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

Please fill in:

- Machine Type No.: ......................
- ID/Machine No.: ........................
- Engine Type: ............................
- Engine No.: ................................
- Date of Purchase: ........................

For name plate, refer to p3/fig. A/8.
For engine type and number, refer to p3/fig. B/7.
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.

Scope of delivery:
- Operating instructions
- Power hoe
- Pipe spanner WS 21
- Tommy for spanners
- Spanner WS 13 / 17
- Hex head wrench 8

Symbols

- Warnings – danger
- Important information
- Choke
- Fuel
- Oil
- Engine Start
- Engine Stop
- Stop
- Air filter
- Visual check
- Clutch
- Hoeing drive
- fast
- slow
- Open
- Closed

agria - Service = contact

Your agria workshop
Part Designations

Fig. A

1 Engine
2 Push plate for lateral handlebar adjustment
3 Steering handle
4 Speed control lever, engine shut-off switch
5 Safety circuit lever
6 Clutch lever
7 Pawl of clutch lever
8 Factory type plate
9 Steering handle height adjusting clamping lever (on the right side)
10 Clutch cable
11 Clutch cable setting screw on gearbox housing
12 R-clip on depth bar
13 Hoeing guard
14 Depth bar
15 Handle
16 Base specification hoeing tools, right
17 Receiving hole for front wheel attachment
18 Transmission oil fill/drain opening
19 Base specification hoeing tools, left
20 Attachment bolt for base specification tools
21 Guard disc

Fig. B

1 Fuel tank cap
2 Starter rope handle
3 Air strainer
4 Oil fill plug, dip-stick
5 Air filter
6 Carburetor / speed control governor
7 Engine type no. / identification no.
8 Spark plug / spark plug connector
9 Exhaust with guard
10 Fuel tank
11 Fuel tap
Index

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- Fuel ........................................ 6
- Maintenance and repair ............ 6

Unpacking and assembly ...... 7

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- Power hoe ................................... 14
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**Recommendations**

**Lubricants and Anti-Corrosive Agents**

Use the lubricants specified for engine and gearbox (see “Specifications”).

We recommend using Bio-lubricating oil or Bio-lubricating grease for “open” lubrication points or nipples (as specified in the operating instructions).

We recommend using Bio-slushing oil to preserve machines and attachments (do not apply on painted covers). You can brush or spray the oil.

Anti-corrosive agents are environmentally friendly and degrade fast.

Using ecologically safe Bio-lubricants and Bio-anti-corrosives, you contribute to environmental protection and to the wellbeing of humans, animals and plants.

**Fuel**

This engine runs smoothly on conventional unleaded regular and super-grade petrol as well as on leaded supergrade 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 residue from depositing in the carburetor, fuel filter, and tank. Or add a fuel stabilizer to the fuel.

For further instructions refer to “Engine Preservation”.

**Maintenance and Repair**

The trained mechanics of your agria workshop expertly carry out any maintenance and repair work.

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 to pull off the flywheel.
Unpacking and Assembly

1. Open the box top.

2. Mount handlebar

Remove the clamping lever (4) together with the washer (3) from the machine.

- Attach the steering handle (1) to its bearing (2), using the clamping lever (4) and washer (3) (ensure that cables and electric lines are not twisted or jammed).
- Adjust the handlebars to working height and lock the gears into mesh.
- Tighten the clamping lever.
- Connect the electric line (for safety circuit lever) to the socket (5 + 6).
- Inspect again whether all Bowden cables are routed properly and are not twisted or jammed to avoid clutch problems.
- Remove the machine from the box or cut it open in 4 corners to fold down the sides.

3. Attach all hoeing tools and guards

4. Attach depth bar

5. Attach the rear support wheel

6. Carry out the start-up procedure
1. Safety Instructions

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

**Warning**

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

**Due Use**

The power hoe and the mounted implements authorized by the manufacturer have been designed for all common applications and tasks in farming and forestry, horticulture and park maintenance (due use).

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

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

Any unauthorized changes to the power hoe render manufacturer liability null and void.

---

**General Instructions on Safety and Accident Prevention**

**Basic Rule:**

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

When driving on public roads, you have to observe the current traffic code.

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

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

Teenagers younger than 16 years are not allowed to operate the power hoe!

Only work in good light and visibility.

Operator’s clothes should fit tight. Avoid wearing loose fitting clothes. Wear solid shoes.

Note the warning and instruction signs on the machine for safe operation. Comply for your own safety.

When transporting the power hoe on vehicles or trailers outside the area to be cultivated, ensure that the engine is shut off.

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

Beware of coasting tools. Before you start any maintenance or repair on them, wait until tools have come to a complete stop.

Riding on the machine during operation is not permitted.

