

Instruction Manual

Disc Harrow

AMAZONE BBG

Taurus 4000/3000



MG 778
DB 3070.1 (GB) 06.02
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GB



Before starting to operate, please carefully read and adhere to this operation manual and safety advice.



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1. Details about the machine

1.1 Range of application

The disc harrow **Taurus 4000/3000** is designed for the usual soil tillage operation in agriculture.

1.2 Manufacturer

BBG Bodenbearbeitungsgeräte Leipzig GmbH & Co. KG

A company of the **AMAZONEN**-Group
Weidenweg 19
D-04249 Leipzig

1.3 Conformity declaration

The disc harrow fulfils the requirements of the EC guide line Machine 98/37/EG and the corresponding additional guide lines.

1.4 On requesting after sales service and parts

When ordering options or spare parts, the machine model and the disc harrow serial number have to be quoted.



The safety requirements will only be fulfilled if in case of repair original **AMAZONE-BBG**-spare parts will be used. No liability will be accepted for consequential losses or resulting damage if other spare parts will be used.

1.5 Type plate

Type plate on the machine



Fig. 1

Type:

Machine No.: _____



The type plate is of documentary value and may not be changed or disguised.



1.6 Technical data

	in		Taurus 3000	Taurus 4000
Nominal working width	mm		3000	4000
Transport width, min.	mm		2970	2950
Transport height	mm		1310	1820
Transport length, depending on roller diameter	mm		7005	7405
Ground clearance during transport, max.	mm		300	300
Permissible tilting to the side (transport position)	%		15	15
Total weight, depending on execution max.	kg		2950	3700
Towing load, front	kg		1100	1200
Axle load (running gear), depending on execution	kg		1950	2500
Transport wheel – at random 19.0/45-17 10 PR 11.5/80-15.3 15.0/55-17	Pcs.		2 (3,5 bar)	2 (3,5 bar)
Track width (axle body)	mm		2200	2200
Power requirement	KW		60-110	90-140
Hydraulic nominal pressure, max.	bar		200	200
Operational speed	km/h		7-15	7-15
Transport speed, unbraked	km/h		25	25
Working depth	cm		4-18	4-18
Diameter of the following roller	mm		520-580	520-580
Number of outer discs Ø 550 mm	Pcs.		4	4
Number of operating discs Ø 660 mm	Pcs.		23	31
scalloped in the front			11	15
plain in the rear			12	16
Disc spacing	mm		230	230
Disc thickness	mm		6 (7)	6 (7)
Disc shaft bearing points	Pcs.		8	8
Disc angle	[°]	front	15-24	15-24
		rear	15-25	15-25

1.6.1 Required on the hydraulic system/tractor

Required for connecting the disc harrow to the hydraulic system of the tractor:

- 2 double acting control spool valves

The maximum permissible pressure of the tractors' hydraulic is 230 bar.

1.6.2 Details about noise level

The tractor operator seat related emission value (sound pressure level) is 74 dB (A), measured when operating with shut tractor cab at the ear of the tractor operator.

Measuring implement: OPTAC SLM 5.

The value of the sound pressure level mainly depends on the vehicle used.

1.7 Designated use of the machine

The BBG disc harrow **Taurus 4000/3000** has been designed for the exclusive usual operation in agriculture. The machine is suitable for all methods of operation: shallow stubble tillage and turning standing crop:

- Stubble tillage
- Cultivation of harvested potato
- Chopping sward
- Chopping lasting forage crop
- Pre-cultivation of ploughed coarse cloddy soils
- Mulching of green manure crops and organic manure

Any use beyond the one stipulated above is no longer considered as designated use. The manufacturer does not accept any responsibility for damage resulting from non-compliance and therefore the operator himself carries the full risk.

Under "designated use" also the manufacturer's prescribed operation, maintenance and repair conditions must be adhered to as well as the exclusive use of **original AMAZONE-BBG-spare parts**.



Any damage resulting from arbitrary changes on the machine rule out the responsibility of the manufacturer.



2. Safety

This instruction manual contains basic advice, which has to be observed when mounting, operating and maintaining the machine. Thus, this instruction manual has implicitly to be read by the operator before starting to operate and this book must be made available to him.

All safety advice in this instruction manual must be strictly observed and adhered to.

2.1 Danger when not adhering to the safety advice

Not adhering to the safety advice

- may result in endangering persons, also the environment and also the machine itself.
- may result in the rejection of any claim for damage.

