

AMAZONE

MOWING UNIT OF THE PROFIHOPPER Machine series PH04

OPERATING MANUAL

Mow, scarify, aerate in all conditions



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PREFACE

The Profihopper is a self-propelled implement for scarifying and mowing from the comprehensive product range of the AMAZONEN-WERKE, H. Dreyer GmbH & Co. KG.

This instruction manual is valid for the AMAZONE-Profihopper mowing unit.

In order to make full use of your newly purchased “AMAZONE-Profihoppers”, please carefully read and adhere to this operation manual before starting to operate your machine.

Especially adhere to the safety advice and warning symbols on your machine.

Ensure that all operators read this operation manual before they operate the machine.

Your Profihopper complies only with the regulations of the agricultural health and safety authorities when in case of repair original spare parts of AMAZONE are used for replacement.

1. Details about the machine

1.1 Range of operation

The AMAZONE-mowing unit has been designed for mowing and scarifying lawns, sportfields, parks etc. In Autumn it collects and chops fallen leaves.

1.2 Manufacturer

AMAZONE Machines Agricoles S.A.

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1.3 Conformity declaration

The cutting deck fulfils the requirements of the EU Guide Line machines 89/392/EC and the corresponding additional guide lines.

1.4 Details when making enquiries and ordering

When ordering options or spare parts, please always state the serial number of your Profihopper.



Safety requirements are only fulfilled when, in the event of repair, original AMAZONE spare parts are used. Using other parts may rule out the liability for resulting damage.

1.5 Technical data

Weight, mowing unit only :	240 kg
Weight, complete Profihopper :	955 kg empty

Working width: 1, 25 m, central working height adjustment, hydraulic lifting of the mowing unit

Collecting system:
cross and feed auger

Drive system:
Belts and angular box

Ground follow-up:
Front wheels 8 x 3.00-4-4PR with tyre sealant, rear support roller

2. Safety advice

This operators manual contains basic advice that should be observed when mounting, operating and maintaining the machine. Therefore, this operators manual must be read by the operator prior to use and must be made available to him.

All the safety advice given in this manual should be carefully observed and adhered to.

2.1 The risks of not adhering to the safety advice

Not adhering to the safety advice

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

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

- Failure of important functions.
- Failure of prescribed measures for maintenance and repair.
- Danger to persons by mechanical or chemical means.
- Danger to persons or the environment from leaking hydraulic oil or petrol.

2.2 Qualification of the operator

The AMAZONE-Profihopper may only be operated, maintained and repaired by persons, who are familiar with it and have been informed of the relevant danger.

2.3 Specification of “hints” in the operation manual

2.3.1 General danger symbol



Safety advice considered necessary to avoid the risk of personal injury is identified with the general danger symbol (according to DIN 4844-W9).

2.3.2 Attention symbol



Advice to avoid damage to the machine or working environment is identified with the Attention symbol.

2.3.3 Hint symbol



Advice regarding the machine's specific operating functions which should be followed for a faultless performance are identified with the hint symbol:

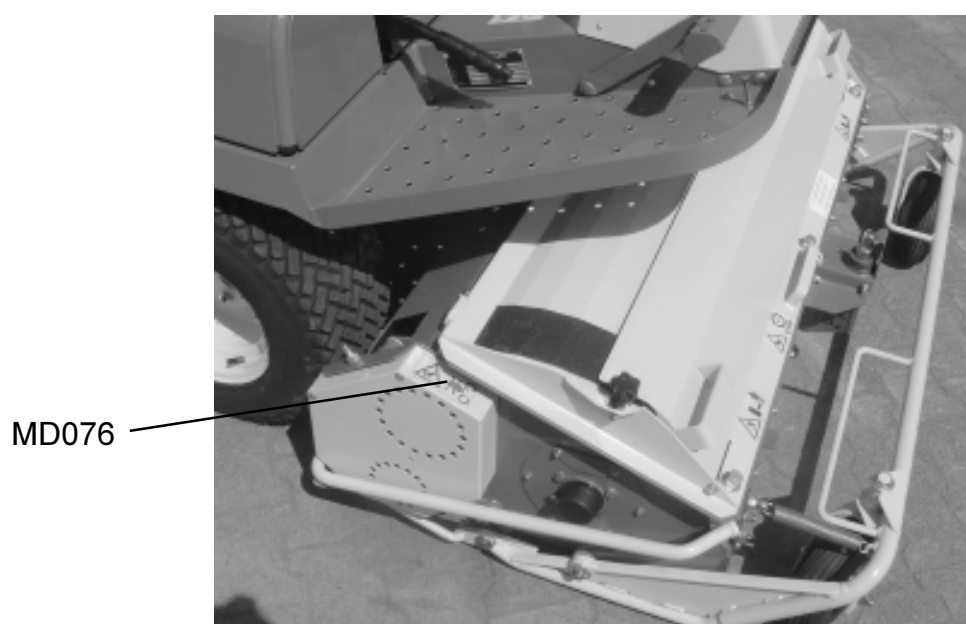
2.3.4 Warning pictographs and hint symbols on the machine

- The warning pictographs indicate dangerous points on the machine. These pictographs should always be observed for safe operation of the machine. Warning pictographs always appear with safety/warning symbols.
- The hint symbols indicate specific points that have to be observed to ensure maximum performance.
- Strictly observe all warning pictographs and hint symbols!
- Please pass on all safety advice to other users!
- Always keep all warning pictographs and hint signs clean and legible.