Mounted or trailed attachments and loads/weights affect the machine’s driving, steering, braking, and tipping characteristics. Therefore, ensure that steering and braking functions are sufficient. 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 machine’s working range. Staying in the danger zone is not permitted.

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.

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. 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.

When starting the engine, do not step in front of the power hoe and the attachment.

Operation

Never leave the operator’s position at the steering handle while the power hoe is at work.

Never adjust the handles during work – danger!

During operation keep a distance to the machine as defined by the length of the steering handle, especially when you turn the machine.

Riding on the machine during operation or in transport is not permitted.

In case of blockages in the attachment, shut off the engine and clean the attachment with an appropriate tool.

In case of damage to the power hoe or to the attachment, immediately shut off the engine and have it repaired.
1. Safety Instructions

If steering causes problems, immediately bring the power hoe to a halt and shut it off. Have the malfunction repaired without delay.

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

If possible, always work at right angle to the slope.

End of Operation

Never leave the power hoe unattended with the engine running.

Before you leave the power hoe, shut off the engine. Then close fuel taps (if equipped).

Secure power hoe against unauthorized use. If the machine is equipped with an ignition key, remove the key. For all other versions, remove the spark plug connector.

Attachments

Only mount attachments with the engine and the attachment drive shut off.

Always use appropriate tools and wear gloves when changing attachments and parts thereof.

For mounting and dismounting attachments bring the support devices into proper position and ensure stability.

Secure the power hoe and attachments against rolling off (parking brake, wheel chocks).

Beware of injuries while coupling attachments.

Hitch attachments as specified and only couple at specified points.

Secure power hoe and attachment against unauthorized use and rolling off when you leave the machine. If necessary, install transport or protective devices and secure.

Hoeing

When hoeing, make sure the depth bar is adjusted properly.

Maintenance

Do not maintain or clean the machine while the engine is running.

Before you work on the engine, always remove the spark plug connector.

Check regularly and, if necessary, replace all protecting devices and tools subject to wear and tear.

Replace damaged cutting tools.

Always wear safety gloves and use proper tools when exchanging cutting tools.

Do not carry out repairs like welding, grinding, drilling, etc. on structural and safety-relevant parts (e.g. coupling devices)!

Keep power hoe and attachment clean to avoid risk of fire.
1. Safety Instructions

Check nuts and bolts regularly for tight fit and re-tighten, 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 power hoe in rooms with open heating.

Never park the power hoe 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 pipes immediately.

Be careful when dealing with 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.

In case of fuel-spillage, pull the power hoe 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 immediately. If the fuel has contacted eyes, rinse them thoroughly, avoid inhaling of vapours.

Read and observe enclosed 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 seperately and properly.

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 Safety decals

Before any cleaning, maintenance, and repair work shut off the engine and pull spark plug connector.

With engine running, keep at a safe distance from hoeing tools.

Do not work without protective guards mounted. Before starting the engine, bring guards in proper position.

Danger – foreign objects may get airborne. Keep clear off machine while engine is running.

Signs

- When working with the machine, wear individual protective ear plugs.
- Wear protective gloves.
- Wear solid shoes.
2. Specifications

**Power hoe**

**Clutch:** .................. Ball clutch

**Transmission:** ............... Worm gear with 1 forward gear

**Oil filling capacity:** ...... approx. 0.25 l

Transmission oil SAE 90-API GL5 (e.g. BP Energear Hypo)

**Hoe shaft speed:** .............. 130 rpm

**Steering handle:** ........ height and side adjustable without tools

**Front support wheel:** ... Ø 200x50 mm

**Weight:** .................. approx. 44 kg

**Noise level:**

Noise level at the ear of the operator ......................... 80 dB(A) (in accordance with EN 709)

**Vibration acceleration value:**

at handlebar grip .......... \( a_{hw} = 5.7 \text{ m/s}^2 \)

in accordance with EN 709 and EN 1033

---

**Machine dimensions:**

- a ........................................ 340 mm
- b ........................................ 570 mm
- c ........................................ 130 mm
- d ........................................ 500 mm
- e ........................................ 600 mm
- h .......................... approx. 1000 mm
- i ........................................ 1450 mm
- A ........................................ 600 mm

All safety requirements in accordance with CEN/GS are fulfilled:
- k ......................... >900 mm at \( h=800 \text{ mm} \)
## 2. Specifications