Not paying attention to the safety advice may cause the following risks:

- Danger to persons not excluded from operational areas.
- Failure of important functions within the machine.
- Failure of carrying out prescribed measures of maintenance and repair.
- Danger to persons through physical or chemical contact.
- Danger to persons, or the environment by leaking hydraulic oil.

2.2 Qualification of operator

The implement may only be operated, maintained and repaired by persons, who are acquainted with it and have been informed of the relevant dangers.

2.3 Identification of advice in this instruction manual

2.3.1 General danger symbol

The safety advice in this operators manual, which may lead to a danger to persons if not being observed, are identified with the general danger symbol (Danger symbol according to DIN 4833-W9).



2.3.2 Attention symbol

Attention symbols which may cause dangers to the machine and its function when not being adhered to, are identified with the attention symbol.



2.3.3 Hint symbol

This symbol marks machine's specific points that should be observed to ensure the correct function of the machine.



2.4 Warning pictographs and hint symbols on the machine

- The warning pictographs indicate dangerous points on the machine. Observing these pictographs means safety for all persons using this machine. The hint symbols always are linked to safety/warning symbols.
- The hint symbols mark machine's specific points which have to be observed to ensure correct function of the machine.
- Strictly observe all warning and hint pictographs.
- Please pass on all safety advice also to other users.
- Please keep all warning and hint signs clean and in an easily readable condition. Please ask for replacement of damaged or missing decals from your dealer and attach to the relevant place (picture No.: = order-No.).
- Fig. 2 shows the fixing points of warning and hint signs. Please find the relevant explanations below.



Fig. 2

Picture No.: MD 095

Explanation:

Before commencing operation read thoroughly operators manual and safety advice.



Picture No.: MD 078

Explanation:

Never enter into bruising zones without first isolating any further movement



Picture No.: 911 888

Explanation:

The CE-sign indicates that the implement fulfils the requirements of the EC guide line Machine 98/37/EG and the corresponding additional guide lines.





2.5 Safety conscious operation

Besides the safety advice in this instruction manual additionally, the national, and generally valid operation safety and accident prevention advice of the authorised trade association are binding, especially VSG 3.1.

Adhere to the safety advice on the decals on the machine.

When travelling on public roads observe the traffic regulations in force in your country.

2.6 General safety and accident prevention advice

Basic principle:

Always check traffic and operational safety before putting the machine to operation.

1. Adhere to the general rules of health- and safety precautions besides the advice in this instruction manual.
2. Always check traffic and operational safety of tractor and implement before putting the machine to operation.
3. The responsible manager is bound to familiarise the operator with the implement and to make available the instruction manual to him.
4. The fitted warning- and advising decals give important hints for a safe operation; adhering to them protects your own safety.
5. When making use of public roads adhere to applicable traffic rules.
6. Become acquainted with the machines controls and functions before beginning the operation. Doing this during operation would be too late.
7. The operator should wear close-fitting clothes. Avoid wearing loose-fitting clothes.
8. Avoid danger of fire by keeping the machine clean.
9. Before beginning to move, check surrounding area (children etc.). Ensure sufficient visibility.
10. Carrying passengers whilst driving or operating the machine is not permitted.
11. Always attach weights correctly to the mounting points provided.
12. Observe the permissible axle loads, total weights and transport dimensions.
13. Ensure that the outer transport dimensions correspond to your national traffic law.
14. Check and install any transport equipment such as lighting, warning devices and any safety advice.
15. Release cables for quick hitches should hang freely and must not work loose from their housings.
16. Do not leave the driving position at any time whilst driving.
17. Standing in the operating area is prohibited.

18. Do not stand near rotating and swivelling parts of the machine.
19. Hydraulic folding frames must only be activated after making sure no-one is standing near the machine.
20. Squeeze and shear points are found on externally activated components (e.g. hydraulics).
21. Allow nobody to stand between tractor and implement if the tractor is not secured against rolling away by the parking brake and/or by the chocks.
22. Lock booms in transport position.

2.6.1 Tractor mounted / trailed implements

1. Attach implements as advised and only to the attachment points provided.
2. Special care should be taken when the implement is coupled to or off the tractor.
3. When attaching or removing the machine bring the supporting devices into the corresponding position (standing safety).
4. When fitting to the three point linkage the mounting categories at the tractor and the implement must implicitly coincide.
5. Use the pulling bar to mount the implement to the tractor's three point hydraulics.
6. Driving, steering and braking abilities are influenced by mounted or suspended equipment and ballast weights. Therefore, check sufficient steerage and braking.
7. When lifting a three point implement the front axle load of the tractor is reduced depending on its size. The sufficient front axle load (20 % of the tractor net weight) has to be maintained).
8. When driving around bends note the width of the machine and/or the changing centre of gravity of the implement.
9. Start operating implements only when all guards have been fitted in guarding position.
10. Before leaving the tractor seat lower the machine to the ground. Actuate the parking brake, stop the engine and remove ignition key.