- Please replace damaged symbols. These can be ordered from your dealer (picture-number = Order-number).
- The illustrations 1a and 1b show the display points for warning pictographs and hint signs. Please refer to the following pages for relevant explanations.



ill. 1a



ill. 1b

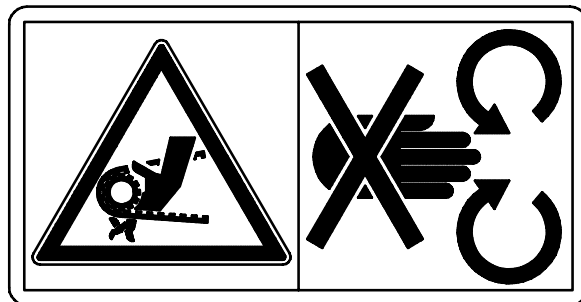


MD075

Fig. No.: MD075

Explanation :

Do not stay within the zone of spinning mowing units!
Do not touch moving implement parts!
Await their absolute standstill!
Wait until all machine components have completely stopped before touching them!

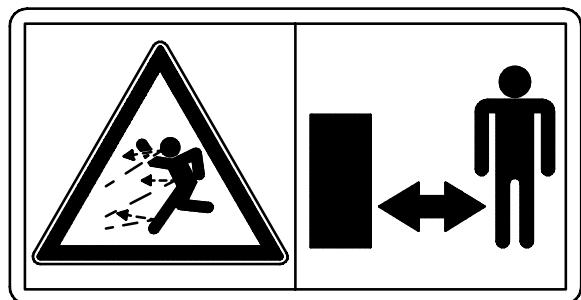


MD076

Fig. No.: MD076

Explanation :

Only start to operate your machine with all guards fitted!
Do not open or remove safety shields while engine is running!
Before removing the guard, stop the engine and remove the ignition key.

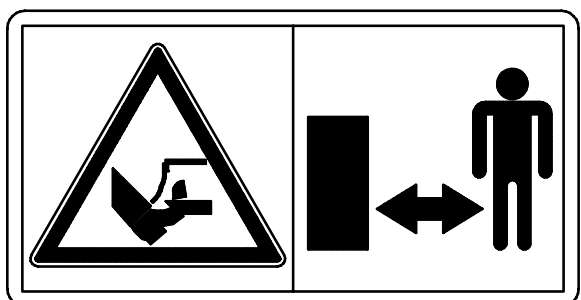


MD079

Fig. No.: MD079

Explanation :

Keep a safe distance from the machine while the mowing unit is running!



MD087

Fig. No.: MD087

Explanation:

Keep clear of the cutting rotor while the machine is running !
Stay clear of mower knife area as long as engine is running with cutting rotor connected!

2.4 Safety conscious operation

Besides the safety advice in this operators manual, the national and generally accepted operational safety and accident prevention regulations of the authorised trade association are binding.

The safety advice indicated on the machine stickers must be observed.

2.5 Safety advice for the operator

2.5.1 General safety and accident prevention advice



BASIC PRINCIPLE!

Before operating your machine, you must carefully read the operating manual and follow the stipulated instructions.

Always check traffic and operational safety before putting the machine into operation!

1. Adhere to the general health and safety precautions as well as to the hints in this instruction manual.
2. Follow the warning and hint signs fixed to the machine. They are there for your safety.
3. Become acquainted with all the machine controls before operating the machine. Do not wait until you are using the machine.
4. While working the operator of the machine must wear close-fitting and appropriate safety accessories.
5. Before commencing operation, check to see that nobody is in the way (particularly children) and that you have good all round visibility.

6. Standing on the machine, or carrying passengers, during operation or transport is not allowed.
7. Do not let anybody stand near the machine when operating.
8. Reverse with caution, beware of children!
9. Avoid sudden turning.
10. Do not use on steep hills.
11. Before dismounting the machine, apply the parking brake, stop the engine and remove the ignition key!
12. Being constantly exposed to noise nuisances can damage the hearing aid and even cause deafness.
Therefore it is absolutely necessary for the operator of the machine to wear an adequate soundproof protection (ear protectors or soundproof helmet).
Safe operation of the machine requires the whole attention of the operator: so it is necessary to avoid listening music or radio with ear- or headphones while working.

