

AMAZONE

PROFIHOPPER

From mach. nb. 03-001

OPERATING MANUAL and

MAINTENANCE NOTEBOOK mach.-nb: 03 ___ (*)

Mow, scarify, aerate in each condition



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1.3 <u>Conformity declaration</u>

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

1.4 <u>Details when making enquiries and ordering</u>

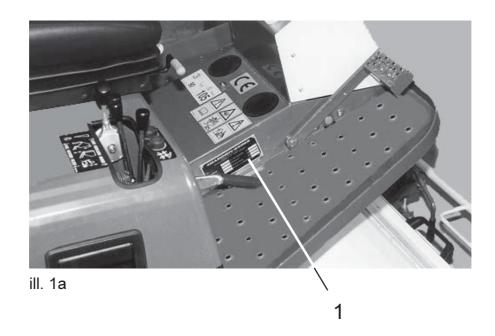
When ordering options or spare parts, please always state the serial number of your Profihopper.



The 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 <u>Identification of the machine</u>

Identification plate on the machine (ill.1a)





The entire identification is of documentary value and may not be changed or disguised!

1.6.1 Noise levels

The operator seat related emission value (sound pressure level) is: LpA = 90 dB(A). Measured when operating at the ear of the operator. Value of the maximum noise level: LwA = 105 dB(A)

1.6.1 <u>Vibration levels</u>

- vibrations measured in accordance to the European norm EN 1033 on the hand and the arm of the operator: 5,7 m/s²,
- vibrations measured in accordance to the European norm EN 1032 on the body of the operator: 1,0 m/s².

1.7 <u>Inappropriate use of the machine</u>

The AMAZONE-Profihopper has been designed for use exclusively on turf's. It has been designed for mowing, scarifying and collecting the mown grass and leaves in Autumn.

Any use beyond those stipulated above is not considered designed use and the manufacturer does not accept any liability or responsibility for damage arising from this; therefore the operator carries the full risk.

The concept of "designed use" requires the operator to adhere to the recommended maintenance and repair programmes and to ensure that any spare parts used are **genuine AMAZONE spare parts**.

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.

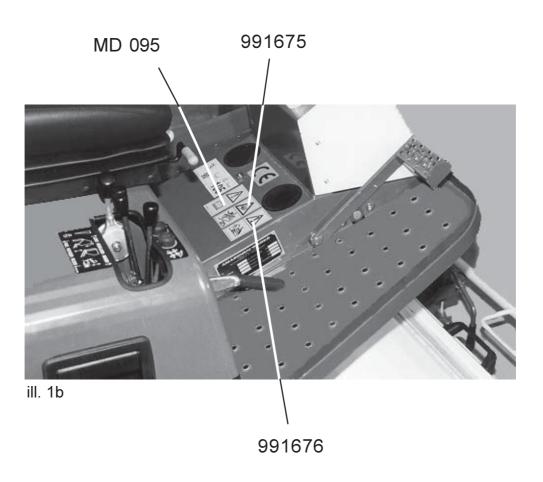
Not paying attention to the safety advice may cause the following risks:

- 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.

- 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 1b, 2, 3a and 3b show the display points for warning pictographs and hint signs. Please refer to the following pages for relevant explanations.





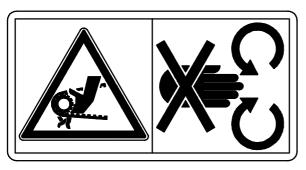


MD075

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

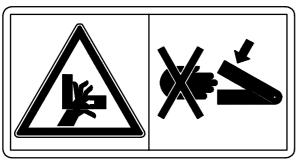
Fig. No.: MD076

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.



MD078

Fig. No.: MD078

Explanation:

Advise people to leave the danger zone!

Never reach into the crushing area as long as parts may move!

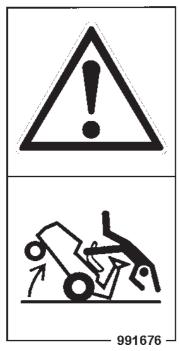


Fig. No.: 991676

Explanation:

Danger of tipping over in driving direction.