2.6.2 Brakes

1. Check function of brake before travelling on public roads.
2. Brake systems should regularly be carefully checked.
3. Setting and repair work at the braking device must only be conducted by specialists, workshops of approved services.
4. When travelling on public roads single wheel braking on the attached tractor should be excluded (lock both pedals).

2.6.3 Bolted connections, tyres

5. Repair work to the tyres may only be conducted by trained personnel and with special mounting tools.
6. When working on the wheels make sure that the implement is safely parked and secured against rolling away (chocks).
7. All fixing bolts and nuts should be retightened as advised by the manufacturer.!
8. Check air pressure regularly.
9. Excessive air pressure may cause the tyre to explode.

2.7 Safety advice hydraulic system

1. The hydraulic system is under high pressure.
2. Connect hydraulic hoses to the hydraulic rams and motors according to the advice in the instructions.
3. When fitting the hydraulic hoses to the tractor hydraulic sockets always ensure that the hydraulic system on the tractor as well as on the implement is without pressure.
4. To avoid wrong hydraulic connection, sockets and plugs should be marked (e. g. colour coded). This helps to prevent contrary function (lifting instead of lowering or vice versa) and reduces the danger of accident.
5. All hydraulic hoses must be checked for their operational safety by a skilled person before the first operation of the machine.
6. Check hydraulic hoses regularly. . In case of damage or ageing replace the hydraulic hoses! The replacement hoses must correspond to the technical demands of the implement manufacturer.
7. The period of use of any hose circuit should not exceed six years including a possible storing period of two years maximum. Also when stored and used properly hoses and hose circuits do age. Therefore their longevity and period of use is limited. Deviations from the above may be accepted by the Health- and Safety Authorities depending on the experience they have had and the danger potential. For hoses and hose cir-

cuits made of thermoplasts other guide lines may prevail.

8. Before starting to do repair work to the hydraulic system release the pressure and stop tractor engine.
9. When searching for leaks appropriate aids should be used because of the danger of injury.
10. Liquids leaking under high pressure (hydraulic oil) can penetrate the skin and cause severe injury.



When injured see a doctor immediately. Danger of infection!

2.8 General safety and accident prevention advice for maintenance, repair and cleaning



Climbing on the implement for maintenance, cleaning or other work with or without aids is prohibited. Danger of accident.

1. Standing underneath the lifted unsecured implement is prohibited. Keep a safe distance from moving disc segments (except for the operator himself).
2. Repair-, maintenance- and cleaning operations as well as the remedy of function faults should principally be conducted with drive and engine stopped. Remove ignition key.
3. Wear a helmet whilst cleaning and repairing the implement.
4. Check nuts and bolts for tightness and retighten if necessary.
5. Tighten all fixing bolts and nuts according to the advice of the manufacturer.
6. Before conducting electric welding operations on tractor or on the mounted implement, remove cable from generator and battery.
7. Change wheels (running gear) only when the implement is in its operational position.).
8. When servicing a raised unit always ensure it is secured by suitable supports.
9. When replacing work tools with cutting edges use a suitable implement and wear gloves.
10. Any spare parts fitted must, as a minimum meet with the implement manufacturers' fixed technical standards. Using **Original-BBG-spare parts** for example ensures this.
11. In care of repainting, replace the warning hints.



2.9 Transport on public roads



Please observe the following hints. They help to prevent accidents in public road traffic.

1. The permissible transport speed with unbraked axle load is 25 km/h.
2. When driving on public roads with lifted implement the control lever has to be locked against unintended lowering.
3. In transport position always take care for a sufficient lateral locking of the tractor's three-point.
4. In transport position danger of injury from protruding discs.
5. During transport the valve on the draw bar must be in the "end position", the swivelling hydraulic must not be actuated.
6. The release ropes for quick coupler should hang freely and in the low position must not release the quick coupling by themselves.
7. The transport width of 3 m may not be exceeded.
8. For implements of more than 3 m transport width, your national traffic law will be binding.
9. Tractor and implement must correspond to your national traffic regulations.
10. Check and attach the transport equipment, as e.g. traffic lights, warning plates and guards.
11. When transporting mounted implements the traffic lights of the tractor must not be hidden. Otherwise an additional traffic light kit should be fitted. Your national traffic regulations will be binding. The vehicle owner and the operator are responsible for adhering to the legal traffic rules.
12. Check traffic lights for function.
13. Attach red-white striped warning plates to the front and to the rear of trailed implements.
14. Apply warning plates according to DIN 11030 or parking plates on the r.h. and l.h. side at the front and at the rear.
15. The space between upper edge of the warning plate and the road should not exceed 1.50 m. Attach the warning plate with a maximum distance of 10 cm from the implement outer edge.
16. The maximum possible slope tilting (in transport position) is 20 %. The maximum possible slope tilting in operational position is equal to that of the tractor. Do not fold in and out the roller frame on slopes or undulated terrain.
17. During transport on public roads, especially when driving in bends, take wide load of the implement into account and keep a safe distance of 1 m to other vehicles and to the edge of the road.
18. Backing up with the implement in transport position is only allowed with an additional person. Backing up with the implement in operational position is prohibited.