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

1. Repair, maintenance, cleaning operations and adjustments should be conducted with the machine stationary, drives and engine switched off and the ignition key removed.
2. When carrying out maintenance work on the hopper, ensure the ram support are locked!
3. Dispose of all oil, grease and filters in a responsible manner!
4. Disconnect the power supply before working on the electrical system!
5. Before conducting electric welding, remove the leads from the alternator and battery.
6. Use only genuine **AMAZONE spare parts**. Any spare parts fitted must meet with the manufacturers specification!

7. Do not open the radiator cap nor the expansion tank filler cap whilst the engine is running or the radiator still hot. Wait until the engine has completely cooled down.
8. Warning! - The hydraulic system is under high pressure.
9. When connecting hydraulic rams the prescribed connection of the hydraulic hoses has to be noted.
10. Regularly check hydraulic hoses for signs of ageing or damage and replace where necessary. Ensure replacement hoses are of an equal specification.
11. When searching for leaks in the hydraulic system – avoid exposing skin to possible contact.
12. Liquids (hydraulic oil) under high pressure may penetrate the skin and cause severe injuries. In case of injury seek medical attention immediately as there is a risk of infection.
13. Before commencing work on the hydraulic system, lower the implement, de-pressurise the system and switch off the engine.
14. No hose circuit should be used for more than six years, including a maximum of two years storage. Even hoses stored and used correctly will age. Deviations from these guide lines may be made according to experience and an assessment of the risk. For hoses made of thermo plastics, other guide lines may prevail.

3. On receipt of the machine

Please check for damage or missing parts upon receipt of the mowing unit or the machine. Only immediate claim to the trailer company with mention of the damage on the delivery note can lead to the replacement of the damaged parts.

Check whether all parts listed on the international consignment note and/or delivery slip are supplied.

Before commencing work, remove all packing material, wire, etc. and check that all lubrication points are well supplied with grease, oil, etc..

4 Cutting and scarifying blades

4.1 Assembly



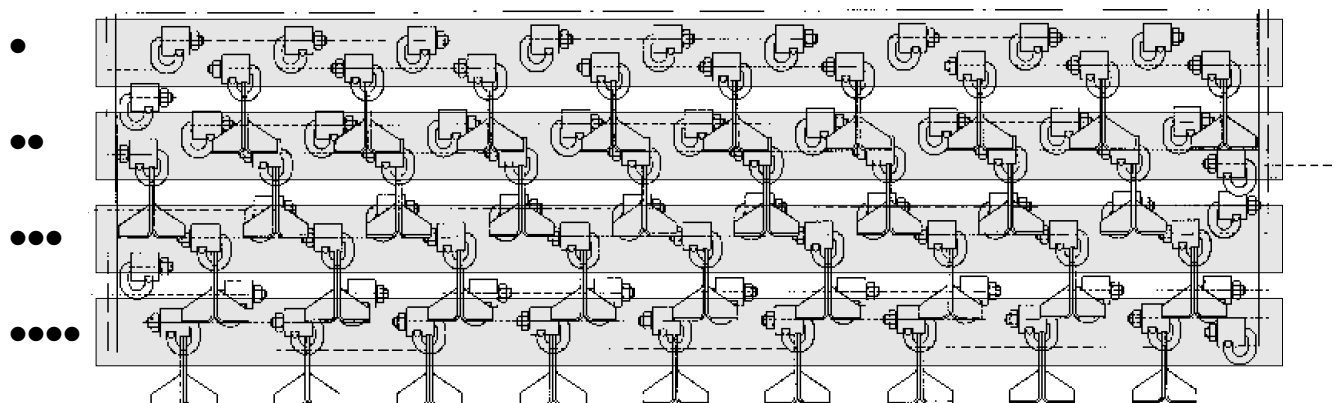
BLADE SELECTION	Cutting	Wing blade	Wing blade sharpened (standard)	Scarifying blade	Scarifying blade and short wing blade
Mowing lawns		● ●	● ● ●		
Mowing fairways		● ●	● ● ●		
Mowing parks		● ● ●			
Mowing public grassland areas		● ● ●	● ●		
Mowing flower residue and environmental sites	● ●	● ● ●			
Leaf collection		● ● ●			
Scarifying				● ● ●	● ● ●

● ● ● Very good results

● ● Good results

MOWING

The wing and scarifying blades can be mounted in 4 different ways. 36 pairs of sharpened wing blades (no.: 991628) are fitted as standard on the Profihopper. These knives are mounted on half of the hook-bolts rows from ● to ●●● (see drawing A).



Drawing A

↓ Driving direction

ATTENTION !

Wing blades should be fitted to the correct hooks. These hooks are open to the right hand side of the cutting rotor (in direction of travel).



