

# Operating instructions for the **AMAZONE** **Groundkeeper** **GH 120/135/150/180**



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# **Operating Instructions**

## **for the**

# **AMAZONE**

## **Groundkeeper GH**

With the AMAZONE Groundkeeper you have purchased a unit for all-season management of public parks, athletic grounds, paddocks, golf courses or other greens.

Correct operation of this equipment is essential to optimise its safe use and produce consistently excellent results.

**Therefore we ask you to read through these operating instructions carefully and to observe them, as claims for damages will be rejected in case of incorrect operation.**

Please enter the machine type and the serial number of your Groundkeeper in the table below. Both indications are to be found on the name plate attached on the right front side of the machine frame. The serial number is, in addition, imprinted on the outer surface of the right frame side part.

**AMAZONE Groundkeeper GH** \_\_\_\_\_

**Serial No.:** \_\_\_\_\_

In case of ordering spare parts or making complaints please always indicate the machine type and the serial No.

Essential safety requirements and warranty assurance can only be achieved by fitting original Amazone spare parts.

**Before commissioning, read through the operating instructions and observe the safety warnings!**

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## 1.0 Machine Details

### 1.1 Manufacturer

Amazone Machines Agricoles S. A.  
F-57602 Forbach/France  
Tel.: 87 87 63 08  
Fax: 87 85 53 23

### 1.2 Technical Data

Type GH	120	135	150	180
Working width	1,20 m	1,35 m	1,50 m	1,80 m
Total width	1,55 m	1,70 m	1,85 m	2,15 m
Weight	320 kg	350 kg	380 kg	430 kg
Tyre equipment (front)	260 x 85	260 x 85	260 x 85	260 x 85
Air pressure (front)	1,5 bar	1,5 bar	1,5 bar	1,5 bar
Total height	1,60 m	1,60 m	1,60 m	1,60 m
Hopper capacity	840 l	950 l	1060 l	1280 l

## 2.0 Important Marks

### 2.1 Industrial Safety Symbol



This symbol is used for all industrial safety instructions indicating a danger to life and limb of persons. Follow these instructions and be especially careful in these cases. Hand over all industrial safety instructions also to other users. Besides the notes in these operating instructions, the generally applicable safety regulations and rules for the prevention of accidents have to be taken into account.

### 2.2 Caution Symbol



This symbol is to be found at those places requiring particular attention to ensure that the rules, provisions, instructions and the correct sequence of operations are observed and that damage to the unit is prevented.

### 2.3 Reference Symbol



This symbol marks the special features of the machine which have to be observed to ensure proper operation.

## 2.4 Warning Symbols and Signs

The warning symbols serve the purpose of providing safety for all persons working with the Groundkeeper.

The signs mark special features of the machine which have to be observed to ensure the correct functioning of the machine.

In the figures, the danger zones are pointed out. For explanations of the warning symbols please refer to the following pages.

1. Strictly follow the warning symbols and signs!
2. Hand over all safety instructions also to other users!
3. Keep the warning symbols and the signs on the Groundkeeper in a good condition! Replace missing or damaged warning symbols and signs (Figure No. = Order No.)!



Figure No. MD075

#### Explanation:

Do not step near rotating rotor!

Do not touch any moving machine parts! Wait until they have fully come to a standstill!

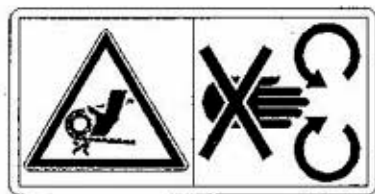


Figure No. MD076

#### Explanation:

Operate the unit only with protecting in place !

Do not open or remove the protecting device when the motor is running!

Before removing the protecting device switch off the power take-off shaft, turn off the motor and take out the ignition key!

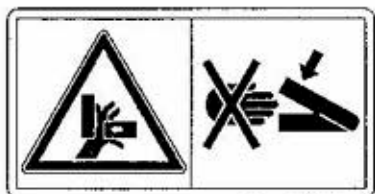


Figure No. MD078

#### Explanation:

Expel persons from the danger zone!

Never reach into the bruising danger zone as long as any parts may be moving there!

### 2.5 Take-Over of the Machine

Upon receipt of the machine please find out whether any transport damages have occurred or whether any parts are missing! Only immediate complaints addressed to the forwarding company will result in payments for damages. Please check whether all parts listed on the delivery note are available.

Before commissioning, completely remove the packing including wires and check the lubrication (PTO shaft).

### 2.6 Designated use

The AMAZONE Groundkeeper is exclusively designed for being used in the management of public parks and greens (designated use).

Every other usage beyond that is not considered due. The manufacturer is not responsible for damages resulting therefrom; the risk incurred shall only be borne by the user.

A designated use also includes the observance of the operating, maintenance and service conditions prescribed by the manufacturer as well as the exclusive utilization of **Original AMAZONE Spare Parts**.

The AMAZONE Groundkeeper may only be used, maintained and repaired by persons who are familiar with it and are informed about the dangers.

The pertinent rules for the prevention of accidents as well as any other generally approved regulations with regard to health and safety and road traffic have to be observed and the safety instructions indicated on the machine labels have to be strictly adhered to.

The liability of the manufacturer is excluded for damages resulting from unauthorized modifications of the machine.



## 3.0 General Safety Regulations and Rules for the Prevention of Accidents

#### Basic Rule:

*Before every commissioning, check the unit for its safety on the roads and in operation*

1. Besides the remarks made in these operating instructions observe the generally applicable safety regulations and rules for the prevention of accidents.
2. The warning symbols and signs attached provide important instructions for a safe operation; follow them for your personal safety.
3. Observe the respective regulations when using public roads.
4. Make yourself familiar with all facilities and operating elements as well as their functions before you start to work. Afterwards, when the machine is already in operation, it will be too late to do so.
5. The user's clothes shall fit tightly. Avoid loosely worn clothes.
6. Check the immediate surroundings before starting and before commissioning. (Children!) Ensure of a sufficient visibility.
7. Passengers are not allowed on the unit at any time.
8. Couple the units correctly and to the appropriate type and size of power unit.
9. Special care is necessary when coupling and uncoupling units to or from the tractor.
10. Place the supports in the corresponding position when mounting or dismounting. (Stability!)
11. Always install the weights according to the regulations at the fixing points provided for this purpose!
12. Comply with the axle weight limits of the tractor (refer to the motor vehicle registration book).
13. Watch for outside transport dimensions according to the motor vehicle construction and use regulation!