3. Description of product

The disc harrow **Taurus 4000/3000** (Fig. 3) is suitable for the use in minimum soil tillage on medium and heavier soils.

The X-Pack formation of the disc gangs is used to avoid any side forces on the tractor. (Fig. 4). Due to the staggered arrangement of the discs in the centre the soil is moved across the entire working width.

The depth control is provided by the rear consolidating roller. The adjustment of the working depth is done by repositioning **AMAZONE**-eccentric depth pin. The optimum reconsolidation of the soil can be matched to varying soil conditions by a choice of different rear rollers.

Cutting and mixing achieved in all working depths by the infinitely variable gang angle adjustment. The $\varnothing$ 660 mm discs with a load of up to 120 kg/disc positively maintain the working depth even in heavy soils and difficult conditions.

One disc gang consists of six to nine discs (incl. smaller side discs) with two large bearings. The centre shaft is a square of 40 x 40 mm made from spring steel. The standard execution provides scalloped discs at the front and plain discs at the rear with smaller outer discs to avoid ridge forming.

Scrapers on every disc ensure a blockage-free operation.

At high operational speeds the side plates provide a limitation of the soil flow (special option).

The cutting angle adjustment, mechanic or hydraulic, allows an infinitely variable setting of the disc angle. The cutting angle of the front and rear disc gangs can be set individually via two hydraulic control valves. For an optimum operational performance the front cutting angle should be set shallower and the rear one steeper.

The transport wheels are hydraulically lifted during operation to prevent any wheel tracks being left on the worked ground.



Fig. 3



Fig. 4



4. On receipt of the machine

Check that no damage has been caused in transit and that all parts are present. Otherwise no responsibility can be accepted by the manufacturer or the carrier.

Check whether all parts (and options) listed up in the delivery note are present.

Before commencing work, remove all packing material, wire, etc.

5. Mounting and dismounting



When mounting the soil tillage implement to the tractor observe the safety advice.



Attach implements as advised and only to the attachment points provided.



Special care should be taken when the implement is coupled to or off the tractor.



When attaching or removing the machine bring the supporting devices into the corresponding position (standing safety).



Nobody should stay between tractor and implement if the tractor is not secured against rolling away by the parking brake and/or by chocks.

5.2 Dismounting

- Control unit for transport wheels in floating position
- Lower implement until it rests on the discs/rollers
- Insert the hydraulic hoses into the provided retainers
- Release pulling bar and unhook

5.1 Mounting



Observe the max. support load of the tractor.



The lower link arms of the tractor must be provided with stabilising rods or chains in order that the implement does not sway to and fro.

- Use the pulling bar to mount the implement to the tractor's lower links of the three point hydraulics.



Ensure that the drawbar securing engages properly.

- Hydraulic connections:
 - 1 double acting control spool valve: Lifting/lowering transport wheels, folding in and out rollers (red marked hoses)
 - 1 double acting control spool valve: cutting angle adjustment (blue marked hoses)
- Fold down transport wheels.
- Raise implement until it is in horizontal position, e.g. with its frame level with the ground.

6. Transport to the field – Transport on public roads and ways



When travelling on public roads and ways during transport to the field tractor and implement have to correspond to your national road transport and traffic rules.



Both, the vehicle owner and operator are responsible for adhering to the legal traffic rules.



For transport position always check all traffic safety kits for proper function and options (e.g. guard canvass for all four disc gangs).

- Traffic lights and warning plates are required for agricultural and forestry implements.



The traffic light kit should correspond to your national traffic regulations.



Check traffic light kit for function.

- When transporting mounted implements the traffic lights of the tractor must not be hidden.
- Transport width of 3 m must not be exceeded. Fold in roller segments and disc gangs accordingly (Fig. 5).



