Flail mower
4500 Hydro

- 4500 621 65 cm / Front wheels
- 4500 622 65 cm / Roller
- 4500 631 80 cm / Front wheels
- 4500 632 80 cm / Roller

Before commissioning the machine, read operating instructions and observe warnings and safety instructions.

Operating Instructions No. 998 790 02.10
Symbols, Name Plate

Please complete:

Machine Type No.:.......................
Identification No.: 
...................................................
Engine Type:.................................
Engine No.:.................................
Date of Purchase:.........................

For name plate, refer to page 3/fig. A/21
For engine type and number, refer to page 54/fig. B/3
Please state these data when ordering spare parts to avoid wrong deliveries.

Only use original agria spare parts!
Specifications, figures and dimensions stated in these instructions are not binding. No claims can be derived from them. We reserve the right for improvements without changing these instructions.

This delivery comprises:
- Operating instructions agria
- Operating instructions Engine
- Flail mower
- Tool kit

agria - Service = contact your agria-workshop

Lifting point, fixing point for recovery, tying up, towing away

Symbols

Warning – danger
Attention
Important Information
Choke
Engine
Engine Start
Engine Stop
Engine speed
Engine oil level
Transmission oil
Fuel
Fuel filter
Forward
Reverse
Fast
Slow
Engage cutter element
Disengage cutter element
Park brake
Closed (locked)
Open (Unlocked)
Tyre air pressure
infinitely linear
Designation of Parts

Fig. A

agria Flail mower 4500 Hydro

3
Designation of Parts

**Fig. A:**

1. Handlebar
2. Tool kit
3. Fuel tank
4. Belt guard cover above
5. Belt guard cover laterally
6. Crank for cutting height adjustment (version front wheels 4500 621, -631)
7. Front frame (version front wheels 4500 621, -631)
8. Locking bolt (version front wheels 4500 621, -631)
9. Front wheel (version front wheels 4500 621, -631)
10. Front tarpaulin guard
11. Mulch housing
12. Rubber cap strips on the mulch housing in the back
13. Adjusting screw for steering brake clutch (on either side)
14. Rubber cap strip on the gear
15. Drive wheel
16. Lug for lashing down and lifting (on either side)
17. Engine
18. Lug for lashing down and lifting (version roller 4500 622, -632)
19. Roller (version roller)
20. Ratchet lever for cutting height adjustment (version roller 4500 622, -632)
22. Clamping lever for handlebars height adjustment
23. Handle for handlebars lateral adjustment
24. Mulching drive shifting lever
25. Engine shut-off switch - only version 80 cm (4500 631, -632)

26. - version 65 cm (4500 621, -622) - Speed adjusting lever
   - CHOKE
   - Engine shut-off switch

   - version 80 cm (4500 631, -632) - Speed control lever

27. Driving speed lever
28. Steering brake lever left
29. Steering brake lever right
30. Safety circuit lever left and right
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Recommendations

Maintenance and Repair

The trained mechanics of your agria workshop carry out expert maintenance and repair.

You should only carry out major maintenance work and repairs on your own, if you have the proper tools and knowledge of machines and internal combustion engines.

Do not hammer against the flywheel with a hard object or metal tools as it might crack and shatter in operation causing injuries and damage. Only use suitable tools for pulling the flywheel.

Fuel

Petrol Engine

This petrol engine runs smoothly on commercial unleded regular petrol.

Do not add oil to petrol.

If, for environmental reasons, you use unleaded petrol, make sure the fuel is drained completely when shutting down the engine for more than 30 days. This is to prevent resin residues from depositing in the carburetor, fuel filter, and tank. Or add a fuel stabilizer.

For further instructions refer to „Engine Preservation“.
1. Safety Instructions

Before starting the engine, read the operating instructions and note:

**Warning** ⚠️

This symbol marks all paragraphs in these operating instructions which affect your safety. Pass all safety instructions to other users and operators.

**Due Use**

The flail mower is constructed solely for the cutting of grass and similar plants as well as thin non-wooded scrub to max. ø3 cm in land & forest management, green spaces, and other such areas (due use).

Any other type of operation is considered undue. The manufacturer is not liable for any damage resulting from undue use, for which the risk lies with the user alone.

When the flail mower is used on public roads, the local national road traffic rules must be observed, e.g. reflectors, lights.

The flail mower is not intended for use with a trailer on public roads or as as a ttractive machine.

**Due use** includes compliance with manufacturer’s instructions on operation, maintenance and repair.

Any unauthorized changes to the tool carrier render manufacturer liability null and void.

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**General Instructions on Safety and Accident Prevention**

**Basic Rule:**

The standard accident prevention regulations must be adhered to, as well as all other generally accepted rules governing operational safety, occupational health and road traffic regulations.

For drives on public roads, the latest traffic code applies.

Accordingly, check the tool carrier for road and operational safety each time you take up operation.

Only persons familiar with the tool carrier and instructed on the hazards of operation are allowed to use, maintain and repair the tool carrier.

Young persons of 16 years or younger may not operate the tool carrier!

**Only work in good light and visibility.**

Operator’s clothes should fit tightly. Avoid wearing loosely fitting clothes. Wear solid shoes.

Note the warning and instruction signs on the tool carrier for safe operation. Compliance is for your own safety.

When transporting the tool carrier on vehicles or trailers outside the area to be cultivated, the engine must be switched off and you must wait until the knives have stopped rotating completely.

**Careful with rotating tools – keep at a safe distance!**
1. Safety Instructions

Due to its centrifugal mass, the cutter blade can follow up. During that time, do not stay too close to the mower housing. Only when the cutter blade is completely standing still and the spark plug connector has been withdrawn, works on the flail mower are permitted.

Foreign powered parts shear and squeeze!

Riding on the machine during operation is not permitted.

Match operating speed to conditions.
Do not change settings of governor. High engine speed increases risk of accidents.

Working Area and Danger Zone

The user is liable to third parties working within the flail mower’s working range.

Staying in the danger zone is not permitted.

If the operator should notice that a person or animal is staying within this area, the machine must be shut down without delay and must not be operated again before the area is free again.

Check the immediate surroundings of the machine before you start it. Watch out for children and animals.

Before you start work, clear the area from any foreign object. During operation, always watch out for further objects and remove them in time.

For operation in enclosed areas, ensure that a safety distance is kept to enclosures to prevent damage to tools.

Be careful when mowing; ensure that the cutter blades does not seize obstacles such as border stones, enclosures, roots etc.

Operation and Safety Devices

Before You Start the Engine

Become familiar with the devices and operating elements and their functions. Above all, learn how to shut off the engine quickly and safely in an emergency situation.

Ensure that all protective devices are mounted and positioned to provide protection.

Starting the engine

Do not start engine in closed rooms. The carbon monoxide contained in the exhaust fume is extremely toxic when inhaled!

Before you start the engine set all operating elements to neutral or idling position.

Be careful upon starting and during mowing; do not come directly close to the cutting section with your hands or feet.

When starting, it is not permitted to bring the flail mower into an upright position or to tilt it.

Do not use assist-starting liquids when using electrical assist-starting devices (jumper cable). Danger of explosion.
1. Safety Instructions

Operation

Never leave the operator's position while the flail mower is at work.
The carrying of additional persons is not allowed.
If clogging occurs in the cutting section, shut off the engine, withdraw the spark plug connector and clean the cutting section with an appropriate tool.
In case of damage to the flail mower, immediately shut off the engine and have it repaired.
Should the machine start to vibrate in an unusually strong manner, an immediate inspection is necessary.
If steering causes problems, immediately bring the flail mower to a halt and shut it off. Have the malfunction eliminated without delay.
Driving speed must always be adjusted to suit the surrounding conditions. When driving uphill or downhill and driving across a slope avoid sudden turns. When driving in curves switch off the differential lock.
If possible, always work across the slope.
Pay careful attention to hills, dips and other unforeseen dangers.
Stop the cutting tools before crossing surfaces other than grass.
Never operate machines with damaged or unfitted safety protection gear.

