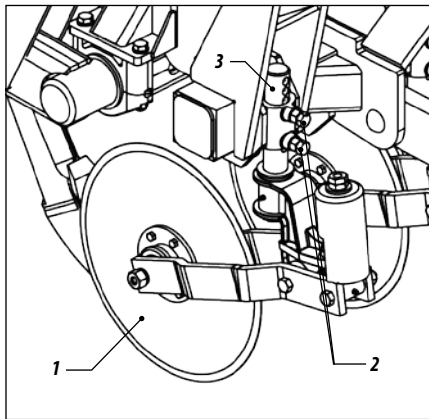


Figure 17

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.

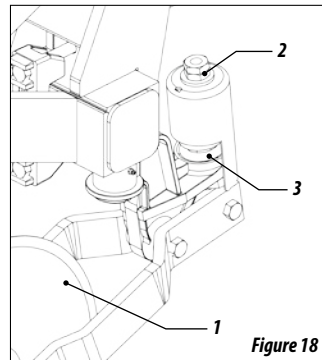
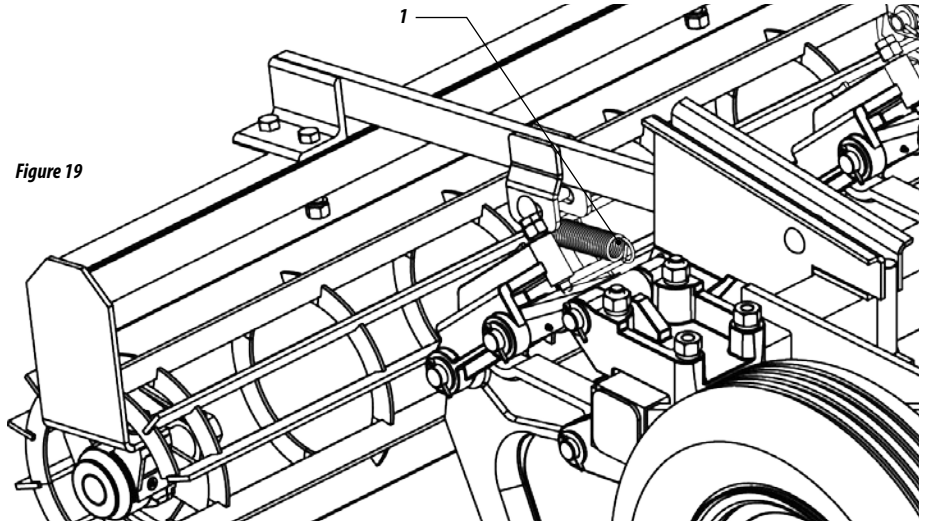


Figure 18

PRESSURE OF THE ROLLER

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

Figure 19



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.