14. Check and install transport equipment such as lighting, warning devices and protecting devices, if any.
15. Release ropes for quick hitches must hang loosely and must not be able to be released automatically when being used in a low position.
16. Never leave the driver's position while the unit is in motion.
17. Road behaviour, steering and braking action are influenced by mounted or coupled units and by the loading weight. Therefore take care that the steering and braking action is sufficient.
18. When the Groundkeeper is lifted the front axle of the tractor is relieved differently depending on the respective size. Watch for compliance with the required front axle weight (20 % of the tractor weight).
19. In cornering, the wide radial range and/or the centrifugal mass of the unit have to be taken into account. To prevent the unit from swinging back and forth, brace the lower link arms of the three-point hydraulic system.
20. Only put the unit into operation if all protecting devices have been fixed in their protective positions.
21. Keep off the working area.
22. Do not stay in the turning and swivelling zone of the unit.
23. Hydraulic folding frames may only be activated if no persons stay in the swivelling zone.
24. There are crush and shearing points at parts activated by external forces (e. g. hydraulic actuation).
25. Before leaving the tractor put the unit down on the floor, turn off the motor and take out the ignition key.
26. Nobody is allowed to stay between the tractor and the unit without the vehicle being secured against rolling away by the parking brake and/or by wheel chocks.
27. The trailing device serves to couple operating units and two-axle trailers if:-
  - a running speed of max. **25 km/h** is not exceeded;
  - the trailer has an overrunning brake or a braking system which can be applied by the driver of the tractive machine;
  - the admissible total weight of the trailer is not more than **1.25-fold** the admissible total weight of the tractive machine, however, **5 t** at most.

**It is forbidden to tow two-wheel trailers with rear mounting units.**

### 3.1 Mounted Units

1. Before mounting and dismounting of units to the three-point linkage put the operating control into the position where unintentional lifting or lowering are excluded.
2. The mounting categories for tractor and unit in the case of a three-point linkage must by all means be in conformity with each other or be adjusted.

3. In the area of the three-point linkage there is danger of injuries by crushing and shearing points.
4. Do not step between tractor and unit when operating the external control for the three-point linkage.
5. When the unit is in transport position, always take care that the tractor three-point linkage is sufficiently controlled laterally.
6. For road transports with lifted unit, the operating lever must be locked against lowering.
7. Couple/mount the units according to the regulations. Check functioning of the trailer braking system. Comply with the manufacturer's instructions.
8. Operating units shall only be transported and driven with the tractors provided for this purpose.

### 3.2 Power Take-Off

1. All PTO shafts used must be in conformity with those stipulated by the manufacturer and be equipped with protecting devices complying with the regulations.
2. Protective tube and protective guard of the PTO shaft as well as power take-off protection - on the implement input shaft - must be mounted and be in a proper condition.
3. For PTO shafts, the prescribed tube overlap in transport and working positions have to be observed. (Comply with the operating instructions of the PTO shaft manufacturer!)
4. The PTO shaft shall only be mounted and dismounted when the power take-off shaft is switched off, the motor is turned off and the ignition key is taken out.
5. Always watch for correct mounting and securing of PTO shaft.
6. Secure PTO shaft protection against following by suspending the chains.
7. Make sure before switching the power take-off shaft on that the selected power take-off speed of the tractor is in accordance with the admissible power take-off speed of the unit (operating speed). As a rule, the power take-off speed is 540 rpm.
8. Careful coupling saves tractor and unit.
9. When the ground driven power take-off shaft is used bear in mind that the number of revolutions is dependent upon the running speed and that the sense of rotation is reversed when backing up.
10. Before switching the power take-off shaft on take care that nobody is in the danger zone of the unit.
11. Never switch the power take-off shaft on when the motor is turned off.
12. When the power take-off shaft is operated nobody is allowed to stay in the area of the swivelling power take-off shaft.
13. Always switch the power take-off shaft off if the operating angles are too large and if it is no longer needed.

14. Caution! After the power take-off shaft has been switched off there is danger by after-running centrifugal forces. Keep clear of the unit during this period. Operations at the unit may only be carried out after the unit has come to a total standstill.
15. The power take-off driven unit or the PTO shaft may only be cleaned, greased or adjusted when the power take-off shaft is switched off, the motor is turned off and the ignition key is taken out.
16. Deposit the uncoupled PTO shaft on the holding device provided for this purpose.
17. After the PTO shaft has been dismantled attach protective covering on power take-off stub.
18. Damages are to be repaired immediately before the unit is operated again.

### 3.3 Hydraulic System

1. The hydraulic system is under high pressure.
2. When connecting the hydraulic cylinders and motors carefully connect the hydraulic hoses.
3. When connecting the hydraulic hoses to the hydraulic system of the tractor see to it that the hydraulic system is depressurized both on the tractor side and on the unit side.
4. Coupling sockets and plugs have to be marked for hydraulic functional connections between tractor and unit to exclude misoperations. When the connections are interchanged, the function is reverse (e. g. lifting/lowering) - **Danger of Accidents!**
5. Regularly check hydraulic hose pipes and exchange them when showing signs of damage or ageing! The replacement pipes must be in accordance with the technical requirements stipulated by the unit manufacturer.
6. When searching for leakages use appropriate devices on account of the danger of injuries.
7. Liquids being discharged under high pressure (hydraulic oil) may penetrate the skin and cause heavy injuries. Should any injuries have occurred immediately consult a doctor.
8. Before any works at the hydraulic system are carried out, put the unit down, depressurize the system and switch off the motor and remove ignition key.
9. Hose pipes should not be used for more than six years, including a storage period of max. 2 years, if any. Hoses and hose connections are subject to natural ageing, even if properly stored and stressed within the permissible range; therefore their period of storage and usage is limited. Unlike this, the period of usage may be fixed according to empirical values, with particular consideration of the endangering potential. For hoses and hose pipes of thermoplastic construction other approximate values may be decisive.