End of Operation

Never leave the flail mower unattended with the engine running.
Before you leave the flail mower, shut off the engine, close the fuel cock, engage the parking brakes and secure against rolling away.
Before you leave the ride-on flail mower fully lower the cutting tools.
Secure flail mower against unauthorized use, remove the ignition key.

Mowing Equipment

In cases of improper operation the sharp blades of the cutter blades pose a considerable danger of injury. Wear protective gloves when working on the cutter blades.
When changing the cutter blades ensure that the screwing movement leads away from the blade edges.
Protective glasses and protective gloves must be worn when sharpening the cutter blades.

Maintenance

Never carry out any maintenance or cleaning with the engine running.
After switching off the drive, the flail mower may continue to coast due to its centrifugal mass. Do not go too near to the flail mower during this time. Only when it has come to a complete standstill can it be worked upon.
Before you work on the engine, always remove spark plug connector.
1. Safety Instructions

Check regularly and, if necessary, replace all protecting devices and tools subject to wear and tear.
Replace damaged cutting tools.
Observe maintenance intervals of the cutter blades.
Always wear safety gloves and use proper tools when exchanging the cutter sections.
Repair work, such as welding, grinding, drilling etc., is not allowed to be carried out on load-bearing, safety-critical parts.
Keep flail mower clean to avoid risk of fire.
Check nuts and bolts regularly for tight fit and retighten, if necessary.
Ensure that you re-install all safety and protective devices and adjust them properly after maintenance and cleaning.
Only use original agria spare parts. All other commercial spare parts must correspond to quality and technical requirements specified by agria.

Storage

It is not allowed to store the flail mower in rooms with open heating.
Never park the flail mower in closed rooms with fuel left in tank. Fuel vapours are hazardous.

Engine, Fuel, and Oil

Never let the engine run in closed rooms. Extreme danger of intoxication! For the same reason, also replace damaged exhaust pipe immediately.
Be careful when handling fuel. Great danger of fire! Never refill fuel close to open fire, inflammable sparks or hot engine parts. Do not refill fuel in closed rooms. Do not smoke when refilling!
Refill only with the engine shut off and cooled down.
Do not spill any fuel, use a proper filling device (e.g. funnel).
In case of fuel-spillage, pull the flail mower away from the spillage before you start the engine.
Make sure fuel is of specified quality.
Store fuel in approved cans only.
Liquids leaking under high pressure, e.g. fuel, can penetrate the skin and cause severe injuries. Immediately see a doctor.
Store anti-corrosive agents and stabilizing liquids out of reach of children. If sickness and vomiting occur, see a doctor. If fuel has contacted eyes, rinse them thoroughly, avoid inhaling of vapours.
Read and observe enclosed instructions.
1. Safety Instructions

Before you dispose of opened and seemingly empty pressurised tins (e.g. of assist-starting liquids) make sure they are completely empty. Empty them in ventilated places safe from spark formation or flames. If necessary, dispose of tins in hazardous waste deposits.

Be careful when draining hot oil, danger of burns.

Make sure oil used is of specified quality. Storage is in approved cans only.

Dispose of oil, greases, and filters separately and properly.

Tyres and Tyre Air Pressure

When working on wheels, make sure tool carrier is parked properly and secured against rolling off.

Any repairs are to be carried out by trained mechanics only and with the appropriate tools.

Regularly check tyre air pressure. Excessive pressure may cause bursts.

Retighten attachment bolts of drive-wheels or check tightness when doing maintenance work.

Electrical System

Persons having a pacemaker may not touch live parts of the ignition system when the engine is running.
1. Safety Instructions

Explanation of Warning Signs

**Attention:**
Carefully read operator's manual before handling the machine. Observe instructions and safety rules when operating.

Shut off engine and remove spark plug connector before cleaning, performing maintenance or repair work.

During operation keep at a safe distance from cutter blades.

Wait until all machine components have completely stopped before touching them.

Danger - flying objects; keep safe distance from the machine as long as the engine is running.

Do not open or remove safety shields while engine is running.

Use sprag before machine is uncoupled or parked.

Stay clear of hot surfaces.

The exhaust fumes contain breath poisons - keep distance. Never let the engine run in closed rooms.

Before each fuel fill, shut off the engine and wait until it has cooled off.

**Signs**

When working with the machine, wear individual protective ear plugs.

Wear protective gloves.

Wear solid shoes.

Check engine oil level.

Explanation of Prohibition Signs

No open fire

Do not smoke!

Do not spray with water

Do not start the engine in closed rooms!
2. Specifications

### Dimensions (mm)

<table>
<thead>
<tr>
<th>Description</th>
<th>4500 621 (65 cm)</th>
<th>4500 622 (65 cm)</th>
<th>4500 631 (80 cm)</th>
<th>4500 632 (80 cm)</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>1160</td>
<td>1270</td>
<td>1270</td>
<td>1270</td>
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<td>790</td>
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<td>h</td>
<td>920</td>
<td>920</td>
<td>920</td>
<td>920</td>
</tr>
<tr>
<td>HH</td>
<td>890 ± 230</td>
<td>890 ± 230</td>
<td>890 ± 230</td>
<td>890 ± 230</td>
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<tr>
<td>l1</td>
<td>1570</td>
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<td>l2</td>
<td>1350</td>
<td>1570</td>
<td>1870</td>
<td>2350</td>
</tr>
<tr>
<td>RH</td>
<td>780</td>
<td>780</td>
<td>660</td>
<td>660</td>
</tr>
<tr>
<td>SH</td>
<td>20 ... 90</td>
<td>20 ... 90</td>
<td>40/65/90/105</td>
<td>40/65/90/105</td>
</tr>
<tr>
<td>PH</td>
<td>460 kN</td>
<td>450 kN</td>
<td>470 kN</td>
<td>460 kN</td>
</tr>
<tr>
<td>PM</td>
<td>460 kN</td>
<td>460 kN</td>
<td>470 kN</td>
<td>470 kN</td>
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<td>VHL</td>
<td>385</td>
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<tr>
<td>VHR</td>
<td>385</td>
<td>385</td>
<td>385</td>
<td>385</td>
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<tr>
<td>β</td>
<td>57°</td>
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<td>δ</td>
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<td>45°</td>
</tr>
</tbody>
</table>
### 2. Specifications

<table>
<thead>
<tr>
<th><strong>Flail mower 65 cm</strong></th>
<th><strong>Flail mower 65 cm</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Front wheels 4500 621</strong></td>
<td><strong>Roller 4500 622</strong></td>
</tr>
<tr>
<td><strong>Driving axle:</strong></td>
<td>.................. Hydrostat gear</td>
</tr>
<tr>
<td><strong>Driving speeds:</strong></td>
<td>...................................</td>
</tr>
<tr>
<td><strong>Forward:</strong></td>
<td>0 - 6,0 km/h</td>
</tr>
<tr>
<td><strong>Reverse:</strong></td>
<td>0 - 3,0 km/h</td>
</tr>
<tr>
<td><strong>Oil for hydrostat:</strong></td>
<td>.................... permanent oil volume</td>
</tr>
<tr>
<td><strong>Steering:</strong></td>
<td>... Single-wheel multiple disc clutch brake</td>
</tr>
<tr>
<td><strong>Tyres:</strong></td>
<td>.......................... 5.00-10 field tyre</td>
</tr>
<tr>
<td></td>
<td>.................. Tyre air pressure: .......... 0,6 - 1,0 bar</td>
</tr>
<tr>
<td></td>
<td>..................................................... 4PR</td>
</tr>
<tr>
<td></td>
<td>.......................... Caster 215x55 mm</td>
</tr>
<tr>
<td></td>
<td>........................................... full rubber</td>
</tr>
<tr>
<td></td>
<td>........................................ with ball bearings</td>
</tr>
<tr>
<td><strong>Fuel tank capacity:</strong></td>
<td>.......... approx. 7,0 l</td>
</tr>
<tr>
<td><strong>Weight:</strong></td>
<td>........................ Empty weight: (with fuel tank filled up): ..........</td>
</tr>
<tr>
<td></td>
<td>4500 621 ............................... 227 kg</td>
</tr>
<tr>
<td><strong>Cutter unit:</strong></td>
<td>................. Flail mower with reciprocating knife system</td>
</tr>
<tr>
<td><strong>Working width:</strong></td>
<td>............. 650 mm</td>
</tr>
<tr>
<td><strong>Cutting height:</strong></td>
<td>........... from 20 to 90 mm</td>
</tr>
<tr>
<td></td>
<td>.... steplessly by means of front wheels</td>
</tr>
<tr>
<td><strong>Cutting range:</strong></td>
<td>...... scrub max. Ø30 mm</td>
</tr>
<tr>
<td><strong>Cutting range:</strong></td>
<td>...... scrub max. Ø20 mm</td>
</tr>
<tr>
<td><strong>Oil for hydrostat:</strong></td>
<td>.................... permanent oil volume</td>
</tr>
<tr>
<td><strong>Steering:</strong></td>
<td>... Single-wheel multiple disc clutch brake</td>
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<td>.......................... Caster 215x55 mm</td>
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<td>........................................... full rubber</td>
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<td></td>
<td>........................................ with ball bearings</td>
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<tr>
<td><strong>Fuel tank capacity:</strong></td>
<td>.......... approx. 7,0 l</td>
</tr>
<tr>
<td><strong>Weight:</strong></td>
<td>........................ Empty weight: (with fuel tank filled up): ..........</td>
</tr>
<tr>
<td></td>
<td>4500 622 ............................... 226 kg</td>
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</tbody>
</table>
2. Specifications