Fig. No.: 991675

Explanation:

Avoid operation on slopes where the machine may slide down or tip over.

Max. inclination: 22%

2.4 <u>Safety conscious operation</u>

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.

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).

A safe operating of the machine requires the whole attention of the operator: so it is necessary to avoid listenning music or radio with ear- or headphones while working.

Operating on slopes (max. 22%)

- 1. Do not turn suddenly.
- 2. Drive slowly.
- 3. Avoid sudden starting and stopping.
- 4. Do not use on slopes with an inclination greater than 22%.

Filling the Diesel tank

- 1. Do not remove the filler cap with the engine running.
- 2. No naked flames or smoking.
- 3. Clean up spillage's with caution.

<u>Transport and storage</u>

- 1. When loading onto a trailer, use ramps with a non skid surface and a gentle angle of inclination.
- 2. When driving the machine onto a trailer or truck, exercise extreme caution.
- 3. During transport on a trailer the engine must be switched off, the parking brake applied and the machine must be strapped down.

- 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, relieve the system from pressure 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.

4. Dashboard and controls

4.1 <u>Dashboard (ill. 4)</u>



Never use a high pressure cleaner while cleaning the dashboard!

1. Control lamp

Indicates whether the hopper is in the operational position. A safety switch stops the engine if the hopper is accidentally lifted during operation. In this case the hopper has to be brought into operational position, the engine has to be started again and the mowing unit has to be engaged.

2. <u>Battery charge control</u>

If the charge control lamp does not go out after the engine has been started, check the charge procedure (possibly the control lamp only goes out at a slightly higher motor speed).

3. <u>Cooling water temperature indicator</u>

3a. Cooling water overheating indicator

When it lights, the engine stops automatically! Let the engine cool down and check the coolant level. Top up if necessary. If the warning light does not go out after the engine has been started again, inform your workshop.

4. <u>Heater starter indication of the Diesel engine</u> (Please refer to starting procedure chapter 5.4)

5. <u>Control lamp parking brake</u>

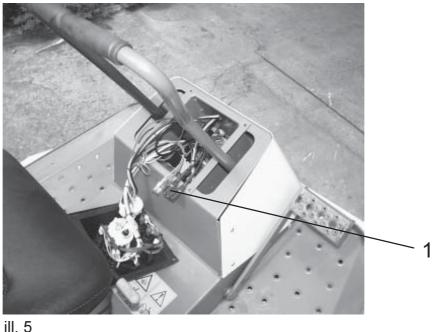
When the parking brake is disengaged the control lamp goes out.

6. Oil pressure control

If it lights up immediately stop the engine and check the oil level. If necessary top up the oil. If the warning lamp does not go out after the engine has been started again, inform your workshop.

4.2 Fuse box of the dash board (ill. 5)

There are two fuses in the dash board. To replace them, slacken the four bolts. You will find replacement fuses in the tool box under the hood. In any case remedy the reason for the melting of the fuses. Danger of fire!



Control levers (ill. 6) 4.3

1. Throttle hand lever

For starting and stopping the engine, bring lever into idling position.

2. Empty hopper

To empty the hopper, pull the lever to the rear in order to bring it into the operational position. Then push the lever forward.

3. Lowering/lifting the hopper

To lift the hopper, pull the lever to the rear. To lower the hopper, push the lever to the front.



ATTENTION! Never drive with the hopper raised. Danger of tipping over!

4.4 **Speed control, steering**

1. Steering arm (ill. 7/1)

To change the drive direction to the left hand side, pull the left hand lever to the rear. To change the drive direction to the right hand side, pull the right hand lever to the rear. It is recommended to operate both levers with one hand for a better government of the steering system (ill. 8).

When changing the driving direction by the foot pedal both steering levers move parallel in the driving direction.

2. Foot throttle (ill. 7/2)

This pedal allows you to adjust, steplessly, the forward driving speed from 0 to 10 k.p.h. In order to bring the machine to a standstill take your foot from the pedal and do not apply any pressure to the steering levers. For reverse driving, pull both steering levers parallel to the rear, do not actuate the foot pedal.

ATTENTION!