Fig. 5

- Take the guard canvass from the retainer underneath the rear of the frame and attach to the disc gangs by using tension rubber bands (Fig. 6).



When driving on public roads with lifted implement the control lever has to be locked against unintended lowering.



In transport position always take care for a sufficient lateral locking of the tractor's three-point.

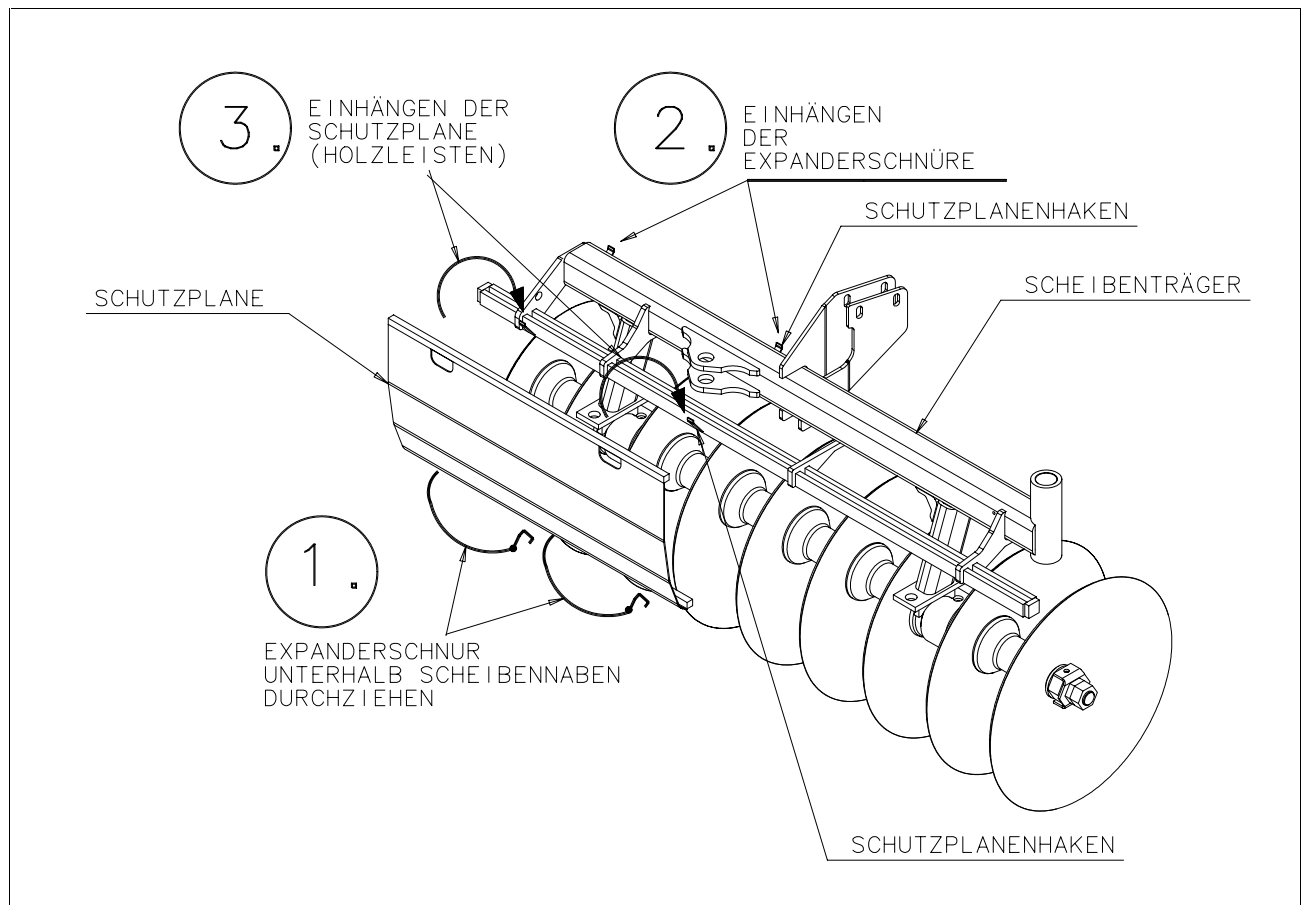


Fig. 6

- Prior to parking and lowering the disc harrow TAURUS 4000/3000, place planks underneath the mounted discs. If you store the implement for a prolonged time, apply anti corrosive protective paint.

7. Settings

7.1 Adjustment of the cutting angle

The usual adjustment for the traction force, the operational speed and the operational efficiency is:

- 18° on the scalloped disc gangs in the front,
- 15° on the rear plain disc gangs.