<table>
<thead>
<tr>
<th>Flail mower 80 cm</th>
<th>Flail mower 80 cm</th>
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<tbody>
<tr>
<td><strong>Front wheels 4500 631</strong></td>
<td><strong>Roller 4500 632</strong></td>
</tr>
<tr>
<td><strong>Driving axle:</strong></td>
<td><strong>Driving axle:</strong></td>
</tr>
<tr>
<td>Hydrostat gear</td>
<td>Hydrostat gear</td>
</tr>
<tr>
<td><strong>Driving speeds:</strong></td>
<td><strong>Driving speeds:</strong></td>
</tr>
<tr>
<td>Forward</td>
<td>Forward</td>
</tr>
<tr>
<td>0 - 6,0 km/h</td>
<td>0 - 6,0 km/h</td>
</tr>
<tr>
<td>Reverse</td>
<td>Reverse</td>
</tr>
<tr>
<td>0 - 3,0 km/h</td>
<td>0 - 3,0 km/h</td>
</tr>
<tr>
<td><strong>Oil for hydrostat:</strong></td>
<td><strong>Oil for hydrostat:</strong></td>
</tr>
<tr>
<td>permanent oil volume</td>
<td>permanent oil volume</td>
</tr>
<tr>
<td><strong>Steering:</strong></td>
<td><strong>Steering:</strong></td>
</tr>
<tr>
<td>Single-wheel multiple disc clutch brake</td>
<td>Single-wheel multiple disc clutch brake</td>
</tr>
<tr>
<td><strong>Tyres:</strong></td>
<td><strong>Tyres:</strong></td>
</tr>
<tr>
<td>rear</td>
<td>rear</td>
</tr>
<tr>
<td>5.00-10 field tyre</td>
<td>5.00-10 field tyre</td>
</tr>
<tr>
<td><strong>Tyre air pressure:</strong></td>
<td><strong>Tyre air pressure:</strong></td>
</tr>
<tr>
<td>0,6 - 1,0 bar</td>
<td>0,6 - 1,0 bar</td>
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<tr>
<td>4PR</td>
<td>4PR</td>
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<tr>
<td>front</td>
<td>front</td>
</tr>
<tr>
<td>Caster 215x55 mm</td>
<td>Caster 215x55 mm</td>
</tr>
<tr>
<td>full rubber</td>
<td>full rubber</td>
</tr>
<tr>
<td>with ball bearings</td>
<td>with ball bearings</td>
</tr>
<tr>
<td><strong>Fuel tank capacity:</strong></td>
<td><strong>Fuel tank capacity:</strong></td>
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<tr>
<td>approx. 7,0 l</td>
<td>approx. 7,0 l</td>
</tr>
<tr>
<td><strong>Weight:</strong></td>
<td><strong>Weight:</strong></td>
</tr>
<tr>
<td>Empty weight: (with fuel tank filled up):</td>
<td>Empty weight: (with fuel tank filled up):</td>
</tr>
<tr>
<td>4500 631</td>
<td>4500 632</td>
</tr>
<tr>
<td>247 kg</td>
<td>246 kg</td>
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<tr>
<td><strong>Cutter unit:</strong></td>
<td><strong>Cutter unit:</strong></td>
</tr>
<tr>
<td>Flail mower</td>
<td>Flail mower</td>
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<tr>
<td>with reciprocating knife system</td>
<td>with reciprocating knife system</td>
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<tr>
<td>Working width:</td>
<td>Working width:</td>
</tr>
<tr>
<td>800 mm</td>
<td>800 mm</td>
</tr>
<tr>
<td>Cutting height:</td>
<td>Cutting height:</td>
</tr>
<tr>
<td>from 20 to 90 mm</td>
<td>from 40 to 105 mm</td>
</tr>
<tr>
<td>steplessly by means of front wheels</td>
<td>4 levels by means of roller</td>
</tr>
<tr>
<td>Cutting range:</td>
<td>Cutting range:</td>
</tr>
<tr>
<td>scrub max. Ø30 mm</td>
<td>scrub max. Ø30 mm</td>
</tr>
</tbody>
</table>
## 2. Specifications

### Petrol Engine for 65 cm

**Manufacturer:** ......................... Honda  
**Type:** ..................... GXV 340 UT2 DN4

**Bore:** ........................................ 82 mm  
**Stroke:** ................................. 64 mm  
**Cubic capacity:** ................ 337 ccm  
**Output:** ...................... 8,1 kW at 3600 rpm  
**Max torque:** ...................... 24 Nm  

**Construction:** ............ Fan-air-cooled  
Spark ignition engine with overhead valves, vertically crankshaft  
**Spark plug:** .............. NGK BPR5ES  
Spark plug gap 0,76 mm  

**Ignition:**  
Electr. magnetic ignition, contactless  
Radio remote screened ............ as per VDE 0879  

**Fuel:**  
Commercial ............................................. unleaded regular petrol  
min. octane number 85 - 91 RON  
(refer to fuel recommendations)

**Fuel consumption:** ........... 313 g/kWh  
**Fuel filter:** ..................... feul-online

**Air filter:** ........ Dry filter element with foamed preliminary filter  
**Carburettor:** ........ Throttle valve type

### Engine

**Rated speed:** .................. 3200 rpm  
**Top no-load speed:** ........... 3350 rpm  
**Idling speed:** .................. 1200 rpm  
**Lubrication:** ... Pressure and spinning

**Engine oil:** Filling quantity approx. 1,1 l  
(if changed with filter)  
Multi-grade oil at ambient temperature -15° bis +45°C:  
SAE 10W-40 API-SF, SG (or higher)

**Operability on Slopes:**  
Engine is suited for use on slopes (with oil level at “max” = upper level mark) possible up to 35° inclination (70 %)

**Noise level:**  
Noise level at operator’s ear ............... $L_{pa} = 88$ dB  
according with EN 836 appendix B and EN ISO 3744  
Acoustic power level: ...... $L_{wa} = 100$ dB  
according with EN 836 and EN ISO 11201

**Vibration acceleration value:**  
Hand-arm vibration  
on handlebar: .............. $a_{hw} = 1,48 \text{ m/s}^2$  
in accordance with EN 836/A2 and DIN EN ISO 20643
2. Specifications

Petrol Engine for 80 cm

Manufacturer: .......... Briggs & Stratton
Type: .. Vanguard OHV 16HP V-Twin

Bore: ........................................ 68 mm
Stroke: ..................................... 66 mm
Cubic capacity: ................... 480 ccm
Output: ............ 11.9 kW (16 SAE-PS) \( \text{at 3600 rpm} \)
Max torque: ......................... 33 Nm \( \text{at 2400 rpm} \)