A sudden actuation of the steering levers causes a heavy acceleration of the machine.

Make yourself acquainted with the steering properties of your machine in a wide area. Danger of accident!

ill. 8



ill. 7



5. <u>Putting into operation</u>

5.1 <u>Safety system</u>

The mower unit is equipped with 2 safety switches:

- One safety switch under the seat which stops the engine as soon as the driver leaves the seat.
- One safety switch on the hopper which stops the engine as soon as the hopper is lifted while the mowing unit is still engaged.

The mowing unit can only be put into operation under the following two conditions:

- The hopper has to be closed and completely lowered.
- The driver has to sit on the seat.



The engine can only be started when the driver is sitting on the seat.

5.2 <u>Tyre pressure</u>

Always observe the required tyre pressure. Other tyre pressures than those recommended might have a negative influence on the steering property.

Tyre pressure: front 1,0 bar rear 1,0 bar

5.3 <u>Details to be observed before starting</u>

Before any operation ensure that the following control points:

Motor oil:

Check oil level (ill. 10) and top up if necessary (ill. 11).

Oil quality: motor oil 10W40 API-CF Total quantity: 2,4 litres

Hydraulic oil, hydro static motor:

The oil tank is integrated in the frame and is located on the right hand side of the machine. The two red marks on the lateral filling level indicator show the minimum and maximum level. Check oil level and top up if necessary (ill. 12). Please bear in mind that the oil expands while warming up. Avoid overfilling.

Oil quality: Motor oil 10 W 40 API-CF Total quantity: 17 litres



ATTENTION! Oil becomes very hot during operation!



ill. 12

• Fuel (Diesel)

The fuel tank is transparent and thus the filling level can easily be controlled.

Fill with Diesel in time. Avoid emptying the tank!

Your Profihopper is equipped with a DIESEL-engine and requires DIESEL-fuel.

Using another fuel (for instance Biodiesel) or a fuel mixture would ruin the engine!

5.5 Mowing

- Start the engine
- Release parking brake
- Switch on mowing unit. For a smoother start of the mowing unit choose a medium motor speed.
- Accelerate the engine with the hand throttle lever (for mowing the maximum engine speed is recommended).
- Slowly press the foot throttle until you have reached the desired driving speed. Choose the driving speed according to the mowing conditions.

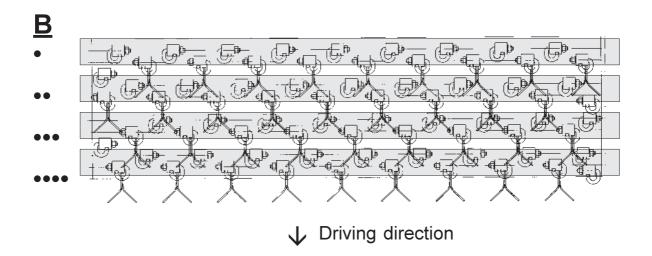
5.5.1 <u>Mowing knives</u>



BLADE SELECTION	Cutting blade	Wing blade	Wing blade sharpened (standard)	Scarifying blade	Scarifying blade and short wing blade
Mowing lawns			000		
Mowing fairways					
Mowing parks		000			
Mowing public grassland areas					
Mowing flower residue and environmental sites	00				
Leaf collection					
Scarifying					

Very good results
Good results

Depending on conditions the rotor speed may need to be adjusted slightly.



The Profihopper can also scarify lawns and collect the debris. Two ways of scarifying are provided:

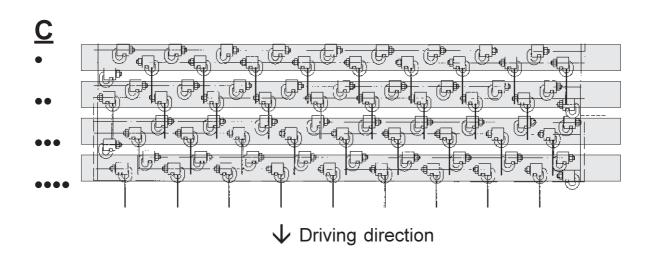
• wide scarifying, knives spacing 33mm,

for this rows • to •••• are only equipped with 36 scarifying knives (ref. 8356000 (3 mm) or 8746000 (2 mm) (see below drawing C)). This allows deeper work without affecting the turf too much.