7.1.1 Hydraulic adjustment of the cutting angle

Proceed as follows to change the cutting angle adjustment:

- Implement is in raised position.
- Adjust double acting hydraulic ram via the tractor control spool valve.
- Hydraulically swivel the front disc gang pair by actuating the valve pulling rope and observe the front setting scale (Fig. 7/1).
- Hydraulically swivel the rear disc gang pair without actuating the valve pulling rope and observe the rear setting scale.



Staying underneath a raised, unsecured implement is prohibited. Keep away from the swivel area of the disc gangs (except for the operator).



The hydraulic cutting angle adjustment allows changing the cutting angle during operation in the field.

7.1.2 Mechanic adjustment of the cutting angle

Procedure for changing the cutting angle adjustment:

- Implement is in the raised position.
- Use the front upper links to manually turn the front pair of disc gang longer or shorter (Fig. 8/1) and observe the front setting scale.
- Use the rear upper links to manually turn the rear pair of disc gang longer or shorter (Fig. 8/1) and observe the front setting scale.



Fig. 7



Fig. 8

7.2 Working depth



The implement is in the raised position

The height adjustable rear mounted roller provides the accurate depth guidance. The resetting and/or twisting of the so-called eccentric pins allow a nearly infinitely variable setting of the working depth.

Reset the eccentric pin (Fig. 9/1) upwards to increase the working depth of the discs on the lowered implement.

Reset the eccentric pin downwards to reduce the working depth of the discs on the lowered implement.

The fine tuning of the working depth is achieved by twisting the eccentric pin from position 1 (shallow) up to position 4 (deep).

- Slacken clip pin.
- Insert the eccentric pin higher/lower and/or twist it.
- Retighten clip pin.



The chosen setting holes must coincide. The stops of the eccentric pins should also coincide regarding their numbers.



Fig. 9

7.3 Setting the scrapers on the wedge ring roller

The scrapers have been set by the factory. In order to adapt the setting to the operational conditions, proceed as follows:

- Slacken the bolted connection (Fig. 10/1),
- Adjust the scraper on the slotted hole,
- Retighten the bolted connection.



Fig. 10

7.4 Setting the scrapers on the discs

The scrapers have been set by the factory. In order to adapt the setting to the operational conditions, proceed as follows:

- Slacken the nut (Fig. 11/1),
- Adjust the scraper on the slotted hole,
- Retighten the nut.



Fig. 11

8. Operation

- Mount the disc harrow onto the tractor.
- Connect hydraulic system.
- Remove the guard canvass from the disc gangs, roll them up and deposit into the retainers provided on the rear of the frame. Secure with tensioning rubber bands.
- Raise the transport wheels so that the implement rests on the support rollers..
- On the Taurus 4000 the support rollers are folded out.
- Fold down side plates.
- The cutting angle adjustment of the front and rear disc segments has been done (see para. 7.1).
- The working depth has been set (see para. 7.2).
- Via the tractor hydraulics the implement is brought into a horizontal position.



Fig. 12



Do not back up with the implement in operational position.

8.1 Operation at the headlands

Prior to driving bends at the headlands raise the implement to avoid a lateral load of the tools.



Prior to driving sharp bends at the headlands raise the implement



Only lower the implement at the headland when the direction of the implement coincides with the operational direction.



8.2 Function faults

No.	Fault	Cause	Remedy
1	Ridges in the centre	Discs operate deeper at the rear than at the front	Bring implement into level position
		Disc angle clearly smaller at the front than at the rear	Adapt disc angle
	Ridges in the side areas	The following roller is not entirely folded down	Fold down roller completely
		Side plates are not attached	Mount side plates
		Side plates are not in operational position	Bring side plates into operational position. Improve adaptation to the working width by slotted hole adjustment.
		The cutting angles on the front and on the rear disc gangs clearly differ	Adapt angles
Arbeitstiefe/-Geschwindigkeit zu hoch	Correct		
2	Disc harrow does not penetrate – it just rolls on the ground	Cutting angle of the front disc gangs is too low	Reset angle
3	Traction power too high	Cutting angle of the disc gangs is too big	Adapt angle
		Working depth is too big	Set the roller shallower by using the eccentric pins and/or slightly lift the implement in the front via the tractor hydraulics
4	Differing cutting angles on the right and left hand side	Disc gangs have not been adjusted	Newly adjust the disc segments by moving the swivelling rams into the ram position. Then sett the selected angle again.
5	Differing working depth on the right and left hand side	Differing cutting angle on the right and left hand side	See No. 4
		The following roller has been unequally set with the aid of the eccentric pin on the left and right hand side and/or different resting points (figures) of the eccentric pins have been selected for the right and left hand side	Readjust settings
6	Formation of tracks by the tractor	Working depth/cutting angle too low	Readjust angle
	Formation of tracks by the wheels of the disc harrow	The lifting ram for the wheel axle has not been moved in its upper final position.	Hubzylinder in Endstellung bringen
		Wheels travel with implement	
7	Mixing effect is unsatisfactory	Operational speed and/of cutting angle of the discs is too low, discs are worn	Correct or readjust gehe angle