Construction: ........ Fan-air-cooled Spark ignition engine with overhead valves, V-mounted double-cylinder and vertically crankshaft

Spark plug: ............ BOSCH FR8DC (706 09)
Spark plug gap 0.76 mm

Ignition:
Electr. magnetic ignition, contactless
Radio remote screened .......... as per VDE 0879

Valve clearance (engine cold):
Intake ....................... 0.05 mm
Outlet ....................... 0.10 mm

Fuel:..........................
Commercial .................. unleaded regular petrol
min. octane number 85 - 91 RON
(refer to fuel recommendations)

Fuel consumption: ........ 312 g/kWh
Fuel filter: .................. fuel-online
Air filter: ........ Dry filter element with foamed preliminary filter

Carburettor: ................. Horizontal float carburettor

Rated speed: ...................... 3200 rpm
Top no-load speed: ........... 3350 rpm
Idling speed: ..................... 1750 rpm

Lubrication:.. Pressure lubrication, full flow oil filter
Oil filter ...................... filter cartridge

Engine oil: Filling quantity approx. 1.6 l
(if changed with filter)

Multi-grade oil at ambient temperature -15° bis +45°C:
SAE 10W-40 API-SF, SG (or higher)

Operability on Slopes:
Engine is suited for use on slopes (with oil level at “max” = upper level mark) possible up to

35° inclination (70 %)

Noise level:
Noise level at operator’s ear .............. \( L_{Pa} = 89 \text{ dB} \)
according to EN 836 appendix B and EN ISO 3744

Acoustic power level: ...... \( L_{WA} = 101 \text{ dB} \)
according to EN 836 and EN ISO 11201

Vibration acceleration value:
Hand-arm vibration
on handlebar: .............. \( a_{hw} = 3.4 \text{ m/s}^2 \)
in accordance with EN 836/A2 and DIN EN ISO 20643
### 3. Devices and Operating Elements

#### Due Use

The flail mower agria 4500 Hydro is suited for use in farming and forestry for example for grass maintenance, such as the mowing of grass, meadows and scrub up to max. Ø3 cm.

#### Engine

- The **four-stroke petrol engine** runs on commercial unleaded petrol (refer to fuel recommendations page 6).

During the first 20 operating hours (break-in period) do not use engine to maximum power.

**Even after break-in period** never use engine at higher speed than necessary for the work in hand.

**High engine speed is harmful to any engine and considerably affects its durability. This applies especially for no load operation. Any overspeed (have the engine roar) can result in immediate damage.**

#### Ignition System

The petrol engine is equipped with a contactless ignition system. We recommend to have necessary checkups done by an expert only.

#### Cooling System

The cooling system is fan-cooled. Therefore keep screen at recoil starter and cooling fins of cylinder clean and free from sucked-in plant trash.

#### Idling-speed

Always ensure that idling-speed is adjusted correctly. At low speeds and with the speed control lever set to idle, the engine is supposed to run smoothly and without run-out.

#### Air Filter

The air filter purifies the air intake. A clogged filter reduces engine output.
3. Devices and Operating Elements

Version 4500 621, -622
65 cm

**Speed adjusting lever**

The lever (A/26) is used in the illustrated positions for the following:

- \(\bigcirc\) Switching engine OFF
- \(\bigcirc\) Engine speed stepless from min. to max.
- \(\n\) Choke, for engine cold starts

Version 4500 631, -632
80 cm

**Choke**

- \(\n\) for engine cold starts
- \(\uparrow\downarrow\) operating position

**Engine Shut-off switch**

0 = Off - engine shut off
1 = Operating position

**Speed adjusting lever**

The lever (A/26) is used in the illustrated positions for the following:

- \(\bigcirc\) Engine speed stepless from min. to max.
3. Devices and Operating Elements

**Safety circuit**

☑️ Engine shut-off position "0" (both levers not pressed).

☑️ Operating position (at least one lever pressed down and held)

⚠️ **Do not fasten safety circuit lever**

⚠️ Release the safety circuit lever in an emergency, the lever will automatically go to STOP position!
3. Devices and Operating Elements

Transmission
The agria flail mower is equipped with a hydrostatic drive.

Driving Control
- The driving speed forward or reverse is steplessly set or changed with the forefinger or the thumb at the driving lever (A/27).
- The 0 setting is engaged when the marking on the driving lever is level with the "0" in the illustration and hits the the spring catch.
- When turning the driving lever forwards, the driving speed is steplessly increased forwards and accordingly backwards, if the driving lever is turned backwards and down.

The engine can only be started if the driving switch is set to "0"!

Mulching Drive
The mulching drive is switched on and off by using the excentric lever (A/24)

switch on
Swing the eccentric lever (A/24) back and over dead centre.

switch on
Swing the eccentric lever (A/24) down.

The engine can only be started if the driving switch and mulching drive is set to "0" and both steering levers are set to "park brake" and are locked into place!
-Safety circuit!
3. Devices and Operating Elements

**Steering Brake**

By use of the steering brake levers (A/28 and A/29) the drive to the inside-facing wheel is switched off and then braked, the outside-facing wheel maintains its speed.

**Steering lever settings**

1. **Wheel drive on**
   - Steering lever pushed down
   - Both pawls (Z) opened

2. **Wheel drive off**
   - Steering lever in the central position

3. **Steering brake on**
   - Wheel drive switched off
   - Steering lever pushed up to the stop

4. **Coasting Operation**
   - Wheel drive switched off
   - Both steering levers in the central position
   - Pawls (Z) engaged in 1st ratchet

5. **Park brake**
   - Wheel drive switched off
   - Both steering levers pushed up to the stop
   - Pawls (Z) engaged in 2nd ratchet

**Quick stop**

- By moving both steering levers (A/28+ A/29) to the central position the operating drive is switched off
- By moving both steering levers to the stop the driving wheels are braked (application recommended, for instance when engine is overloaded)
  - The equipment drive (PTO shaft) remains unaffected.
3. Devices and Operating Elements

Handlebar

Do never adjust operating handles during working – risk of accidents!

Handlebar – Height Adjustment

- Unfix clamping lever (A/22) until the ratchets are free.
- Bring left and right handlebar to the desired height and introduce into the respective ratchet.
- Tighten clamping lever (A/22) again.

Handlebar – Lateral Adjustment

From its normal position (centre position), the handlebar can be turned by about 20° to the left or right.

- Handle (A/23) pulled back
  - Handlebar locking bolt is unlocked
  - Handlebar can be turned to the left or right
- Release handle and slightly move handlebar to the left and right until the locking bolt is engaged.
Cutting Height Adjustment

Version: Front wheels

Only adjust cutting height and front wheels when mulching drive is switched off and parking brake is engaged - risk of accidents!

Adjustment

20 mm - 90 mm stepless
For this turn the crank (A/6) upwards
lower = Turn clockwise
higher = Turn anti-clockwise
Flip the crank handle back down after adjusting = Security against unintentional adjustment.

Front wheels

The front wheels may be adjusted using the locking bolts (A/8) to:

A Moveable position
Bolts turned upwards and facing back = light steering on even surfaces

B Rigid position
in running wheel central position (movement directly ahead)
Bolts turned downwards, facing forward and locked = better control of the sides on slopes
3. Devices and Operating Elements

Cutting Height Adjustment

Version: Roller

⚠️ Only adjust cutting height and front wheels when mulching drive is switched off and parking brake is engaged - risk of accidents!

Adjustment

40 mm - 105 mm in 4 levels

For this press ratchet lever (A/20) outwards:
- lower = adjust ratchet lever upwards
- higher = adjust ratchet lever downwards
and swing ratchet lever inwards into the appropriate ratchet.

Cutting height:
- 1 = 40 mm
- 2 = 65 mm
- 3 = 90 mm
- 4 = 105 mm
3. Devices and Operating Elements

Fixing Points

For towing away, recovering and tying down and to ensure a safe transport, use the fixing points.