Attention:



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

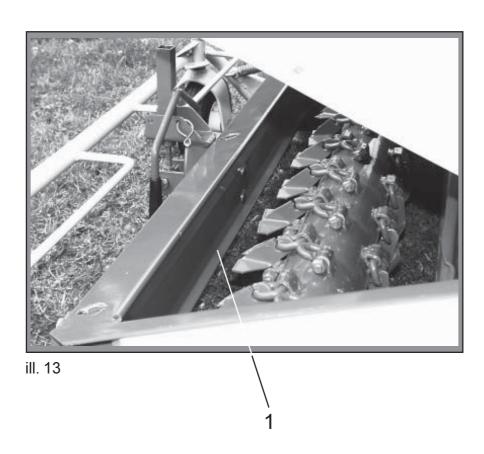


5.5.2 Adjustment of the stripping plate

The so-called "stripping plate" is placed on the front side of the mowing unit (ill. 13/1) and can be set differently allowing optimum collection of the mown material when mowing and scarifying. The stripping plate has been set for scarifying by the factory.

Setting positions:

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



5.5.3 <u>Setting the cutting height</u>

To set the cutting height, proceed as follows:

- Remove securing pin of the lever
- Turn lever (ill. 15)
- Set the desired cutting height by turning
- Set lever again in locked position and secure with t pin.



ill. 15



ill. 18





ill. 22



ATTENTION!

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

This way, an unintended lowering of the hopper is avoided.



ill. 23

- Loosen and remove foreign particles by turning the worm auger (ill. 23)
- Remove safety support
- Lower the hopper into operational position

5.7 <u>Emptying the hopper</u>

As soon as the hopper is full, an audible fill indication sounds. As soon as this signal is given, empty the hopper.



Avoid overfilling the hopper. Danger of damage to the worm auger system!

Emptying at ground level

- Push the lever for tipping the hopper to the rear
- After emptying bring the hopper into the operational position by pressing the lever.

Lift discharge

- Drive backwards until approx. 1 m in front of the discharging point.
- With the control lever bring the hopper to the discharging height.
- Slowly approach the discharging point (ill. 25)



6. <u>Lighting device (Option. Order-No.: 992890)</u>

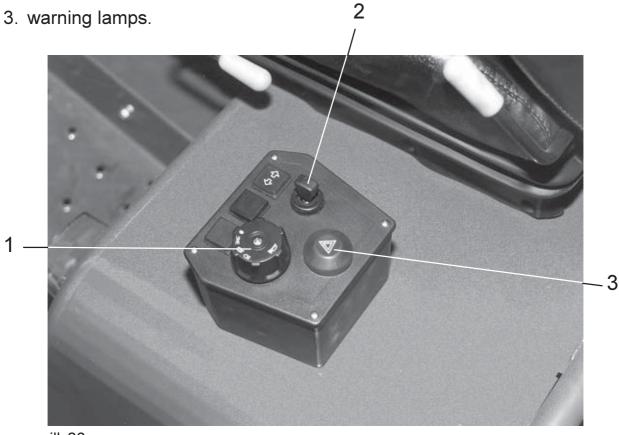
For getting a licence to operate your Profi-Hopper, this option is not necessarily required.

The lighting device includes:

- front indicators
- rear indicators incl. fixing elements
- front head lamps
- rear lights
- 1 horn
- 1 dashboard arranged beside the driver's seat.

Operating the lighting device (ill. 26)

- Knob for switching on and off the parking lamps and front head lamps.
 Turn the knob to the right to switch on the lights.
 Press the knob to horn
- 2. Indicators



ill. 26

You will find some spare knives in the tool box (ill. 27/1) In case the rotor heavily vibrates in spite of a correct knife configuration, please contact your service centre.

7.2 <u>Maintenance of the engine</u>

Please adhere to the operating- and maintenance advice of the engine manufacturer LOMBARDINI. The instruction accompanies your machine.



ATTENTION!