### 3.4 General Safety Regulations and Rules for the Prevention of Accidents for Maintenance, Repair and Servicing

1. On principle, only carry out repair, maintenance and cleaning works and only eliminate malfunctions when the drive is switched off and the motor is at a standstill. Take out the ignition key.
2. Regularly check nuts and bolts for tightness - for the first time after 3-4 bin fillings - and tighten, if necessary.
3. When maintenance works are carried out with the unit being lifted, always secure it by appropriate supporting elements.
4. Duly dispose of oils, greases and filters according to Health and Safety regulations.
5. Before any works on the electrical installation are carried out the power supply has to be cut off.
6. When carrying out electrical welding on the tractor or implement, remove cable to battery and generator.
7. **Essential!** Spare parts must at least meet the stipulated technical requirements of the unit manufacturer. This is the case, for instance, if **Original** spare parts are used.




### 4.0 Mounting and Dismounting of the Machine at the Rear Three-Point Linkage of the Tractor

To ensure safe mounting and dismounting of the machine to and from the tractor (also comply with chapter 3.1) it is advisable to proceed in the following order:

- Attach the PTO shaft on the free shaft end at the machine. (If PTO shafts with free-wheel are used, the free-wheel must be attached on the machine side.)
- Attach the lower links to the implements lower link pins of the tractor.
- Ensure securing lynch pins are fitted.
- Attach the PTO shaft on the power take-off shaft of the tractor.
- (**Attention:** Watch for the correct length of the PTO shaft as otherwise damage may occur to the tractor or to the angular gear of the machine when the machine is lifted!)
- Connect the top link.
- Adjust the top link until the front wheels of the machine are well placed on the floor.
- Insert hydraulic pipe for hydraulic hopper emptying (accessories).

To uncouple the machine you can proceed in reverse order.

Should you be in possession of a trailed Groundkeeper GHT please take into account the additional instructions given in Chapter 9.

 **Expel persons from the danger zone behind and under the machine since the machine can swing out backwards if the top link is unscrewed or fails completely.**


*The lowering time of the filled unit must be at least two seconds. Set lowering throttle in hydraulic system, if any.*

#### 4.1 PTO shaft

**Only use the PTO shaft prescribed by the manufacturer:**

- Walterscheid W 2200 SD 15460 F5/1R with free-wheel for tractors up to 40 HP max.
- Walterscheid W 2200 SD 15460 without free-wheel for tractors up to 40 HP max.
- Walterscheid W 2400 SD 25560 F5/1R with free-wheel for tractors from 40 HP onwards
- Walterscheid W 2400 SD 25560 without free-wheel for tractors from 40 HP onwards

 **Note:**

 Should you have a tractor without independent power take-off, you must use a PTO shaft with free-wheel. Otherwise, the tractor is kept in motion by the large centrifugal force of the rotor in spite of a disengaged clutch.

#### 4.2 Mounting and Adaptation of the PTO shaft

##### 4.2.1 Mounting of the PTO shaft

**Clean the gear input shaft at the machine beforehand and always attach the PTO shaft with grease on the input shaft!**

##### 4.2.2 Adaptation of the PTO shaft during First Installation

*During first installation adapt the PTO shaft to the tractor according to Fig. 1. As this adaptation is only valid for this particular type of tractor check or repeat PTO shaft adaptation when the type of tractor is changed.*

During first installation attach the other PTO shaft half on the power take-off profile of the tractor without fitting the PTO shaft guards into each other.

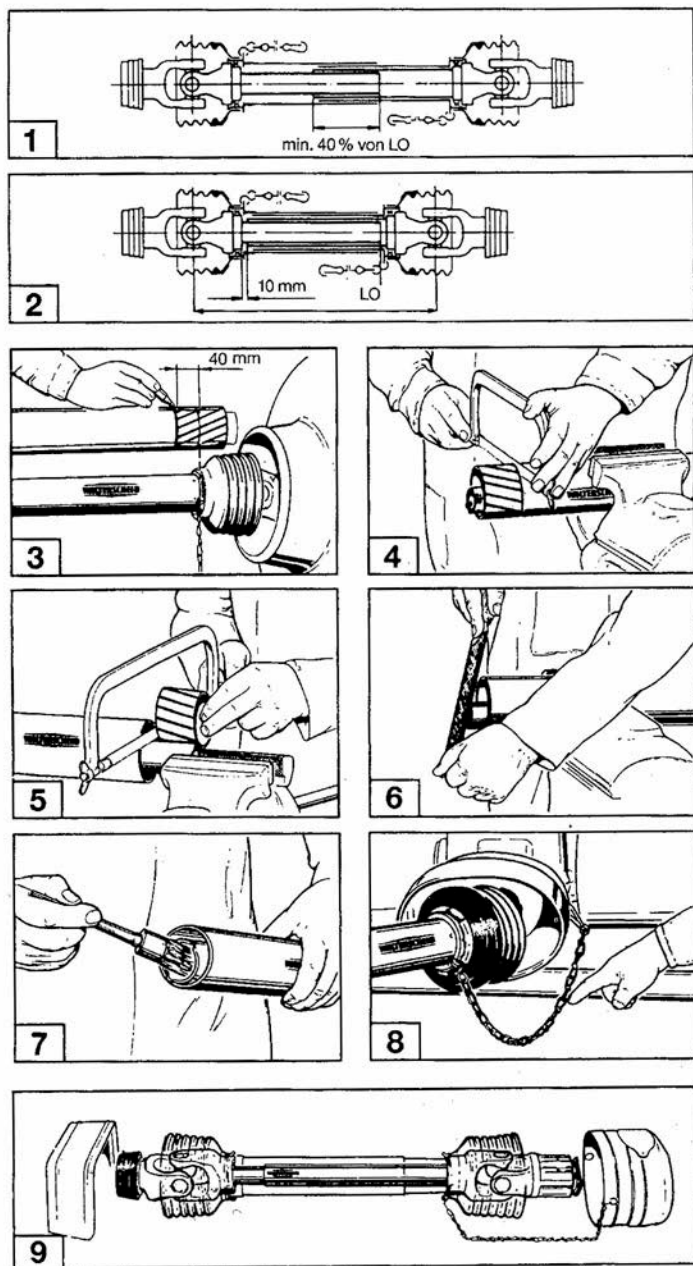


fig. 1

1. By holding both PTO shaft guards side by side check whether a sliding profile overlapping of the PTO shaft tubes of **at least 40 % L0** (length 0) is guaranteed both for a lowered and for a lifted machine.
2. In shortest position, the PTO shaft housings must not bump against the yokes of the universal joints. A safety gap of at least 10 mm must be observed.
3. To adapt the length, hold the PTO shaft halves side by side in their shortest operating position and mark them.