9 pairs of knives x 4 rows = 36 pairs of knives / rotor

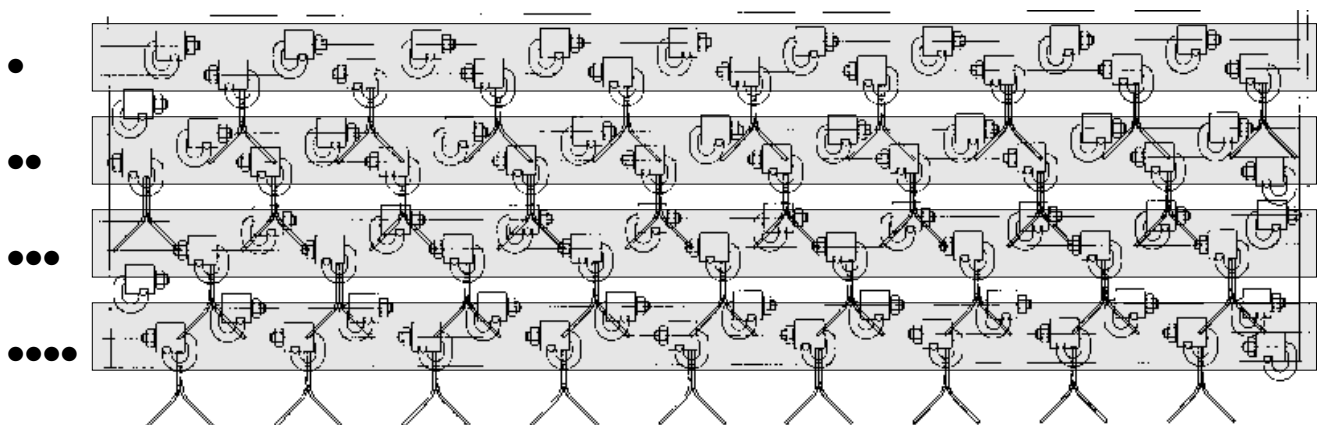
The hooks that are open to the left hand side of the cutting rotor should only be used for the addition of scarifying knives needed when narrow scarifying (see page 17).

Following the marks on the rotor the configuration is easily arranged. The blades are easily swapped over without tools by simply hooking the blades on the hook-bolts.

With its variable blade configuration the Profihopper can mow any kind of lawn, even in rainy weather.

If required the flail knives can be replaced with "Y"-shaped mowing knives (72 pieces, order-No. 1205200). The machine requires less power with these knives, however, its collection performance is reduced.

The "Y"- knives are hooked onto the hook-bolts in the same way (see below drawing A and B). Depending on conditions the rotor speed may need to be adjusted slightly.



↓ Driving direction

Drawing B

SCARIFYING

The Profihopper can also scarify lawns and collect the debris.

Two ways of scarifying are provided:

- **wide scarifying, knives spacing 33mm,**

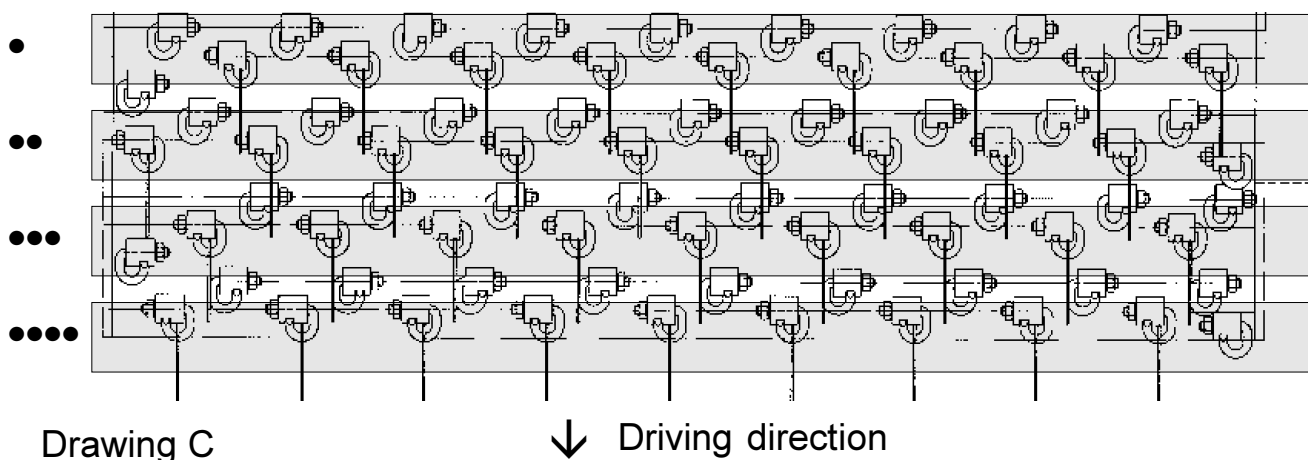
Half of the hook-bolts are therefore equipped with 36 pairs of scarifying knives (n°: 8356000 (3 mm) or 8746000 (2 mm)). These knives are only to be fitted on the hooks which are mounted left to right (driving direction) (see drawing C).