Before the first operation, carefully read and adhere to the instruction manual of the engine manufacturer LOMBARDINI!



ATTENTION!

Before doing any work on parts of the engine, stop the engine, remove the ignition key and let the engine cool down!

In order to access the engine and the main driving elements, please proceed as follows:

- Open the hood
- lift hopper into its highest position
- apply safety support
- open the engine hood

Now the engine is easily accessible.

7.2.1 <u>Oil level – Oil change</u>

Please refer to the instruction manual for the LOMBARDINI engine.

7.2.2 <u>Engine oil filter</u>

Please refer to the instruction manual for the LOMBARDINI engine.

The air filter is equipped with a primary filter which should be cleaned daily.

- Remove thumb nut
- Remove cover
- Clean dust container (ill. 29)
- Reassemble the primary filter in the reverse order.



ill. 29

7.2.4 <u>Fuel filter (ill. 29a)</u>

The fuel filter should be changed every 250 working hours, or at least, however, once a year.

For further hints, please refer to the instruction manual of the engine manufacturer LOMBARDINI.



ill. 29a

7.3 <u>Hydrostatic drive</u>

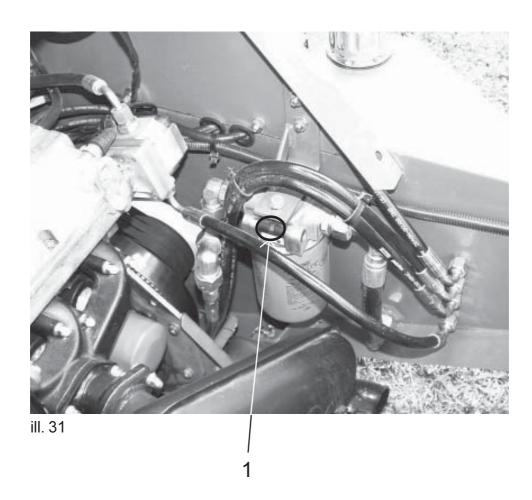
7.3.1 <u>Hydaulic oil filter</u>

The hydraulic oil filter is equippe dwith an indicator (ill.31/1) which shows the state of pollution.

Indication green: filter is in order

Indication red: filter is dirty and has to be changed This control must be done engine running at the max.

Irrespective, the hydraulic oil filter has to be changed at least once a year.



7.4 Battery

The battery has been placed underneath the hood (ill. 27/2 p. 45). It is maintenance free.



Charging the battery

Adhere to the instructions for the battery charger. Before charging, disconnect and take out battery.

Disconnecting the battery

Loosen the pole cables of the battery only after engines has come to a standstill.

Switch off electric users.

Loosen first the minus- and then the plus-cable.

Attaching the battery

Attach first the plus- and then the minus-cable Do not mix up the cables!

Starting aid

In case the battery is discharged the engine can be started with starting aid cables and a second battery. First connect the plus poles and then the minus poles with the starting aid cable.



Keep a safe distance from sparks and flames!



Explosive gas! Explosion hazard!

Do not pose any metal parts on the battery! Short circuit hazard!

7.5 **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:

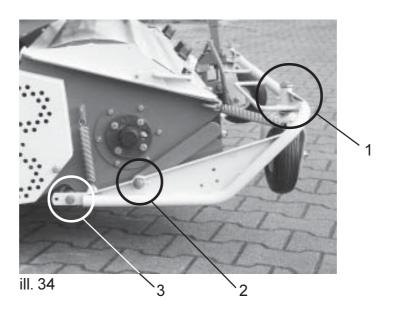
Mowing unit

- Clutch (every 150 working hours) (ill. 33a)
 Caution! clean the surplus grease in order to avoid grease going in the belt transmission(ill. 33b)
- Bearings of the front wheels (ill. 34/1)
- Joints of the height adjustment frame (ill. 34/2)
- Rear roller bearings (ill. 34/3)
- Universal ball joints of the coupling arms (ill. 35 a+b)





ill. 33a ill. 33b



• Bearings of the cross auger (ill. 36a + 36b)