4. Equally shorten the internal and the external protective tubes.
  5. Round off parting edges and carefully remove chips.
  6. Grease sliding profiles and fit them into each other.
  7. The holding chains have to be anchored in such a way that the construction is stable and the PTO shaft protection does not follow the rotating movement during operation.
  8. Only work with a completely protected drive.
- Insert PTO shaft with complete PTO shaft guard and complementary protection at the tractor and the unit. Immediately replace the protecting devices when damaged.



*The max. cardan angle of a universal joint of the PTO shaft must not exceed 25°.*

*The PTO shaft manufacturer's mounting and maintenance instructions affixed to the PTO shaft also have to be observed!*



*To avoid damages only engage the power take-off shaft slowly at a low tractor engine speed!*

#### 4.3 Input Speeds at the Groundkeeper Gearbox

The Groundkeeper Gearbox is equipped with a power take-off connection. The machine has to be driven with a maximum speed of the driving motor of 540 rpm.

**Speed of the driving motor  $n = 540$  rpm**



Speeds of the driving motor which are higher than indicated lead to a considerably higher rotor speed. In extreme cases, this might result in the detachment of cutters possibly endangering the operating personnel.

Guarantee claims for damages due to a too high speed of the driving motor of the power take-off shaft will not be accepted.

#### 5.0 The Mowing Attachment

The Groundkeeper has a flail mowing attachment with mowing blades being oscillatingly suspended from a pipe with a large diameter. When the rotor

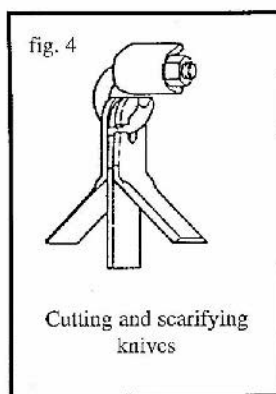
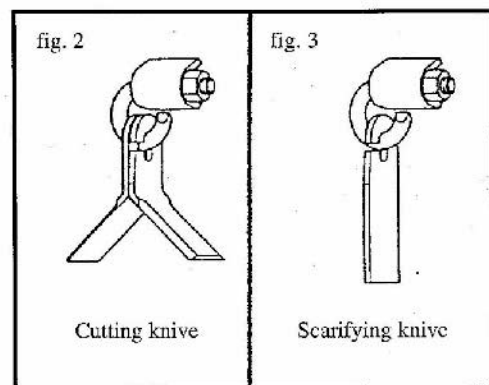
starts spinning, the mowing and scarifying knives are raised and thus catch hold of the material to be mown and cut it off. The cutters made of special steel are suspended in four rows from the rotor perimeter by means of special hooked bolts.

##### 5.1 Mounting of the Mowing and scarifying knives

There are three arrangements of mowing and scarifying knives:

- Fig 2 : Suspension of the mowing cutters for mowing greens,

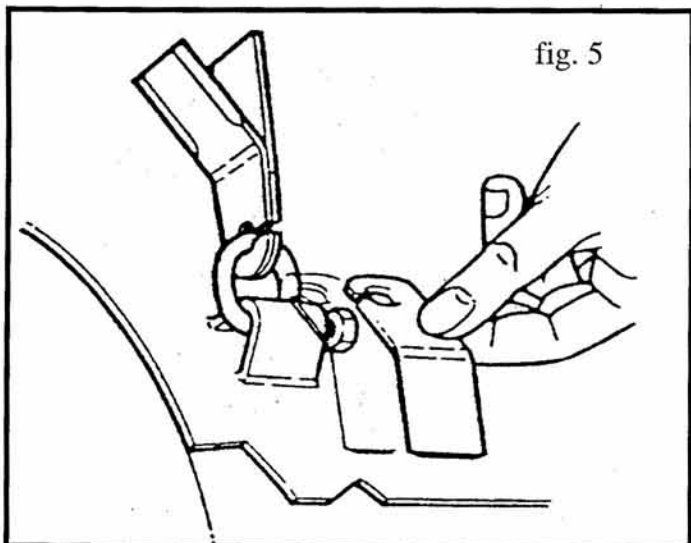
- Fig 3 : Suspension of the scarifying knives for scarify,



- Fig 4 : Suspension of the mowing and scarifying knives for mowing and scarifying in one operation.

If the mowing blades used are worn on one side they can be re-used by turning them round. This is possible because both the front and the rear side of the blades are provided with a cutting edge.

Blades can be turned round or exchanged without any tools (Fig. 5).



 **Note:**

**It must by all means be ensured that the rotor is completely equipped with the same cutter arrangement. Missing or wrongly mounted mowing tools lead to an unbalanced mass resulting in a damage to the complete machine in the long run.**

The rotor is accessible in the following way:

- Mount the machine on a tractor,
- Switch off the tractor engine,
- Remove the two fastening screws of the hood (SW 17) (Fig. 6),

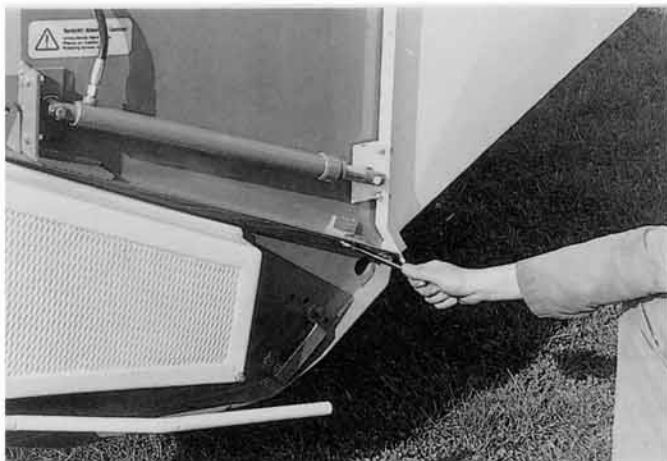


fig. 6

- Open the tray,
- Lift tray with hood (Fig. 7),



fig. 7

- Engage securing support (Fig. 8).



fig. 8



**Attention:**



When working at the rotor and lifted tray you must by all means ensure that the rotor is at a standstill and that the securing support is inserted into the hood.