Version front wheels
on the tubular frame at the front and the lugs (A/16) at the rear.

Version roller
lug (A/18) at the front and the lugs (A/16) at the rear.
4. Commissioning and Operation

Commissioning

Please note that durability and operational safety of the engine depend to a large extent on its breaking-in. Always allow a cold engine to warm up for some minutes and never run it at full throttle at the beginning.

Please note: for the first 20 hours of operation (break-in period) do not use the engine at full power.

Make sure you check and maintain air filters regularly and use clean fuel. Only use branded petrol.

Only use fresh, clean fuel (not older than 3 months) and approved fuel cans to be purchased in special shops. Rusty sheet metal cans or fuel cans not suited for petrol/Diesel are not permitted.

For the first commissioning or after longer periods of no operation, fill fuel tank to maximum to avoid starting problems.

Be careful when dealing with fuel.

Fuel is easily inflammable and explosive in certain conditions!

- Do not refill in closed rooms.
- Before each fuel fill, shut off the engine and wait until it has cooled off.
- Never refill close to open fire, inflammable sparks or hot engine parts.
- Do not smoke during filling!
- Do not spill any fuel, use a proper filling device.

Do not cause fuel tank to overflow, but leave a 5 mm margin for the fuel to expand.

Note: For reasons of transport, the engine is not filled completely with engine oil!

Before you operate the engine the first time, fill in engine oil, do not fill over max.
### 4. Commissioning and Operation

<table>
<thead>
<tr>
<th>Step</th>
<th>Image</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><img src="image1.png" alt="Fuel Tank Icon" /></td>
<td>? ok Sufficient fuel is filled into the tank?</td>
</tr>
<tr>
<td>2</td>
<td><img src="image2.png" alt="Air Filter Icon" /></td>
<td>? ok Air filter clean?</td>
</tr>
<tr>
<td>3</td>
<td><img src="image3.png" alt="Engine Oil Level Icon" /></td>
<td>? ok Check the engine oil level</td>
</tr>
<tr>
<td>4</td>
<td><img src="image4.png" alt="Bolt Icon" /></td>
<td>? ok Check all bolts and nuts for tight fit</td>
</tr>
</tbody>
</table>

**Important Notes:**

- Only take machine into operation with all protective devices mounted and positioned to provide protection!
- Check safety circuit
- Only take machine into operation with all protective devices mounted and positioned to provide protection!
- Careful when starting the engine in closed rooms! Ensure good ventilation and fast escape of exhaust fumes. Exhaust fumes contain carbon monoxide which acts toxic when inhaled.
- Do not touch the hot engine - danger of burns!
- Do not touch or remove the ignition line and spark plug connector while the engine is running.
4. Commissioning and Operation

Starting the Engine

Wear individual protective ear plugs and solid shoes!

Mount spark plug connector

1. Open fuel tap
   (only version 65 cm)

2. Set the engine shut-off switch to operating position
   (only version 80 cm)

3. Set driving speed to position neutral “0”

4. Set mulching drive to "0"

5. Set both steering levers to "park brake" and lock

   The engine can only be started if the driving switch and mulching drive is set to "0" and both steering levers are set to "park brake" and are locked into place!

   Safety circuit!

6. Cold engine: set speed adjusting lever to max and put CHOKE to “CHOKE” position
   
   Warm engine: Set speed control lever to max

7. Start the engine with the recoil starter

8. Once the engine has started, let it warm up for some time. Slowly push choke back into operating position.
4. Commissioning and Operation

Driving

Start the engine Pos. 1 - 8

9 Set the engine revolutions to "max"

10 Set both steering levers to "drive"

- Steer according to the description on page 22

11 Move the driving levers slowly either forwards or backwards (depending on the driving direction)

- the driving speed increases as the driving levers are moved further

Mulching

Start the engine and drive Pos. 1 - 11

12 Switch the mulching drive slowly and evenly to "I"

Stop the machine while the engine is running:

- driving speed to "0"
- pull park brake and lock
- mulching drive to "0"

⚠️ Only adjust the cutting height when the knives are at a standstill!
- Turn off the mulching drive before moving across areas other than grass.
- If a foreign object is hit, look for damage to the machine and carry out any necessary repairs before continuing to work with the machine. Worn or damaged cutting tools can be ejected!
- If the machine begins to vibrate unusually strongly an immediate check is necessary.
- Before any cleaning turn off the engine and pull spark plug connector for safety reasons!
4. Commissioning and Operation

**Danger Zone**

![Diagram of Danger Zone]

Staying in the danger zone of the machine during starting and operation is not permitted.

If the operator should notice that a person or animal is staying within this area, the machine must be shut down without delay and must not be operated again before the area is free again.

The user is liable to third parties working within the ride-on brushcutter's working range.

**Working on Slopes**

![Diagram of Working on Slopes]

To prevent the machine from sliding on slopes make sure it is secured by another person using a bar or a rope. This person must stay at a higher position than the vehicle and at a safe distance from the attachment at work!

- if possible, always work cross to the slope!
- **Do not drive on slopes greater than 35°.**

Please be aware that there is no such thing as a "safe" slope. Driving on grass-covered slopes requires particular attention. In order to protect against rolling over you should:

- only drive if the ground conditions allow - on damp grass there is insufficient adhesion for the wheels
- not suddenly stop or start if you are driving up- or downhill
- maintain a low driving speed on slopes and in sharp curves
- pay attention to mounds and dips and other dangers which may not be obvious.
4. Commissioning and Operation

**Shutting off Petrol Engine**

1. Reduce the engine speed to "min"

2. Set the mulching drive to "0"

3. Set both steering levers to "park brake" and lock

4. Run the engine for approx. 2 minutes at a slow speed before it is switched off.
   - Set the speed control lever to engine stopp respectively the engine shut-off switch to "0"

5. Wait until all moving machine parts have come to a standstill!

6. When leaving, secure the machine with chocks against rolling away!

7. Secure the machine against unauthorized use – disconnect spark plug connector!
5. Maintenance

Engine agria

Apart from observing all operating instructions, it is also important to pay attention to the following maintenance instructions.

⚠️ ⌛ ⌛ ⌛ ⌛ ⌛

Only do all maintenance work with the engine shut off and spark plug connector disconnected.

Engine

1. Checking Oil Level
   - each time you take up operation and after 8 operating hours → Engine
   - Engine oil level below "min" and over "max" leads to engine failure or possibly a breakdown!

2. Changing Engine Oil
   After the first 5 operating hours, the following oil changes always after 25 - 50 operating hours
   - while engine is still warm, but not hot – danger of burns!
   - Clean oil filler tube, drain plug A and surrounding parts.
   - Dispose drain plug A and collect old oil in proper container.
   - Dispose of old oil in the proper manner.
   - Lock drain plug.
   - Fill fresh oil B → engine
   - For engine oil quality refer to “Specifications”

Engine Oil Filter (version 80 cm)
Change oil filter cartridge (B/5) always after 100 operating hours → engine

Fuel filter
Change fuel filter (B/12) always after 100 operating hours → engine
5. Maintenance

Cooling System

After mowing for longer periods of time, clogging of plants and dust may occur in the cooling system. Sustained operation with the cooling system clogged lets the engine heat up and causes damage.

Clean engine only with a brush or compressed air. Do not spray with water.

- Always check cooling-air screen (B/11) and remove dirt and plants sucked in: Take off cooling-air screen and clean with a brush or compressed air.

- Clean fan system after every 100 hours of operation or at least once per year, preferably before the season starts. Take off fan case and clean cooling fins on both, cylinder and cylinder head, in addition to the fins and cooling-air screen.

Exhaust System and Governor

Check exhaust system (B/9), governor link, governor rod and governor springs on a regular basis for plant trash and clean, clean with a brush or compressed air if necessary. Danger of fire results when exhaust system is dirty.

Check each time before you put the flail mower into operation.

Spark plug

For fitting and removing the spark plugs swing the handlebar to the right.