ill. 36



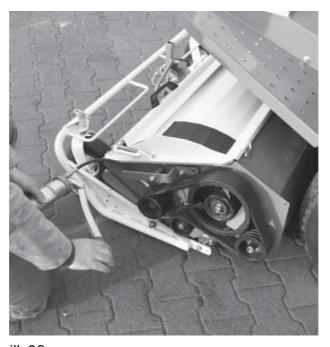
ill. 36a

 Bearings of the main transmission shaft of the rotor and the cross auger (ill. 38 a+b)



ill. 38b

Bearings of the rotor (ill. 39 +ill. 40)



ill. 39

Steering elements

- Joints of the steering levers (ill. 42)
- Joints of the foot throttle (ill. 43)



ill. 42



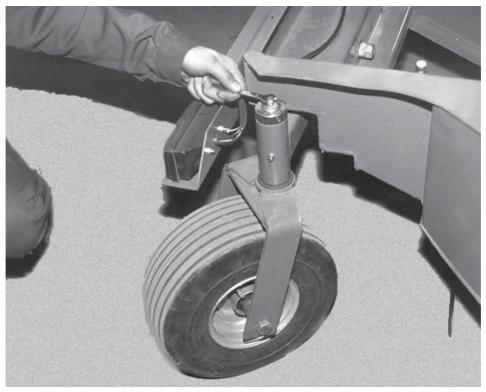
ill. 43

7.6 Vibration absorber of the rear wheels

The rear wheels are equipped with a vibration absorbing system which avoids a heavy swinging of the wheels when driving at maximum speed.

This system is subject to certain wear which may be corrected as follows:

- Tighten setting bolt as required (ill. 46).
- Secure setting bolt with counter nut.

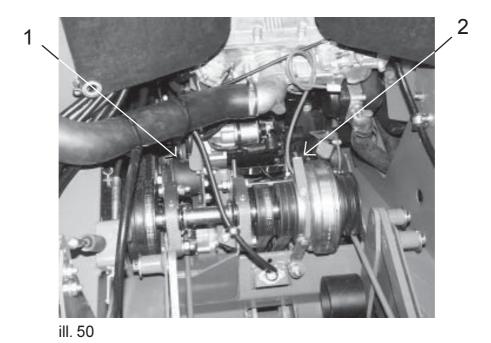


ill. 46

All other belt drives are self-tensioning but exworks they are pre-tensioned according to following values :

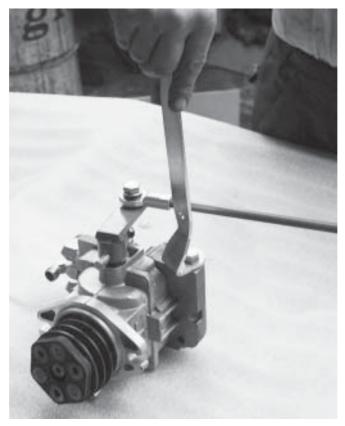
TRANSMISSION	BELTS	STATIQUE PRE-TENSIONING
Main drive system (Motor - main shaft)	3	First connection
Pump transm. (main shaft - Hydropump)	4	First connection
Mowing unit (main shaft - mowing unit)	2	First connection
Longitudinal screw transmission	3	First connection
Transversal screw rotor transmission	5	First connection

The pumps are accessible by lifting the hood (ill. 50).