### Engine

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>Honda</td>
</tr>
<tr>
<td>Type</td>
<td>GCV 160 N2E</td>
</tr>
<tr>
<td>Version</td>
<td>Fan-air-cooled 1 cylinder-4-stroke OHC engine (petrol)</td>
</tr>
<tr>
<td>Bore</td>
<td>64 mm</td>
</tr>
<tr>
<td>Stroke</td>
<td>50 mm</td>
</tr>
<tr>
<td>Piston displacement</td>
<td>160 ccm</td>
</tr>
<tr>
<td>Output</td>
<td>4.1 kW at 3,000 rpm</td>
</tr>
<tr>
<td>Torque</td>
<td>max 11.4 Nm at 2,500 rpm</td>
</tr>
<tr>
<td>Spark plug</td>
<td>NGK BPR 6ES, Bosch WR 7 DC</td>
</tr>
<tr>
<td>Spark plug gap</td>
<td>0.7–0.8 mm</td>
</tr>
<tr>
<td>Ignition</td>
<td>Transistor trip coil, contactless; ignition point: 20° before dead centre, radio remote screened according to VDE 0879</td>
</tr>
<tr>
<td>Fuel tank capacity</td>
<td>1.1 l</td>
</tr>
<tr>
<td>Fuel</td>
<td>Conventional petrol Octane number min. 85 RON (refer to fuel recommendations in this manual)</td>
</tr>
<tr>
<td>Air filter</td>
<td>Dry element filter</td>
</tr>
<tr>
<td>Carburetor</td>
<td>Float carburetor Throttle valve type</td>
</tr>
<tr>
<td>Mixture control screw</td>
<td>opened by approx. 1 turn in base setting</td>
</tr>
<tr>
<td>Top no-load speed</td>
<td>3,250 rpm</td>
</tr>
<tr>
<td>Idling speed</td>
<td>1,550–1,850 rpm</td>
</tr>
<tr>
<td>Engine oil</td>
<td>Multi-grade oil SAE 10 W-40 SG, SF or higher quality grade</td>
</tr>
<tr>
<td>Operability on Slopes</td>
<td>Engine is suited for use on slopes (with oil level at „max“ = upper level mark) Continuous operation possible up to 20° inclination (37 %)</td>
</tr>
</tbody>
</table>

**Valve lash (engine cold)**

- Intake: 0.15 ± 0.04 mm
- Outlet: 0.20 ± 0.04 mm
3. Machine and Operating Elements

The power hoe agria type 1000 is suited for all usual applications in horticulture, in agriculture and forestry as well as in park maintenance.

Engine

The four-stroke petrol engine is operated with commercial petrol (see fuel recommendation on page 6). During the first 20 operating hours (break-in period), the motor should not be operated at load limit. Even after the break-in period, you should make it a principle to never push the accelerator more than is just necessary for the actual work.

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.

Cooling System

The engine 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.

Ignition System

The engine is equipped with a maintenance-free, contactless electronic ignition system. We recommend to have necessary check-ups done by an expert only.

Speed Control Lever

The speed control lever (A/4) on the steering handle serves to control engine speed, to set the CHOKE and to stop the engine. For positions see fig. C

The speed control lever also serves as an emergency shut-off. In an emergency, move the lever to position “STOP” to shut off the engine fast.
3. Machine and Operating Elements

**Safety circuit Lever**

The power hoe is equipped with a safety circuit lever.

1. **Stop position**: When releasing the lever (A/5), the ignition system is shut off (engine is off). Beware – engine keeps running due to centrifugal mass.

2. **Start position**: For starting the engine and for short breaks, pull the hand clutch lever (A/6) and fasten with pawl.

3. **Operating position**: To operate the machine press safety circuit lever.

! **Do not tie down safety circuit lever.**

The speed control lever also serves as an emergency shut-off. In an emergency, move the lever to position “STOP”, the lever automatically goes to STOP position.

**Clutch**

The power hoe is equipped with a ball clutch. This is actuated using the clutch hand lever (A/6). Pull the lever to disengage the gear and to stop the engine driving the hoeing tools. When the lever is opened (pawl A/7 is not locked) a positive connection between engine and tools is made and the hoeing tools start operating. With the control lever pulled, this connection is disengaged and the tools come to a stop.

**Transmission**

The power hoe is equipped with a worm transmission with one forward gear.
3. Machine and Operating Elements

**Height adjustment of the steering handle**
- Loosen the clamping lever (1) in counter-clockwise direction until the teeth are disengaged.
- Adjust the steering handle to the desired height, re-match the gears (centre of tooth – centre of tooth space); then re-tighten the clamping lever.

**Side adjustment of the steering handle**
- Push down the pressure plate (2) with your right hand while slightly lifting the steering handle (as shown in the figure); then swing it to the left or right.
- Release the pressure plate, slightly move the steering handle to the left and right until it locks into the toothing.
3. Machine and Operating Elements

Hoeing tools

1. Hexagon nut
2. Linch pin
3. Star washer
4. Extension guard
5. Guard discs
6. Add-on hoeing tool
7. Hex head bolt
8. Base hoeing tool, right
9. Countersunk bolt
10. Base hoeing tool, left

Example: Hoeing width 70 cm
Example: Hoeing width 50 cm

Working width:

- Base hoeing tools: .......... approx. 50 cm
- Base hoeing tools and add-on tools: ............... approx. 70 cm

Fitting the hoeing tools

- Only fit/remove the hoeing tools while the engine is shut off and the spark-plug connector is removed! Wear safety gloves!