9 knives X 4 rows = 36 knives / rotor. This allows deeper work without affecting the turf too much.



ATTENTION:

Never mix used knives with new knives: this would cause an unbalance rotor!



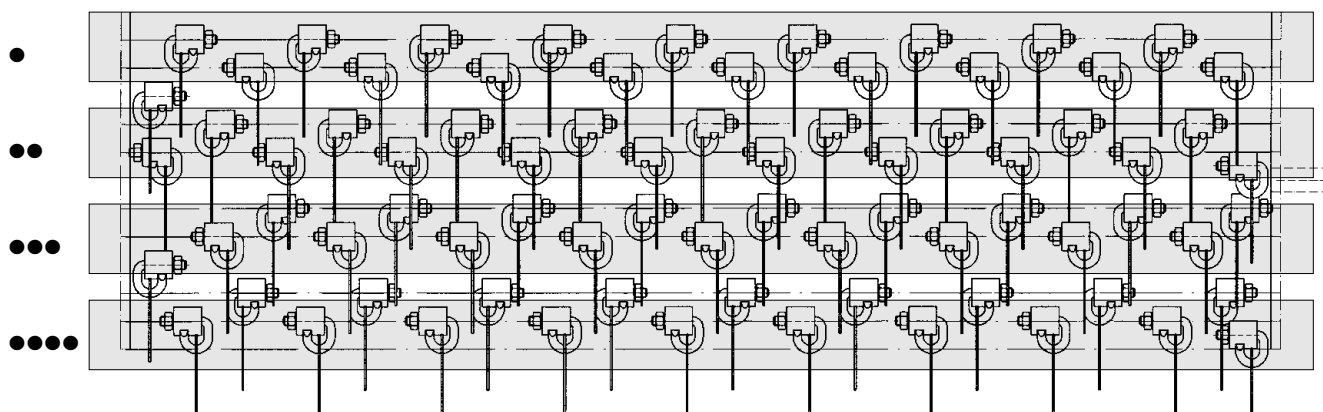
Drawing C

↓ Driving direction

- **narrow scarifying, knives spacing 16mm,**

All hook-bolts on the rotor have to be equipped with scarifying knives (76 knives, see drawing below).

This method of scarifying is more aggressive and suited for regeneration work of heavily felted lawn (moss) in spring.



Drawing D

↓ Driving direction

ATTENTION:

The rotor must be equipped absolutely as described on the drawings A, B, C and D.

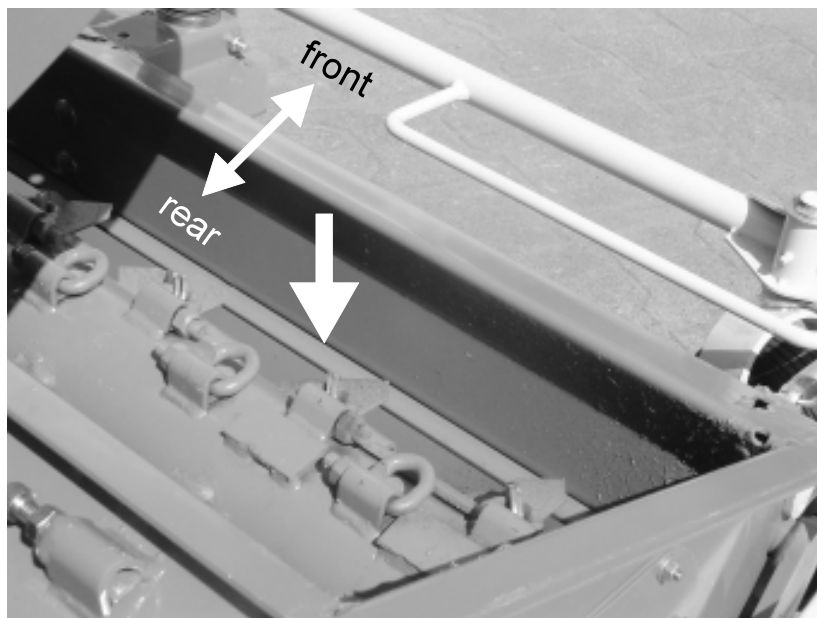
Missing flails or wrong placed flails will provide an unbalance of the rotor which will cause failure and damages on the machine.

4.2 Adjustment of the stripping plate

The so-called “stripping plate” is placed on the front side of the mowing unit (ill. 2) and can be set differently allowing optimum cutting quality of the mown material when mowing and scarifying. The stripping plate is set for scarifying when leaving the factory.