## 5.2 Adjustment of the stripping plate

A stripping plate is fixed on the rear side in the vertical shaft of the hood. It has the function of separating the mown material from the mowing attachment and of discharging it into the hopper. Therefore the stripping plate must be adjusted in such a way that the gap forming between it and the cutters is as small as possible. For this purpose, the setting gauge included in the delivery is to be used. If only squared off mowing cutters are mounted, the short side of the gauge (111 mm) (Fig. 9) must be adjusted between rotor tube and stripping plate. If straight scari-fying knives are mounted, the long side (117 mm) (Fig. 10) has to be used.

fig. 9

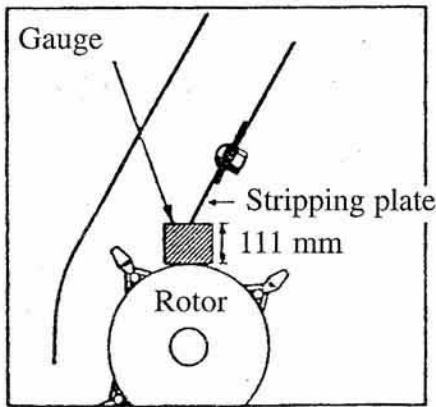
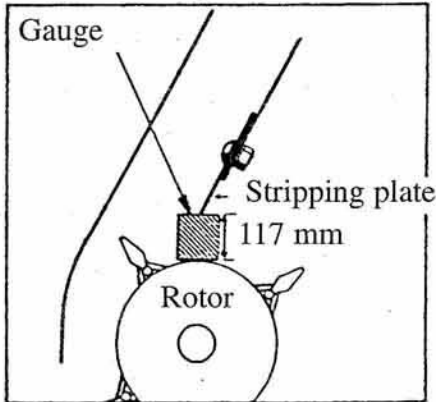


fig. 10



The stripping plate is accessible in the following way:

- Remove the two fastening bolts of the hopper (SW 13) (Fig. 11),
- Remove fastening nut of the tension spring (Fig. 12),
- Take off tension spring from hood,
- If your machine is equipped with hydraulic hopper emptying, you will have to remove the holding device of the hydraulic cylinder at the hopper by taking

away both fastening bolts (SW 13) (Fig. 13),

- Should your machine be equipped with a crank handle, you will have to remove the hook by taking away the fastening bolt (Fig. 14),
- Then you can take off the hopper (Fig. 15),
- Now the fastening bolts of the stripping plate are accessible (Fig. 16).

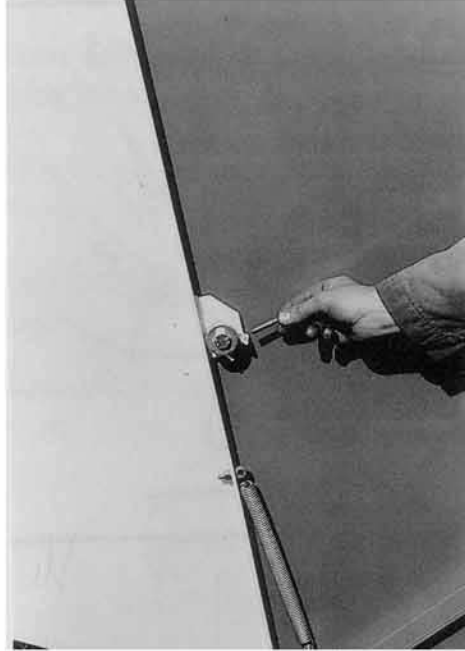


fig. 11



fig. 12



### Attention:

Only work at the machine when the rotor is at a standstill.



fig. 13

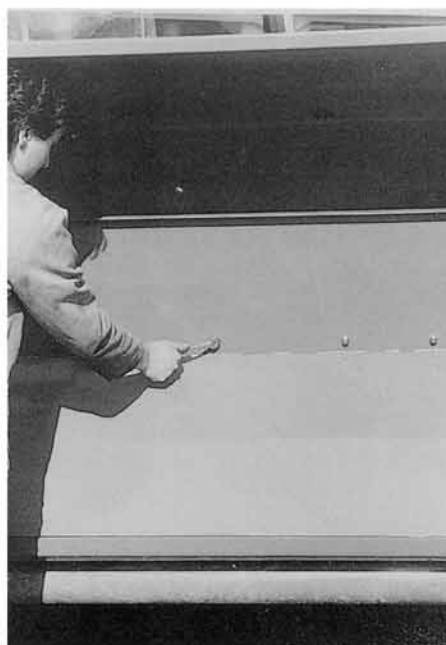


fig. 16

## 6.0 Working with the Machine

### 6.1 Adjustment of the Height of Cutting

The observance of a uniform height of cutting is ensured by the rear supporting roll and the front wheels.

For mowing, the basic adjustment of the supporting roller is in the second hole from the bottom (Fig. 17a), for scarifying with new blades it is in the second hole from the top (Fig. 17c) and for scarifying with about 5 mm worn blades it is in the upper hole (Fig. 17b). In this position, the supporting roller will be cleaned by the rotating blades from adhering soil and grass so that operation is also possible under difficult conditions.