9. Cleaning, maintenance and repair



Repair-, maintenance- and cleaning operations as well as the remedy of function faults should principally be conducted with drive and engine stopped. Remove ignition key.



When conducting electrical welding operations on the tractor or on the mounted implement remove cable from the generator and the battery.



Check tyre pressure in regular intervals.



Check traffic light kit for proper function.



When removing sprung elements (disc gangs) observe the pre-tensioning. Use appropriate tools.

9.1 Hydraulic hoses

When starting and during operation the ordinary condition of the hoses should be checked by a skilled person.

If hoses are found defective in any way, exchange them immediately.

The maintenance of the checking intervals should be recorded by the operator.

Checking intervals

- For the first time when putting to operation
- Thereafter at least once a year

Checking points

- Check hose casing for damage (kinks, cuts and abrasion, trapping, rubbing points)
- Check whether the hose casing is brittle
- Check hose for deformation (bubbles, buckling, squeezing, separation of layers)
- Check for leakages
- Check the appropriate fitting of the hoses
- Check the hose for firm seating in the armature
- Check connecting armature for damage and deformation
- Check for corrosion between connecting armature and hose
- Do not exceed the permissible period of use.



9.1.1 Exchange intervals

- The period of use of any hydraulic hose circuit should not exceed 6 years (including a possible storing period of two years maximum).

9.1.2 Marking

Hydraulic hoses are marked as follows:

- Name of the manufacturer
- Date of production
- Maximum dynamic operational pressure

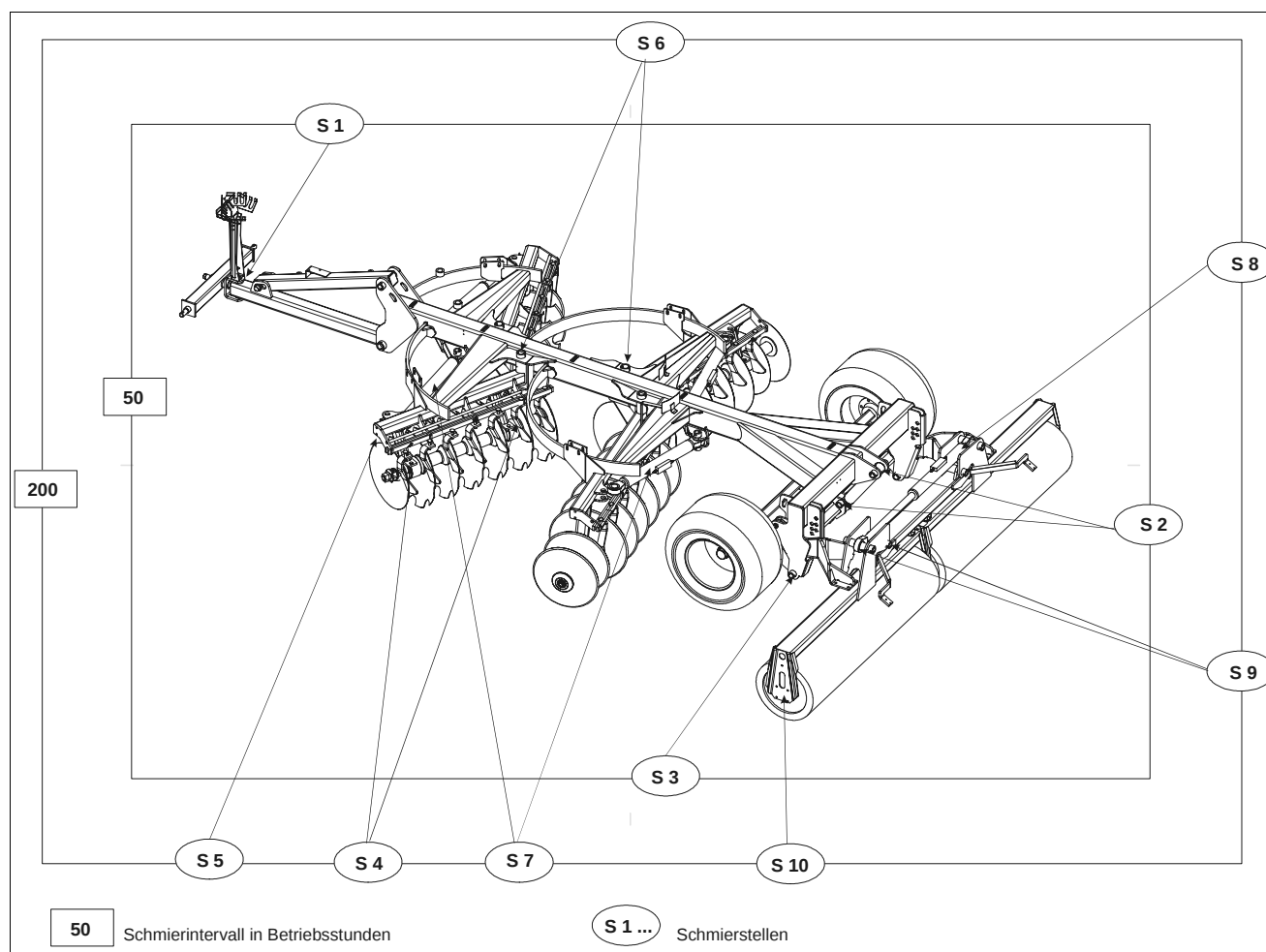
9.1.3 Please observe when fitting and removing