All other maintenance of the engine → engine
5. Maintenance

Machine

Hydrostat Gear

The hydrostat gear is permanently filled with lubrication oil and thus no oil change is necessary.

If there are leaks →agria - Service←

Hydrostat Cooling Fan

The cooling fan is located above the hydrostat gear.

- Check the functionality of the cooling fan at least once per year and remove any dirt on the radiator grill. →agria - Service←

Tarpaulin Guard, Rubber Cap Strips

Always inspect for damage and wear before starting the machine and when carrying out service work and replace if necessary:

1. tarpaulin guard at the cutting section in front
2. rubber cap strips at the mulch housing
3. rubber cap strip at the gear.

⚠️ Do not operate either with damaged tarpaulin guard/rubber cap strips or without them fitted.

Drive-Wheels

- When commissioning the tool carrier and each time you change wheels, check and tighten wheel screws after the first 2 operating hours with 100 Nm. Proceed likewise when doing maintenance work.

- Check tyre air pressure regularly. For smooth driving, make sure that there is the same pressure in front and rear tyres respectively.
5. Maintenance

Adjustments on Hand Levers

Check clutch play or adjustments each time you operate the machine. If necessary, readjust (especially after commissioning the machine, during break-in period, and after exchanging the Bowden cables).

Handhebelspiel: X = 1-2 mm

! = The Bowden cable must be placed in the hand lever support on bottom position!

Adjustment:
1. Remove retaining spring (2).
2. Remove cable end (3) and adjusting pin (4) out of bracket in hand lever.
3. Screw adjusting pin (4) in or out to a play of X or idle is present in position 0.
4. Place cable end and adjusting pin back into bracket
5. Fit retaining spring (2).

Park Brake

Every time you start operation, check the park brake on proper function = with the steering brake levers on both sides pulled in and locked

● The park brake must hold the machine on slopes of 25° if the pawl (Z) on either side is engaged in the 2. ratchet.

Adjustment: on hand levers 1 - 3 to be undertaken alternately the setting of the wheel coupling.

Wheel Coupling

Each wheel must be uncoupled when the pawl (Z) is engaged in the 1. ratchet.

Adjustment: to be made with the adjusting screws (A/13) alternately the setting of the park brake.
5. Maintenance

Safety Circuit
Check dead stop for proper function each time you take up operation and each time you do maintenance work on the machine.

- The engine must not be capable of being started when the mulching drive is in operation or when the driving lever is not set to a neutral "0".
- When the operator leaves the position at the handlebars and the mulching drive is in operation or the movement drive is switched on, the engine must automatically come to a stop.
- Check electric conductors and connections for good condition, exchange, if necessary.

[agria - Service](#)

Engine-Off-Switch
Check engine-off-switch for proper function each time you do maintenance work on the machine.

1 Version 65 cm
- With the speed adjusting lever in position , the engine must automatically come to a stop.
- Check electric conductors and connections for good condition. [agria - Service](#)

2 Version 80 cm
- With the engine-off-switch in position , the engine must automatically come to a stop.
- Check electric conductors and connections for good condition. [agria - Service](#)

Cutter Brake
The brake which is integrated into the cutting tools ensures that, after switching off the engine (at max. engine speed) or when leaving the operating position (safety switch), the cutting tools will come to a complete stop at the latest after 7 seconds.
- Check cutter brake for proper function each time you take up operation.
- After every **100 hours** check that the cutter coasting time < 7 seconds, where necessary [agria - Service](#).
5. Maintenance

V-Belt
Always after 50 operating hours check V-belt for wear, change if necessary:

A V-belt engine - hydrostat
B V-belt engine - cutter brake
C V-belt cutter brake - knife shaft

Tensioning V-Belt
V-belt A:
is tensioned automatically through springs.

V-belt B:
- Switch on mulching drive to "I"
- Remove the V-belt protector (A/4) on the mulch housing
- Regulate adjusting nut ④ at the end of the bowden cable until the necessary tension in the V-belt has been reached ➔①
- Remount the V-belt protector (A/4)!

V-belt C:
- Remove the V-belt protector (A/4) on the mulch housing
- Loosen screws ② in front and in the back approx. one turn
- Regulate adjusting screw ① until the necessary tension in the V-belt has been reached ➔①
- Retighten screws ②
- Remount the V-belt protector (A/4)!

Correct V-belt tension:
if a V-belt string could be pressed in with thumb pressure approx. 10 - 15 mm.

Do not operate the machine without the protection device in place!
5. Maintenance

Changing V-Belt

**V-belt A:** Access from underneath at the rear

**V-belt B:**
- Switch off mulching drive to "0"
- Remove the V-belt protector (A/4) on the mulch housing
- Remove screw 3 for tension lever
- Change the V-belt B
- Remount screw 3 for tension lever
- Remount the V-belt protector (A/4)!

**V-belt C:**
- Switch off mulching drive to "0"
- Remove the V-belt protector (A/4 and A/5) on the mulch housing
- Loosen V-belt tension (2 1)
- Remove screw 3 for tension lever
- Remove V-belt B of the V-belt pulley
- Change the V-belt C
- Remount V-belt B
- Remount screw 3 for tension lever
- Adjust V-belt tension
- Remount the V-belt protector (A4 and A/5)!

Do not operate the machine without the protection device in place!
5. Maintenance

Driving Chains

1. **Cleaning and Lubrication**
   - Carry out a check by eye of driving chains for dirt and grease, clean where necessary and **at least once per year** lubricate with Teflon spray. For this it is best to remove the chain protection covers (see below paragraph chain tension).

   Also lubricate driving chain after every cleaning with a high-pressure cleaner with Teflon spray and start it for a short while.
   - Replace the chain protection covers!

2. **Chain Tension**
   - Carry out a check by eye of driving chains for the right chain tension **at least once per year**, if necessary retighten. For this it is best to remove the chain protection covers:
     - Loosen clamping screws (1) approx. one turn
     - Regulate adjusting nuts (2) until the necessary chain tension has been reached ➔
     - Retighten clamping screws (1)
     - Replace the chain protection covers!

   **Do not operate the machine without the protection device in place.**

---

**Correct chain tension:**

if a chain string could be pressed in with thumb pressure approx. 10 - 15 mm.
5. Maintenance

Lubricating points

Lubricate at the lubricating nipples ① - ② after each 50 operating hours or least once per year and after cleaning with a high-pressure cleaner.

Lubricate at the lubricating nipples ③ - ④ after each 100 operating hours or least once per year and after cleaning with a high-pressure cleaner.

Version front wheels

① on either side knife shaft bearing (left by the recess at the V-belt protector)
③ on either side rocker bearing of the front wheels
④ on either side locking bolts of the front wheels

Version roller

① on either side knife shaft bearing (left by the recess at the V-belt protector)
② on either side roller bearing
5. Maintenance

Flail Knives

- Wear protective gloves.
- Do not re-sharpen blunt or damaged flail knives. The knives may be re-used after the first cutting edge is worn by turning 180°. After this a change of knives is necessary.
- Worn or damaged cutting tools can be ejected!

- After every 50 working hours, at every change of knives and when there is an increase in vibration, check the flail knives, screws and the fixing lug on the rotor shaft for wear and damage.

Replace all parts which do not meet the minimum dimensions.

- Only use a hexagon head screw (1) with a property class of at least 10.9.
- Never work with flail knives and screws which are below the dimensions shown in the diagram or which are damaged!
- Should increased vibrations in the machine continue to occur →agria - Service←

The flail knives are easily exchanged, are suspended loosely swinging and must remain freely suspended.

- Only use original agria spare parts!

agria-No. 65 cm 80 cm
Flail knives (4) 79084 32 St. 48 St.
Hexagon screw (1) 10.9 77779 16 St. 24 St.
Washer (2) 55709 32 St. 48 St.
Locking nut 00666 16 St. 24 St.

- Tightening torque of the counternut: 25 Nm. Always exchange the counternut for a new one when changing the knives.
- Oil the flail knife screws a little in cases of extremely hard use, so that wear is reduced.
General Maintenance

- Watch out for fuel and oil leakage, especially from the engine, hydrostat gear and angular gear, and repair if necessary.