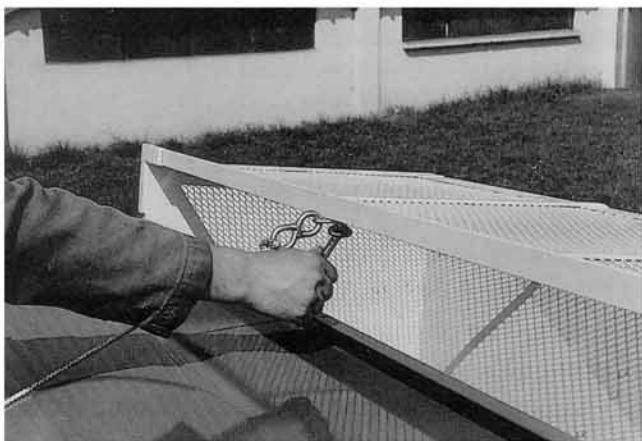


fig. 14



fig. 15

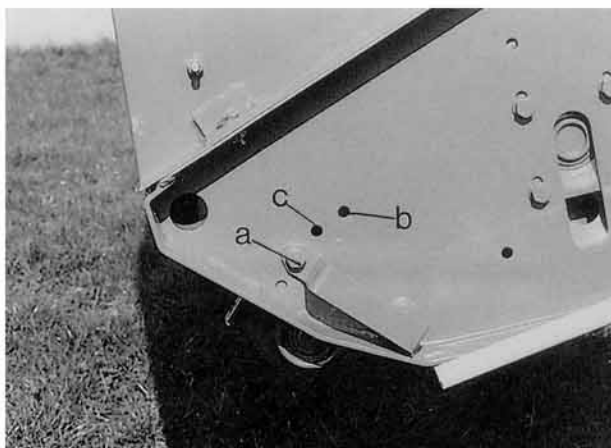


fig. 17



The supporting roller is adjusted as follows:

- Lift the machine,
- Remove the bolt at the adjusting lever (Fig. 18a),
- Bring the supporting roll into the desired position by means of this lever,
- Insert the bolt into the lever and tighten.

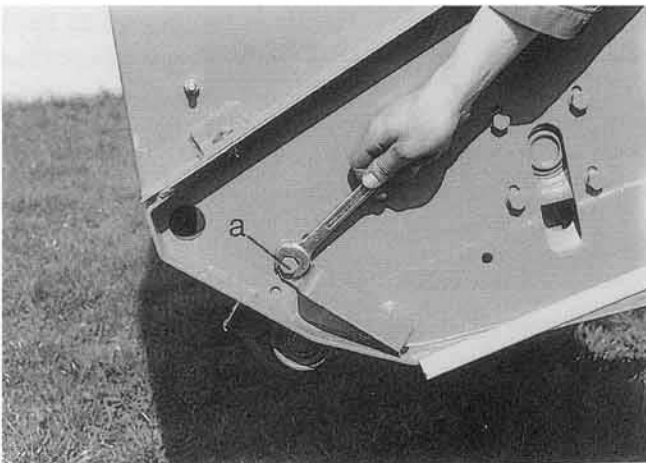


fig. 18

The height of the wheels is adjusted by removing the distance bushings and changing their plug-in connections (Fig. 19). In order to do so the machine with the hydraulic system of the tractor lifts. The PTO shaft must be removed and the bushings must be positioned in accordance with the desired working height.



fig. 19

### 6.1.1 Front Roller

For sacrificing on uneven ground, a front roller is offered as a special accessory. It is mounted into the same holding devices as those of the front wheels. For height adjustment, the R-clip and the bolt at both sides have to be removed and the roller has to be aligned into the desired position (Fig. 20).



fig. 20

## 6.2 Mowing and Scarifying

The operating speed is dependent upon the density and humidity of the lawn. It must be adapted to the conditions. The maximum speed of the PTO shaft of 540 rpm has to be observed. The hopper must be emptied in due course to guarantee a clean pick-up. If the bin is too heavily filled this might lead to clogging in the vertical shaft above the rotor which will not even come off when the hopper is emptied.

Scarifying is normally carried out at the beginning or at the end of the vegetation growth period. In order to clean and aerate felted and moss-grown lawn, cutting, verti-cutting and picking up can all be done in one operation.

For this purpose, straight scarifying blades are mounted between the bent mowing blades pairs. If the lawn has already been cut short, only the straight blades are mounted. The best suction effect is achieved by a combination of mowing and scarifying blades. Therefore, a combination of mowing and scarifying blades should be used under difficult, wet conditions.

The scarifying blades are mounted on all four rows. The working height has to be adjusted in such a way that the scarifying blades slightly slit the soil. It is

recommended to lift the machine for turning in order to avoid damage to the lawn.



### Attention!!

1. For verti-cutting operations with a high soil proportion, only fill about half the tray since otherwise there is danger of overloading the tractor and the machine frame with a full hopper.
2. Moreover, it must be driven carefully with full hopper and lifted machine on uneven ground as otherwise frame damage might occur.
3. When the hopper is full, the machine may only be lowered slowly. If the rear supporting roll hits on stones or paved edges, damage might otherwise occur to the machine.
4. When Groundkeepers are used for the first time or after new scarifying blades have been mounted, the supporting roll may only be mounted in the second-highest position (Fig. 17c). Only after about 5 mm of the scarifying blades have been worn, the supporting roll can also be installed in the highest position (Fig. 17b).

## 6.3 Mulching

If the mowing material is only to be mown, chopped up and then to be dropped immediately, the mulching flap can be closed during the mowing operation by releasing the control rod and pressing it backwards. For picking-up purposes, the control rod has to be drawn forwards and to be engaged (Fig. 21).