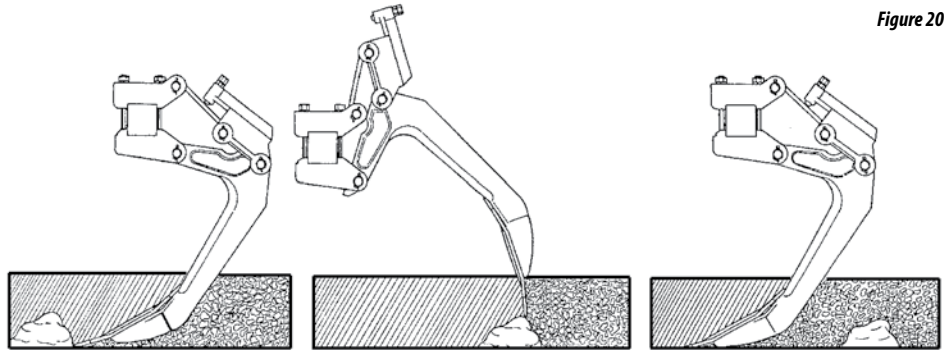


Figure 20

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

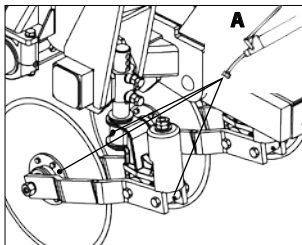


Figure 21 - Cutting disc

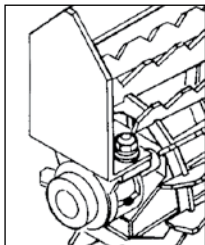


Figure 22



*Roller bearings
(lubrication, see
page 22)*

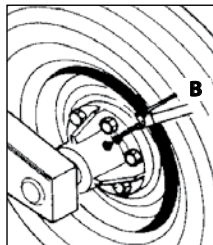


Figure 23 - Wheel

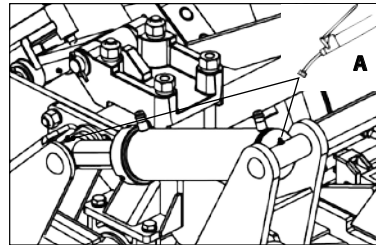


Figure 24 - Hydraulic Piston

- 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 as follows:
09 - removing the dust cap item 1 Fig. 28.
10 - clean the existing grease (used);
11 - introduce new grease in the dust cap;
12 - replace the dust cap on the wheel.

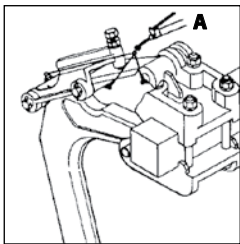


Figure 25 - Tyne

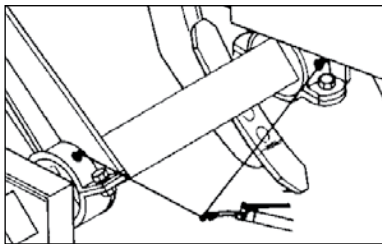


Figure 26 - Wheel axle bearings

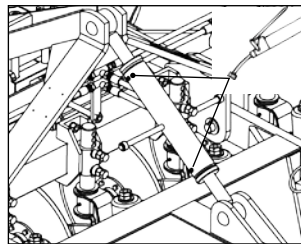


Figure 27 - Regulator of the header

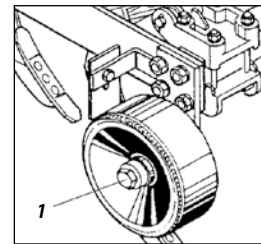


Figure 28

LUBRICATION OF THE ROLLER BEARINGS

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

OIL BATH BEARINGS (OPTIONAL)

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

TABLE OF EQUIVALENT AND GREASES

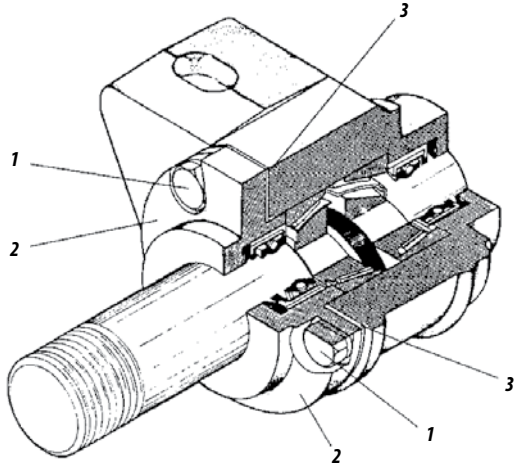
<i>Manufacturer</i>	<i>Grease Type</i>
<i>Petrobrás</i>	<i>Lubrax GMA 2</i>
<i>Atlantic</i>	<i>Litholine MP 2</i>
<i>Ipiranga</i>	<i>Super Grasa Ipiranga Ipiranga Super Grasa 2 Ipiflex 2</i>
<i>Castrol</i>	<i>LM 2</i>
<i>Mobil</i>	<i>Mobilgrease MP 77</i>
<i>Texaco</i>	<i>Marfak 2 Agrotex 2</i>
<i>Shell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

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:
19- Loosen the screws Item 1 fig. 29.
20- 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.

- 21- 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.
- 22- 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.



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WARNING

The draws contained in this instruction manual are merely illustrative.



CONTACT

*In case of doubt **do not** operate the equipment, please contact our **After-sales Service**.
Phone: 08000-152577
e-mail: export@baldan.com.br*



PRODUCT IDENTIFICATION

- Do the identification below to always have the properly informations about your equipment life time.

Owner: _____

Dealer: _____

Farm: _____

City: _____ *Country:* _____

Model: _____

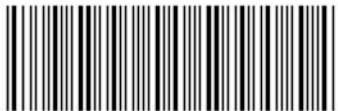
Warranty certified number: _____ *Serial number:* _____

Purchase date: _____ / _____ / _____

Invoice. Nr: _____

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Baldan



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