Settings possibilities:

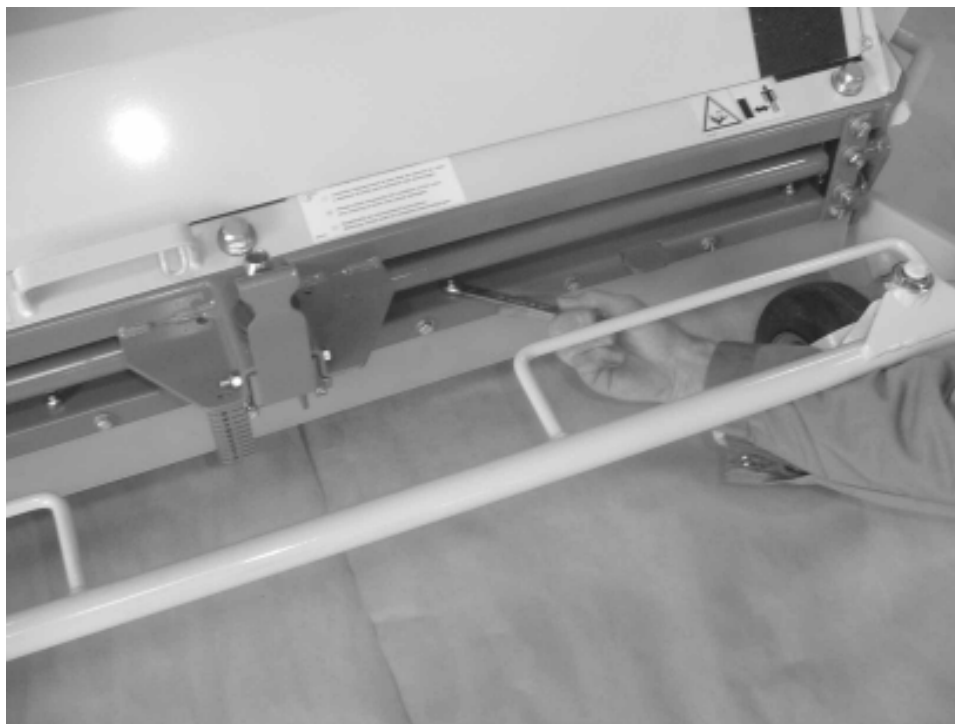
- Scarifying Push plate to the front until stop
- Mowing Push plate to the rear until stop



ill.2

With scarifying knives, the stripper plate must obligatorily be set forward.

Prior to setting the stripping plate slacken the four fixing bolts (ill. 3).



ill. 3

The plate can be pushed forward to the rotor with the help of a mallet (ill. 4)



ill. 4

4.3 Setting the cutting height

To set the cutting height, proceed as follows:

- Pull the release catch back and remove the adjusting handle (ill. 5a),
- Place the handle on the height adjuster and turn (ill. 5b),
- Set height (ill. 5c),
- Replace the adjusting handle making sure the release catch is locked.



ill. 5 a



ill. 5 b

The mowing unit is equipped with a cutting height indicator (in cm).



ill. 5c

4.4 Collecting system

Grass cuttings, leaves etc. are collected and, by means of the worm auger, delivered into the hopper where it is compacted.



CAUTION!

When one of both augers is blocked, the clutch starts to work: a specific noise is audible and the transmission of the mowing deck must be immediately released otherwise the clutch can be damaged!



ATTENTION!

Do not open the mowing unit unless the machine has come to a total standstill!

The mowing unit mounted on a Profihopper series 04 is equipped with an automatic cut-out system (see power unit operating manual).

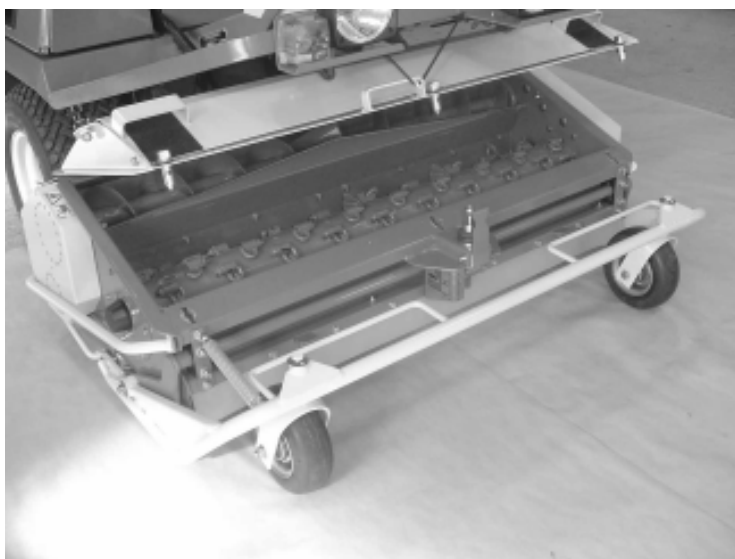
When the worm augers declutches during mowing, please proceed as follows:

Cleaning the lateral worm auger:

- Switch off mowing unit
- Stop engine
- Open the hood of the mowing unit by using the hand crank (ill. 6)
- Hook the hood into the fixing loop (ill. 7).



ill. 6



ill. 7

- Open the protective cover of the V-belt guard (ill. 8)
- Fix hand crank to the end of the lateral worm auger (ill. 9)
- By turning the worm auger loosen and remove foreign particles.

ill. 8



ill. 9



Cleaning the longitudinal worm auger:

- Lift the hopper into its highest position
- Apply safety support (ill. 10)



ill.10



ATTENTION!

While doing any work underneath the hopper, the safety support must be applied!

This way, unintended lowering of the hopper is avoided.

- Loosen and remove foreign particles by turning the worm auger (ill. 11)



ill. 11

- Remove safety support
- Lower the hopper into operational position
- Shut hood of mowing unit and lock.

ATTENTION!



Before starting to operate again, ensure that the hood of the mowing unit has been locked properly. Defective locking bolts should be exchanged immediately!

Now, you may continue to operate.

4.5 Mulching

The Profihopper is able to mow and chop without collecting (mulching).

The mulch flap is removed from its storage position on top of the cutting deck cover and inserted inside the cutting deck in front of the cross auger. This flap stops material entering the cross auger (ill. 12) and is thus it is chopped and distributed back on the ground.



ill. 12

5. Maintenance (see maintenance schedule p 34)



ATTENTION!

Stop the engine before any maintenance work. Apply parking brake and remove ignition key!

5.1 Cleaning



ATTENTION!

Never use a high pressure cleaner to clean the transmission elements.

- For opening the hood of the mowing unit,
- Clean only the rotor box with the aid of a high pressure cleaner. Ensure that after cleaning the dirty water is entirely drained off the worm auger system. Clean the draining bores. **After each cleaning with high pressure water, grease the mowing unit (especially the bearings).**

5.2 Care of the rotor



Missing mowing knives or incorrect configuration of the knives will cause a heavy balance error and thus damage the machine!

Always ensure the correct configuration of the knives.

You will find some spare knives in the tool box. Should the rotor vibrate heavily, in spite of a correct knife configuration, please contact your service centre.

5.3 Greasing points

In order to ensure that your mower always operates optimally, the following points have to be greased once a week or after a thorough cleaning:

Mowing unit

- Clutch (**every 150 working hours**) (ill. 13a)



CAUTION!

Grease surplus can easily reach and damage the belt transmission located under the belts drive guard (ill. 13b)

- Bearings of the front wheels (ill. 14/1)
- Joints of the height adjustment frame (ill. 14/2)
- Rear roller bearings (ill. 14/3)
- Universal ball joints of the coupling arms (ill. 15 a+b)



ill. 13a



ill. 13b



ill. 14

1

2

3



ill. 15a



ill. 15b

- Bearings on the mowing unit drive shaft (ill. 16 a+b).

There are two grease nipples on the drive shaft's bearings.