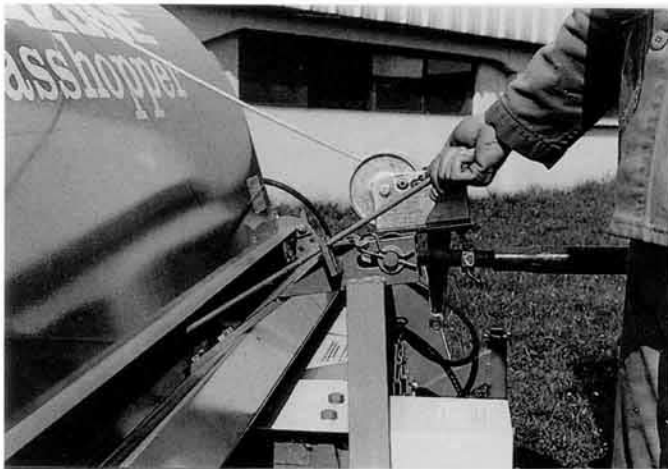


fig. 21

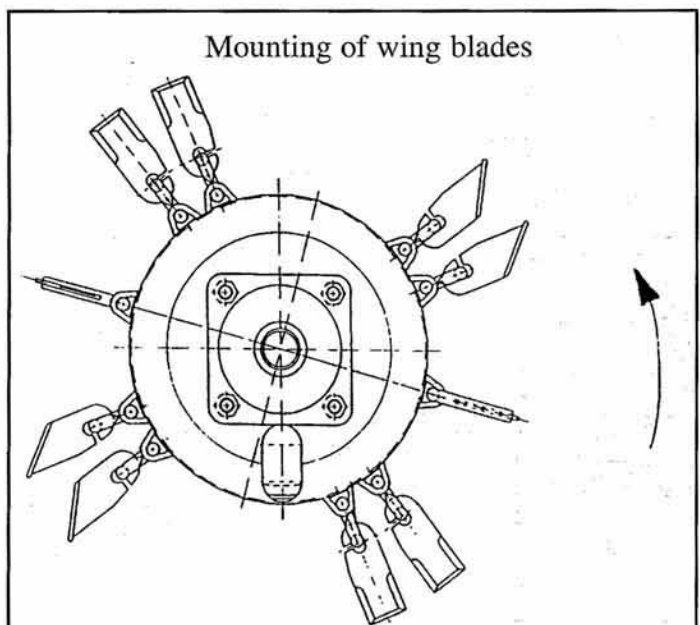
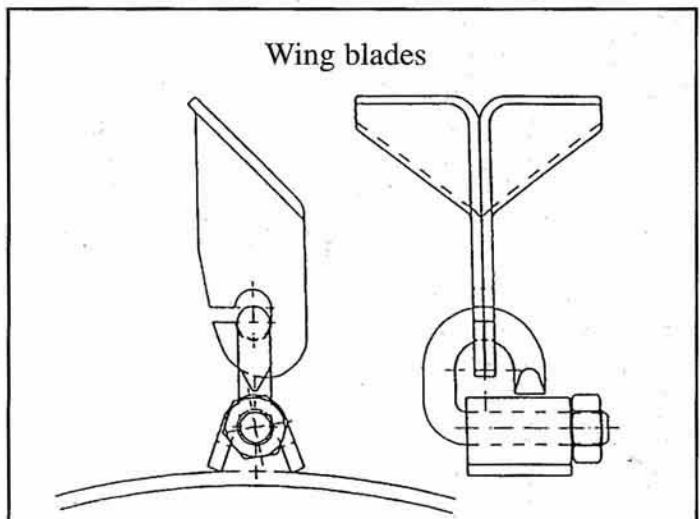
## 6.4 Collection

Due to the high suction effect generated by the rotor, the machine can also be used for picking up already mown or other loose material. During this process the material is lifted by the air suction, chopped up by the rotating cutters and blown through the shaft into the tray. Depending upon the state of the material to be picked up, the oscillating flaps might possibly be used to prevent the material from being blown forward.

### 6.4.1 Special collection Accessories

For especially difficult collection conditions, e. g. extremely wet and short lawn, wing cutters are available which considerably intensify the suction effect of the Groundkeeper.

The wing blades are used in combination (2 x 2 opposite blade rows) with the standard blades to assist in the collection work.



Besides, there are also special verti-cutting blades with air guide rails which have particularly proved their worth when operated on paddocks.

## 6.5 Hopper Emptying

First of all, the machine is lifted by the three-point hydraulic system of the tractor. Then the hopper is opened either by means of the hydraulic emptying mechanism or by the crank handle. When collecting wet material only half fill the hopper.



**Note:** Only drive extremely carefully with a lifted hopper!

## 7.0 Cleaning of the Machine

Above all, when mowing and verti-cutting wet grass which is then also partly mixed with soil the machine will soil heavily. In this case, it is recommended to clean the rotor and the bin intensively by a water jet.

## 8.0 Maintenance and servicing

As far as possible, the Groundkeeper has a maintenance-free design. The following points should, however, be observed and dealt with. Please also comply with Chapter 9.4, if you possess a trailed Groundkeeper GHT.

### 8.1 Oil Level in the Angular Gearbox

The angular gearbox of the machine does not require any lubricating service. However, once a year the oil level should be checked. For this purpose, the check screw (Fig. 22) which is laterally attached to the

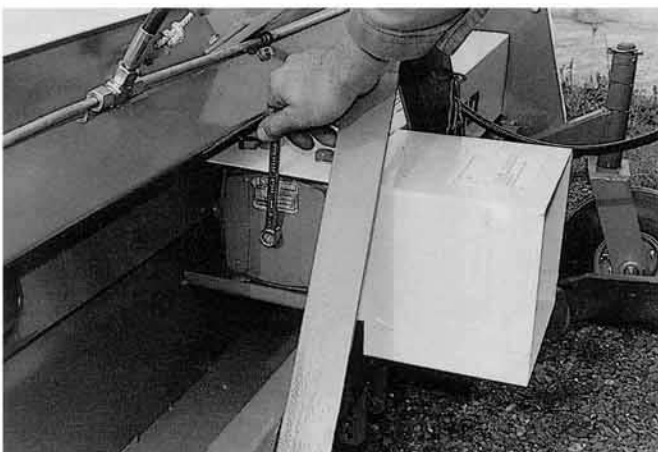


fig. 22

gearbox must be opened and it has to be checked whether the oil level reaches the lower edge of the bore. If required, the gear has to be refilled with gear lubricant oil EP 140.

### 8.2 Greasing Points

Depending upon the working intensity, the following points should be regularly lubricated with multi-purpose grease:

- Axle of the steering wheel fork,
- Castor wheels (Fig. 23)
- Rotor bearings (Fig. 24) (for this purpose, the V-belt guard on the left machine side must be removed (SW 13),
- PTO shaft.
- Gear-wheel of the crank handle when the tray is emptied mechanically (Fig. 25).



fig. 23

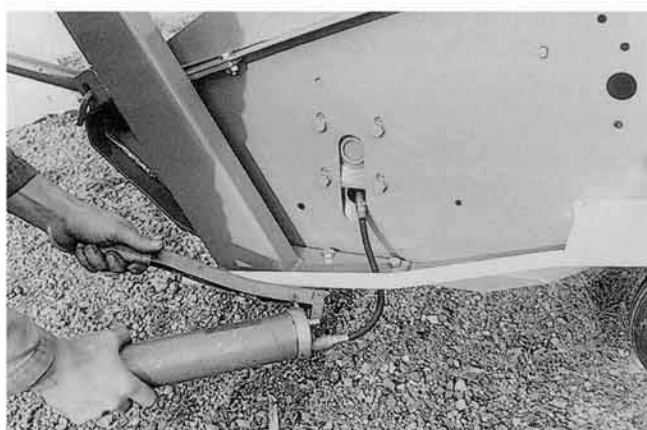


fig. 24

When the unit is operated daily, these works have to be carried out once a week, otherwise as required.