>agria - Service<

- Regularly check bolts and nuts for tight fit and tighten them as necessary.
- Slightly grease all sliding and moving parts with bio-lubricating grease and bio-lubrication oil.

Cleaning

After every mulching application, immediately and thoroughly clean the cutting section with water. All sliding parts must then be greased with Bio lube oil or Bio grease.

After cleaning with a high-pressure cleaner, immediately lubricate the lubricating points at the machine and shortly operate the flail mower so that the entered water is pressed out.

At the bearing points, a grease collar shall have emerged protecting the bearing point against entering of dirt, plant sap and water.

Clean engine only with a cloth. Avoid spraying with air-compressed water jets, as water might leak into ignition and fuel system causing malfunctions.

Graphic Symbols

Worn and missing stickers with operating and safety instructions must be replaced.
Storage

For longer periods of no operation proceed as follows:

a) Clean thoroughly
Repair paint coat

b) Petrol engine preservation

see also ➔ Engine

- Drain fuel completely or fill fuel tank and add fuel stabilizer (agria no. 799 09).
- Observe enclosed instructions.
Let engine run for approx. 1 minute.

- Change the engine oil.

- Fill a tea-spoon (approx. 0.03l) of engine oil into the spark plug opening. Slowly crank the engine.

- Reinstall the spark plug and set the piston to compression via the recoil starter (pull the starter grip until resistance is felt) - valves are closed.

- Slowly crank the engine after every 2–3 weeks (spark-plug connector is removed). Then set the piston to compression again.

c) V-Belt and Clutch

Always only shut down the machine with the mulching drive disengaged, otherwise problems could occur with the clutch as a result of deformed V-belts.

d) Parking

To avoid severe corrosion:

- to preserve the machine from atmospheric influences
- do not park the machine:
  - in humid rooms
  - in rooms where fertilizer is stored
  - in stables or adjacent rooms.

e) Covering the machine

Protect the machine with cloth or a similar cover.
A = Each time before you take up operation
B = After every cleaning with air-compressed water jets
J = Once a year

Maintenance Schedule
**Inspection and Maintenance Chart**

<table>
<thead>
<tr>
<th>Item in chart</th>
<th>P</th>
<th>A</th>
<th>2</th>
<th>8</th>
<th>25</th>
<th>50</th>
<th>100</th>
<th>500</th>
<th>1000</th>
<th>J</th>
<th>B</th>
<th>p.</th>
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<tbody>
<tr>
<td>Check safety circuit function</td>
<td>11</td>
<td>K</td>
<td></td>
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<td>37</td>
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<tr>
<td>Check engine shut-off switch function</td>
<td>11</td>
<td>K</td>
<td></td>
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<td>37</td>
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<tr>
<td>Check cutter brake for proper function</td>
<td>16</td>
<td>K</td>
<td></td>
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<td>Check brake</td>
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<tr>
<td>Check tarpaulin guard and rubber cap strips</td>
<td>15</td>
<td>K</td>
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<td>Clean cooling-screen</td>
<td>4</td>
<td>K</td>
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<td>34</td>
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<td>Check engine oil level, refill, if necessary</td>
<td>1</td>
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<td>Clean surrounding parts of exhaust</td>
<td>7</td>
<td>K</td>
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<td>34</td>
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<td>Tighten wheel screws</td>
<td>13</td>
<td>K</td>
<td></td>
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<td></td>
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<td>35</td>
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<tr>
<td>Check bolts and nuts</td>
<td></td>
<td>K</td>
<td></td>
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<td>43</td>
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<tr>
<td>Cleaning</td>
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<td>Lubricate knife shaft bearing</td>
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<td>Lubricate roller bearing</td>
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<td>K</td>
<td>K</td>
<td>K</td>
<td>K</td>
<td>41</td>
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<tr>
<td>Check V-belt</td>
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<td>38</td>
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<tr>
<td>Clean spark plug and adjust</td>
<td>6</td>
<td>K</td>
<td>BM</td>
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<tr>
<td>Change engine oil</td>
<td>2</td>
<td>W</td>
<td>W</td>
<td>33</td>
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<tr>
<td>Clean air filter</td>
<td>3</td>
<td>W</td>
<td>BM</td>
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<td>Check the knives for wear</td>
<td>14</td>
<td>W</td>
<td>W</td>
<td>42</td>
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<td>Check the cutter coating time</td>
<td>16</td>
<td>W</td>
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<td></td>
<td></td>
<td>37</td>
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<tr>
<td>Clean guide plates, cooling fins – earlier, if required</td>
<td></td>
<td>F</td>
<td>F</td>
<td>34</td>
<td></td>
<td></td>
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<tr>
<td>Change engine oil filter (only vers. 80 cm)</td>
<td>8</td>
<td>W</td>
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<tr>
<td>Lubricate front wheels</td>
<td>19</td>
<td>K</td>
<td>K</td>
<td>BM</td>
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<td>Replace spark plug</td>
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<td>K</td>
<td>BM</td>
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<td>Adjust valve clearance</td>
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<td>Clean cylinder head</td>
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<tr>
<td>Replace fuel filter</td>
<td>5</td>
<td>W</td>
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<tr>
<td>Replace fuel hoses</td>
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<td>F</td>
<td>BM</td>
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<td>Lubricate driving chains</td>
<td>12</td>
<td>W</td>
<td>W</td>
<td>40</td>
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<td>Check driving chain tension</td>
<td>12</td>
<td>W</td>
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<td></td>
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<td>40</td>
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<tr>
<td>Lubricate all sliding parts</td>
<td></td>
<td>K</td>
<td>K</td>
<td>43</td>
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<tr>
<td>Check hydrostat cooling fan</td>
<td>9</td>
<td>W</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>35</td>
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</tr>
</tbody>
</table>

**P** = Item in lubrication chart or maintenance schedule (page 46)

**A** = Each time you take up operation

**B** = After each cleaning, especially with a high-pressure cleaner

**J** = At least once per year

**K** = Checks and maintenance to be executed by operator

**W** = Maintenance to be executed by professional workshop

**F** = Maintenance should be carried out by your agria workshop

**BM** = Refer to engine operating instructions
# 6. Troubleshooting

*Observe safety instructions!* Have all serious malfunctions on the machine or engine repaired by your agria workshop. They have the proper tools. Improper repairs can only add to the damage.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause</th>
<th>Remedy</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrol engine does not start</td>
<td>Spark plug connector not connected</td>
<td>Connect spark plug connector</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>CHOKE is not operated</td>
<td>Set choke lever to position CHOKE</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Engine shut-off switch is set to „0”</td>
<td>Set engine shut-off switch to „I”</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Safety circuit is not set to start position</td>
<td>Set safety circuit to start position</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Mulching drive not switched off</td>
<td>Switch off mulching drive</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Driving speed not in position neutral</td>
<td>Set driving speed to „0” neutral</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Park brakes not applied</td>
<td>Set both steering levers to “park brake” and lock</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Fuel tank empty or poor fuel</td>
<td>Fill fresh fuel</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Fuel line clogged</td>
<td>Clean fuel line</td>
<td>BM</td>
</tr>
<tr>
<td></td>
<td>Defective spark plug</td>
<td>Clean, adjust or exchange spark plug</td>
<td>BM</td>
</tr>
<tr>
<td></td>
<td>Engine too much fuel („flooded engine”)</td>
<td>Dry and clean spark plug and start at full throttle</td>
<td>BM</td>
</tr>
<tr>
<td></td>
<td>Engine-off-line defective</td>
<td>Check line and connections</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>Leaked air due to loose caburetor and suction line</td>
<td>Tighten attachment bolts</td>
<td>F</td>
</tr>
<tr>
<td>Misfirings in petrol engine</td>
<td>Engine running in CHOKE range</td>
<td>Set CHOKE to operating position</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Loose ignition cable</td>
<td>Fit connector tightly on ignition cable, fix ignition cable retaining device, fit connector tightly on spark plug</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>Clogged fuel line or poor fuel</td>
<td>Clean fuel line, fill fresh fuel</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Vent opening in fuel tank cap clogged</td>
<td>Exchange fuel tank cap</td>
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<td></td>
<td>Water or dirt in fuel system</td>
<td>Drain fuel and fill fresh fuel</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Air filter clogged</td>
<td>Clean air filter or exchange</td>
<td>BM</td>
</tr>
<tr>
<td></td>
<td>Carburetor misadjusted</td>
<td>Re-adjust carburetor</td>
<td>BM</td>
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<tr>
<td>Excessive temperature in petrol engine</td>
<td>Low engine oil level</td>
<td>Refill oil immediately</td>
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<tr>
<td></td>
<td>Impaired cooling</td>
<td>Clean cooling fan screen, clean internal cooling fins</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Air filter clogged</td>
<td>Clean air filter or exchange</td>
<td>BM</td>
</tr>
<tr>
<td></td>
<td>Carburetor misadjusted</td>
<td>Re-adjust carburetor</td>
<td>BM</td>
</tr>
<tr>
<td>Misfirings in petrol engine at high speeds</td>
<td>Short firing intervals</td>
<td>Adjust spark plug</td>
<td>BM</td>
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<tr>
<td></td>
<td>Incorrect idle mixture</td>
<td>Adjust carburetor</td>
<td>BM</td>
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<tr>
<td></td>
<td>Petrol engine frequently stalls in idle</td>
<td>Firing interval too long, defective spark plug</td>
<td>Adjust or replace spark plug</td>
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<tr>
<td></td>
<td></td>
<td>Carburetor misadjusted</td>
<td>Re-adjust carburetor</td>
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<tr>
<td></td>
<td></td>
<td>Air filter clogged</td>
<td>Clean air filter or exchange</td>
</tr>
</tbody>
</table>
## 6. Troubleshooting