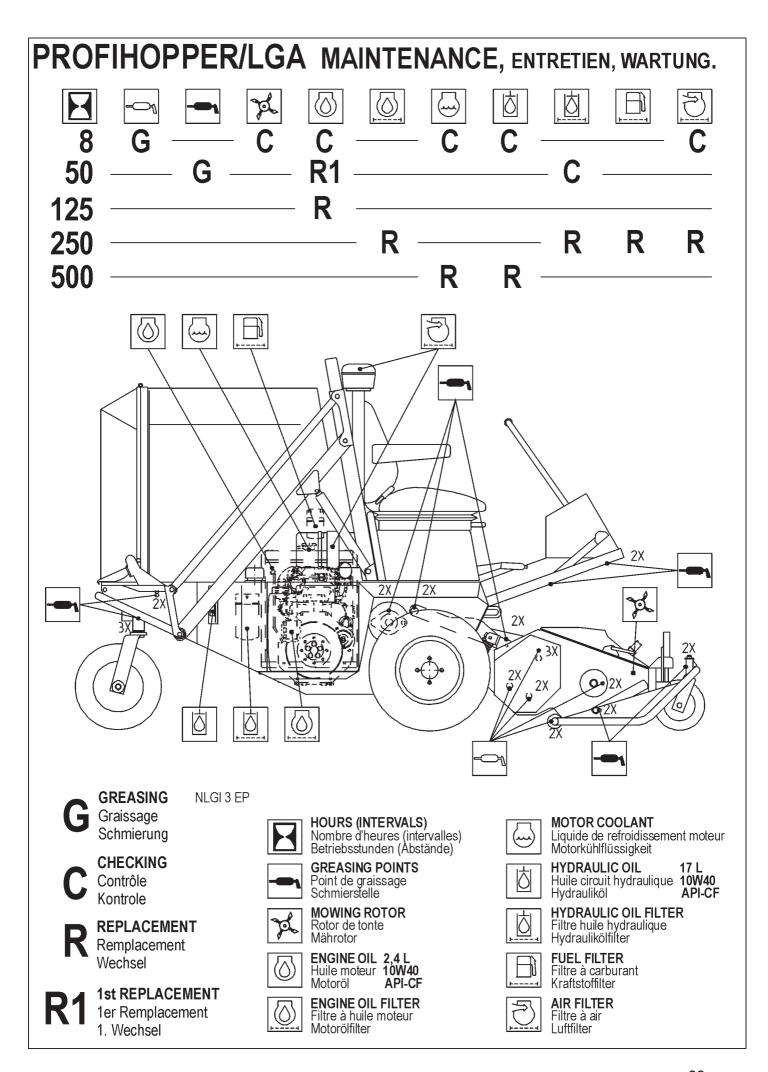




To disengage the pumps put the key on the locking bolt and unbolt it (ill. 51). The machine can then be pushed by hand.



ill. 51



	MAINTENANCE STATEMENT
Date: Technician:	Date: Technician:
Statement nb:	Statement nb:
Operating hours:	
Engine oil change Hydraulic oil change Engine oil filter Hydraulic oil filter Air filter (x2) Fuel filter Pressure relieve valve adjustment* Miscellaneous:	
Next maintenance date:	Next maintenance date:
Dealer stamp and signature	Dealer stamp and signature
* AMAZONE Technical info 200 MAINTENANCE STATEMENT	* AMAZONE Technical info 2002-8 MAINTENANCE STATEMENT
Date: Technician:	Date: Technician:
Statement nb:	Statement nb:
Statement nb: Operating hours:	Statement nb: Operating hours:
	Statement nb: Operating hours: YES NO Engine oil change Hydraulic oil change Engine oil filter Hydraulic oil filter Air filter (x2) Fuel filter Pressure relieve valve adjustment* Miscellaneous:

MAINTENANCE STATEMENT	MAINTENANCE STATEMENT
Date: Technician:	Date: Technician:
Statement nb:	
Operating hours:	Operating hours:
Pressure relieve valve adjustment* Next maintenance date: Dealer stamp and signature Press NO Press NO Press NO Engine oil change	Engine oil change Hydraulic oil change Engine oil filter Hydraulic oil filter Air filter (x2) Fuel filter Pressure relieve valve adjustment* Miscellaneous:
* AMAZONE Technical info 2002- MAINTENANCE STATEMENT	MAINTENANCE STATEMENT
Date: Technician:	Date: Technician:
Statement nb:	Statement nb:
Operating hours: YES NO	Operating hours:YES NO
Engine oil change Hydraulic oil change Engine oil filter Hydraulic oil filter Air filter (x2) Fuel filter Pressure relieve valve adjustment* Miscellaneous: Next maintenance date:	Engine oil change Hydraulic oil change Engine oil filter Hydraulic oil filter Air filter (x2) Fuel filter Pressure relieve valve adjustment* Miscellaneous:
Dealer stamp and signature	Next maintenance date: Dealer stamp and signature