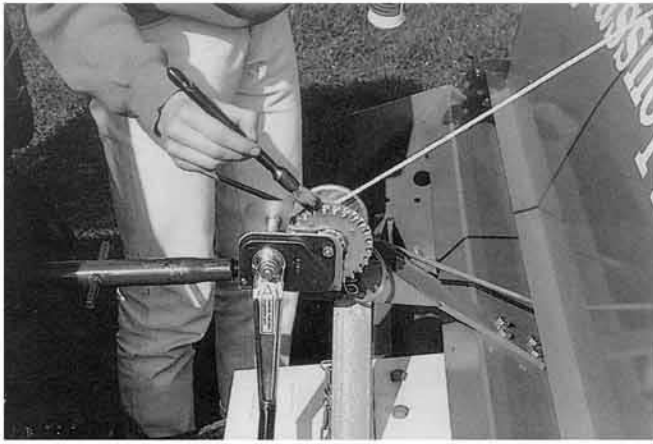


fig. 25

### 8.3 Longer Standstill Periods

If the machine has not been used for a long period of time it is advisable to clean it and to preserve it with some spray oil before storing it. Before recommissioning, an authorized workshop should check the functioning of the overload coupling arranged between angular gearbox and V-belt drive.

### 8.4 Tyre Pressures

Front wheels: 2 bar max. inflation pressure allowed, 1.5 bar working pressure.

When mounting the tyres, they must be depressurized (a divided rim might explosively fly apart when being dismounted).

## 9.0 Complementary Operating Instructions for the Drawn AMAZONE Groundkeeper GHT

### 9.1 Mounting and Dismounting of the Machine

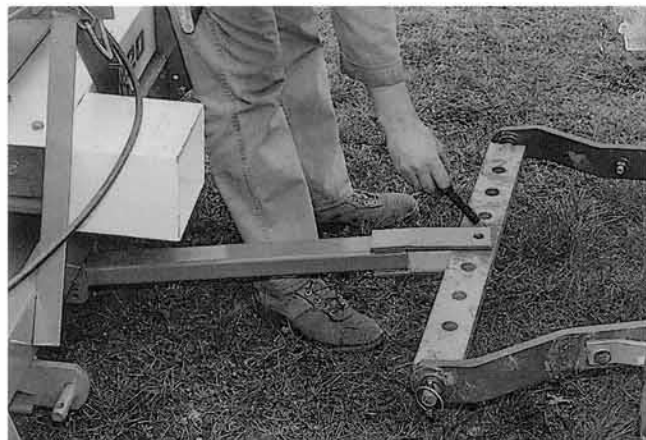


fig. 26

The machine must be mounted in the following way:



- Adjust drawbar to the desired working height,
- Attach drawbar to the tractor linkage drawbar (Fig. 26),
- Insert hydraulic connections.

Proceed in reverse order for uncoupling the machine.

### 9.2 Adjustment of the Working Height

The working height is adjusted by means of the supporting roller (see Chapter 6.1) and the drawbar. The connection of the drawbar is changed as follows:

- Lower the machine,
- Remove front fastening bolt (SW 17) (Fig. 27),
- Align drawbar in the desired position,
- The fastening bolt can be aligned in two positions (Fig. 28a, 28b).

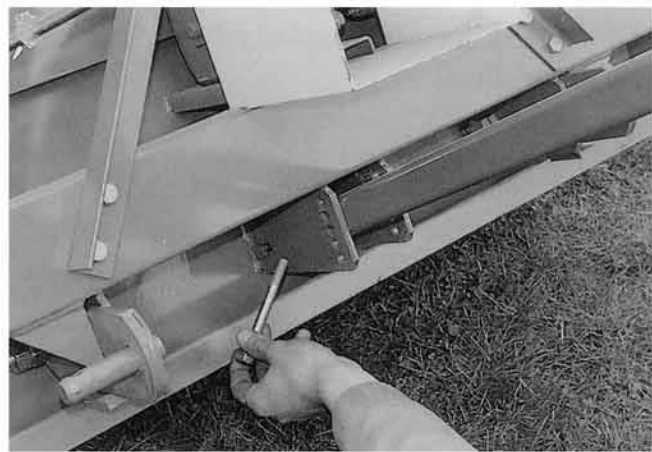


fig. 27

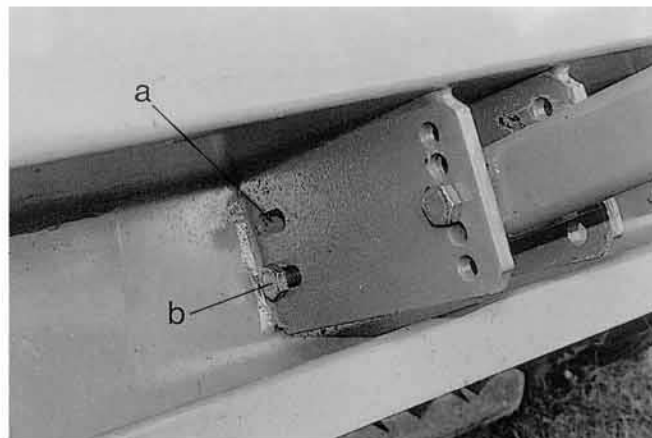


fig. 28



### **9.3 Transport on Public Roads**

On public roads, the machine has to be lifted by means of the rear supporting wheels. The supporting wheels can be operated hydraulically (accessories) or mechanically.

The weight of the machine (above all when the hopper is filled) should not be underestimated, in particular for tractors having a low gross weight.

### **9.4 Maintenance**

Apart from the few maintenance works to be carried out at the AMAZONE GH Groundkeeper there are two further items which have to be taken into account for GHT.

#### **9.4.1 Tyre Pressures**

Rear supporting wheels: 2 bar

When mounting the tyres, they must be depressurized (a divided rim might explosively fly apart when being dismounted).

#### **9.4.2 Additional Greasing Point**

The bearings of the rear supporting wheels must regularly be greased.