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause</th>
<th>Remedy</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrol engine does not run smoothly</td>
<td>Speed control linkages clogged or jammed</td>
<td>Clean speed control linkages</td>
<td>34</td>
</tr>
<tr>
<td>Petrol engine does not stop when set to stop</td>
<td>Defective engine-stop-line</td>
<td>Check line and connection</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>Earth missing</td>
<td>Check ground contact</td>
<td>F</td>
</tr>
<tr>
<td>Petrol engine output too low</td>
<td>Air filter clogged</td>
<td>Clean air filter or exchange</td>
<td>BM</td>
</tr>
<tr>
<td></td>
<td>Loose cylinder head or damaged gasket</td>
<td>Tighten cylinder head, exchange gasket</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>Poor compression</td>
<td>Have engine checked</td>
<td>F</td>
</tr>
<tr>
<td>No wheel drive</td>
<td>V-belt tension defective</td>
<td>Check V-belt tensioning device</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>V-belt defective</td>
<td>Change V-belt</td>
<td>39</td>
</tr>
<tr>
<td>Drive speed not regular</td>
<td>Hydraulic operation defective</td>
<td>Check and adjust cables and operating elements</td>
<td>F</td>
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<tr>
<td>Steering brake has no effect</td>
<td>Blockage in the steering operation by foreign bodies</td>
<td>Remove blockage on the steering handles and operating elements in the steering bar</td>
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</tr>
<tr>
<td></td>
<td>Steering brake misadjusted</td>
<td>Readjust</td>
<td>F 36</td>
</tr>
<tr>
<td></td>
<td>Bowden cables defective</td>
<td>Change bowden cables</td>
<td>F</td>
</tr>
<tr>
<td>No mulching drive</td>
<td>V-belt tension defective</td>
<td>Check V-belt tensioning device</td>
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<td></td>
<td>V-belt defective</td>
<td>Change V-belt</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>Mulching drive misadjusted</td>
<td>Readjust</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>Bowden cables defective</td>
<td>Change bowden cables</td>
<td>F</td>
</tr>
<tr>
<td>Excessive vibration</td>
<td>Loosened attachment bolts</td>
<td>Tighten attachment bolts</td>
<td>43</td>
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<td></td>
<td>Knives damaged or unevenly worn</td>
<td>Replace knives</td>
<td>F 42</td>
</tr>
<tr>
<td>Mulching output suddenly declines</td>
<td>Dull knives</td>
<td>Change knives or re-sharpen them</td>
<td>F 42</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Remove any burr with a hand grinding stone</td>
<td></td>
</tr>
</tbody>
</table>

*BM = see operating instructions engine
F = agria - Service*
1 Delta module  
2 Dead man's switch left  
3 Dead man's switch right  
4 Engine Stop  
  - for version 65 cm on the engine  
  - for version 80 cm on the handlebar (A/25)  
5 Mulching drive  
6 Driving speed  
7 Brake right  
8 Brake left

bl = blue  
br = brown  
br/bl = brown/blue  
sw = black  
we = white
# Varnishes, Wear Parts

agria Order No.

## Fuel Stabilizer for Petrol Engine
- **799 09** Fuel stabilizer  
  pouch  5 g

## Varnishes
- **181 03** Spray varnish birch-green  
  spray tin  400 ml
- **712 98** Spray varnish red, RAL 2002  
  spray tin  400 ml
- **509 68** Spray varnish black  
  spray tin  400 ml

## Emergency Tyre Repair:
- **713 13** Tyre sealing gel Terra-S  
  Bottle  1 l.

## Wearing Parts:
- **100 884** Front tarpaulin guard 65 cm
- **101 257** Front tarpaulin guard 80 cm
- **100 892** Rubber cap strip 65 cm
- **101 256** Rubber cap strip 80 cm
- **100 479** Rubber cap strip on the drive
- **790 84** Flail knives
- **777 79** Knife screw 10.9
- **006 66** Locking nut for knife screw
- **100 506** V-belt, engine - Hydrostat
- **100 523** V-belt, engine - knife brake
- **101 273** V-belt, cutter brake - knife shaft, 65 cm
- **101 274** V-belt, cutter brake - knife shaft, 80 cm

## Wearing Parts - Engine:

<table>
<thead>
<tr>
<th>Part</th>
<th>Honda</th>
<th>B&amp;S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spark plug</td>
<td>789 88</td>
<td>706 09</td>
</tr>
<tr>
<td>Filter element cpl.</td>
<td>405 272</td>
<td>716 22</td>
</tr>
<tr>
<td>Foamed preliminary filter</td>
<td>-</td>
<td>640 88</td>
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<tr>
<td>Engine oil filter</td>
<td>-</td>
<td>716 23</td>
</tr>
<tr>
<td>Fuel filter</td>
<td>789 81</td>
<td>789 81</td>
</tr>
</tbody>
</table>
Designation of Parts

Fig. B

Petrol Engine

1 Air filter
2 Spark plug connector
3 Engine identification number
4 Fan housing
5 Engine oil filter (only version Briggs & Stratton Vanguard 16 HP)
6 Fuel tap (only version Honda GXV340)
7 Oil dip-stick, oil filler tube
8 Drain plug
9 Muffler
10 Starter grip
11 Screen fan
12 Fuel filter
13 Fuel pump (only version B&S Vanguard 16 HP)
14 Choke (only version B&S Vanguard 16 HP)
Designation of Parts

Fig. B
Honda GXV 340

Briggs & Stratton Vanguard 16 HP
Conformity Declaration

EC Declaration of Conformity

Wir erklären, dass das Produkt
Schlegelmäher mit allen einschlägigen Bestimmungen der EG-Maschinenrichtlinie 2006/42/EG in Übereinstimmung ist. Die Maschine ist auch in Übereinstimmung mit allen einschlägigen Bestimmungen der folgenden EG-Richtlinien:


agria-Werke GmbH
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Directeur
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Managing Director
Head, Research and Development

Bedrijfieleider
Hoofd ontwikkeling en constructie

Herr Tijges is bevollmächtigt die technischen Unterlagen zusammenzustellen.
Monsieur Tijges est habilité à agencer la documentation technique.
Mr. Tijges is authorized to assort the technical documents.
De heer Tijges is gemachtig om de technische documentatie op te stellen.
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