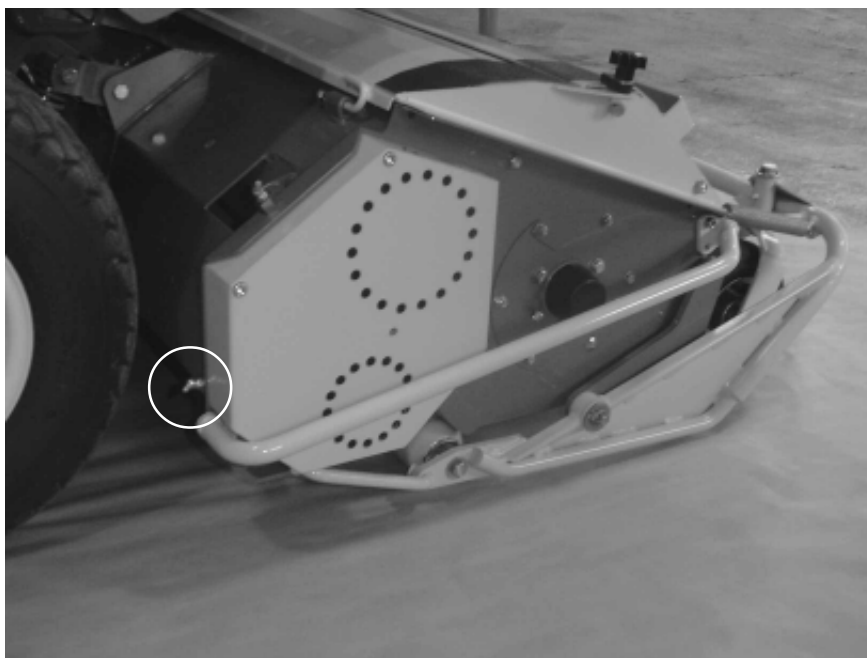


ill. 16a



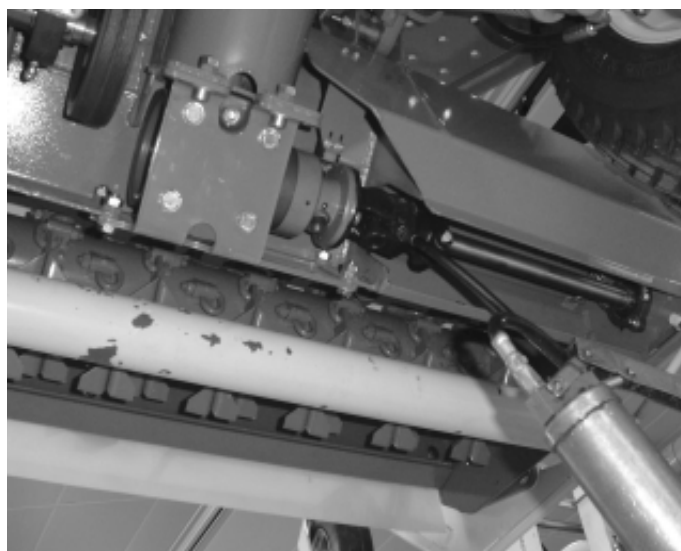
ill. 16b

- Bearings of the transmission shaft of the second auger (ill. 17)



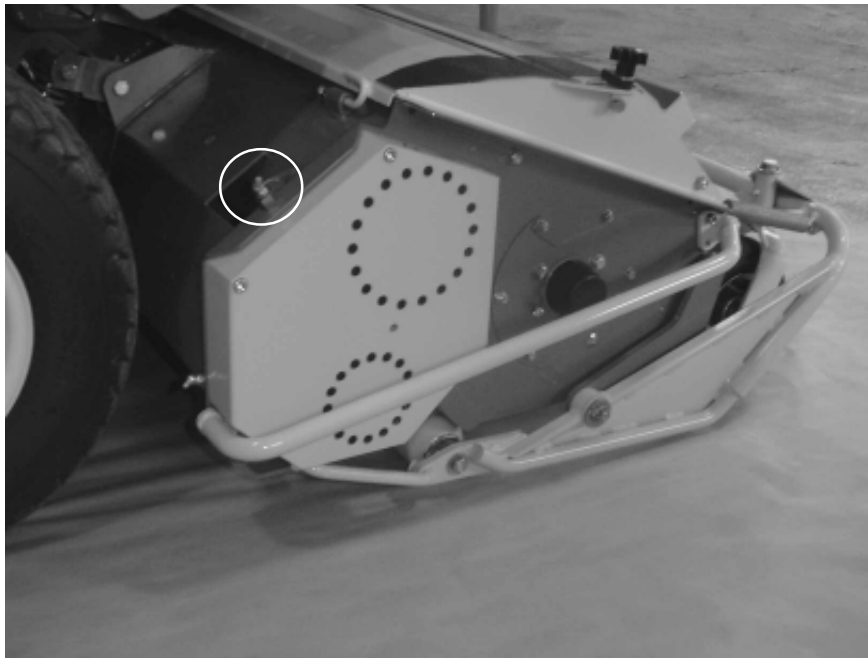
ill. 17

- Joint of the transmission shaft of the second auger (ill. 18)



ill. 18

- Bearings of the cross auger (ill. 19 + 20)



ill. 19

- Bearings of the rotor (ill. 20+ ill. 21)



b (= bearings
of the cross
auger)

a (= rotor)

ill.20



ill. 21

- High adjustment (ill. 22)



ill. 22

All other belt drives are self-tensioning but ex-works they are pretensioned according to following values :

TRANSMISSION	BELTS	STATIQUE PRE-TENSIONING
Mowing unit (main shaft - mowing unit)	2	First connection 550N After running in 400N
Longitudinal screw transmission	3	First connection 263N After running in 225N
Transversal screw rotor transmission	5	First connection 258N After running in 220N

5.4 Longer pauses in operation, storing over winter

1. Thoroughly clean the mowing unit.
2. Carry out all the necessary greasing.
3. Check V-belts condition. If they have to be replaced, please contact your workshop service.
4. Store the mowing unit in a dry place.

NOTES

This image shows a full page of a handwriting practice worksheet. It consists of multiple rows of horizontal dotted lines spaced evenly down the page, providing a guide for letter height and placement. The background is plain white, and there are no margins or additional markings.