Affix the hydraulic hoses on the fixing points given by the manufacturer.

- Always ensure that hydraulic parts and connections are clean.
- The hoses have to be fitted in such a way that their natural placement and movement are not hindered.
- During operation the hoses should not be under tension, twisted or strained by external forces.
- The permissible bending radius must be observed.
- The hoses should not be painted.

9.2 Lubrication advice Taurus 4000/3000

Item	Description	Qty.	Lubricating interval	Lubricant	Comment
S1	Drawbar carrying pin	1	50 Operational hours	SWA 523	Grease nipple
S2	Lifting ram, axle, upper and lower joints	2	50 Operational hours	SWA 523	Grease nipple
S3	Axle, axle pin, greased	2	50 Operational hours	SWA 523	Grease nipple
S4	Disc bearing (disc gang)	8	200 Operational hours	SWA 523	Grease nipple
S5	Side plates: hinged pins	2	200 Operational hours	SWA 523	Grease
S6	Joint between disc carrier and frame	4	200 Operational hours	SWA 523	Grease nipple
S7	Hydraulic ram between disc carrier and frame	8	200 Operational hours	SWA 523/ ÖL R68	Grease nipple
S8	Swivel rams, joint eyes	2	200 Operational hours	SWA 523	Grease nipple
S9	Hinged bolts, following unit, joint sleeves	2	200 Operational hours	SWA 523	Grease
S10	Flange bearing following rollers	4 (2)	200 Operational hours	SWA 523	Grease nipple





10. Special optional equipment

10.1 Options at random

10.1.1 Wheels 11.5/80 – 15.3 10PR

Order No. 78230308

10.1.2 Wheels 15.0/55 – 17 10PR ET –85

Order No. 78230312

10.1.3 Wheels 19.0/45-17 10 PR ET 70

Order No. 1201112

10.1.4 Cage roller SW 401-2/520 w. folding frame and carrying arm, 4 m folded

Order No. 78240408

10.1.5 Cage roller 301/520, 3m rigid

Order No. 1233203

10.1.6 Cage roller SW 402/520, 4m rigid

Order No. 1233204

10.1.7 Wedge ring roller KWL 402/580, 4m rigid

Order No. 78240404

10.1.8 Wedge ring roller KWL 402 – 2/580, 3m folded

Order No. 78240424

10.1.9 Wedge ring roller KWL 302/580, 3m rigid

Order No. 78230303

**10.1.10 Carrying arms for fitting SW or KW,
rigid**

Order No. 78230309

10.2 Additional equipment

**10.2.1 Hydraulic cutting angle adjustment
T3000**

Order No. 78230307

**10.2.2 Hydraulic cutting angle adjustment
T4000/2, double acting connections**

Order No. 78240401

**10.2.3 Hydraulic cutting angle adjustment
T4000/3, double acting connections**

Order No. 78240405

10.2.4 1 set side plates 3m

Order No. 78230075

10.2.5 1 set side plates 4m

Order No. 78240170

10.2.6 Traffic light kit

Order No. 78240410









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