50 cm working width:

- Fit the base hoeing tools (8 and 10) onto both ends of the hoeing shaft. Ensure that the blades point into traveling direction. When fitting the second hoeing tool (either left or right), make sure the knives pointing to the housing are fitted in a staggered way to the knives fitted on the opposite end of the shaft.
- Attach the hoeing tools to the shaft using the hex head bolts (7) that go in the holes on the hubs and shaft.

70 cm working width:

- Fit the hoeing tools in the same way as described in 50 cm working width.
- Fit the add-on tools (6) in the hubs of the base tools.
- Secure them with the linch pin (2) which is inserted in the holes on hub and shaft (linch pin pointing in the contra-rotating direction).
- Attach the extension guards (4) using attachment bolts (9, 3 + 1).

Guard discs

The discs are to prevent shrubs and bushes from being damaged by the hoe and to protect young plants from being covered with soil. In addition, they offer protection for the operator when hoeing along field edges or fences.

- Fit the guard discs (5) in the outer hubs on the hoeing tools.
- Secure them with the linch pin (2) which is inserted in the holes on hub and shaft.
3. Machine and Operating Elements

**Depth bar**

The depth bar slows down the power hoe’s forward speed. The working depth is set by adjusting the depth bar as required. The deeper the depth bar setting, the deeper the working depth of the hoeing tools. There are two holes to set the bar (14) to the desired depth. Secure it with the R-clip (12).

**Optional depth bar**

This depth bar (accessory no. 1001 511) (1) is available as an option to improve depth control in loose soils. Remove the standard depth bar (A/14) and replace it by the optional depth bar, locking it with the R-clip (2).

**Front wheel**

For easier transport, use the front wheel. Push the wheel’s axle into the receiving bearing (A/17) and attach it with the pressure spring, washer and split pin in the order illustrated (fig. I).

You can leave the wheel on the machine during hoeing, if you pivot it up into hoeing position.

**Hoeing position:**

- Press your hand on the wheel’s axle (see arrow in fig.) to unlock the bracket.
- Pivot the bracket up and lock it.

**Travelling position:**

- Correspondingly, pivot the bracket down and lock it.
3. Machine and Operating Elements

Ridding attachment

Required accessories:
1 coupling device
Item no. ............................... 1040 411
1 ridging body
Item no. ............................... 0252 011
alternatevly:
1 pair of strake wheels
Item no. ............................... 0120 011

Assembly:

Remove any add-on tools from the hoe. Remove the two blades (8 and 9) that point outwards from each side of the machine. Each set of blades now changes sides and is attached for the blades to point inwards (as illustrated in fig.). This gives a working width of 36 cm and there is no need to use optional tools. Attach the guard discs. Remove the depth bar and fit the coupling device (12).

Insert the ridging body’s bar (1) in its bracket, insert the locking pin (2) as illustrated and secure it with an R-clip (3).

Adjust the ridging body’s (7) tilt via the hex head bolt (5). Set the body (7) to the desired ridging depth, then tighten the hex head bolt (4).

Strake Wheels

You can replace the hoeing tools by strake wheels (Accessory no. 0 120 011) (15) to improve traction or ridging performance in cultivated soils. The strake wheels are attached in the same way as the hoeing tools: insert the hex head bolt in the holes on the hubs and the hoeing shaft.

Ridging

To use the power hoe for ridging, proceed as described in the paragraph on hoeing.

- To adjust the working depth, adjust the tilt of the ridging body bar’s in its bracket either by turning the adjuster screw (K/5) or by adjusting the runner (K/13) and the clamping screw (14).

- To adjust the working width, adjust the mouldboards (7) and the clamping screw (6).
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 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 with engine oil!

Before you operate the engine the first time, fill in engine oil (see page 28)!
## 4. Commissioning and Operation

### Starting the engine

*(with the engine in horizontal position)*

**⚠️ Do not start engine in closed rooms! Exhaust fumes contain carbon monoxide which acts toxic when inhaled.**

- Only operate the power hoe in the area to be cultivated, do not turn it on on concrete or asphalted ground, etc.
- Move the steering handle to working position and tighten the knob screw.

**Keep your feet off the hoeing tools.**

- **Protective covers mounted?**
- **Attachments attached correctly?**

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Check engine oil level</td>
</tr>
<tr>
<td>2</td>
<td>Mount spark plug connector</td>
</tr>
<tr>
<td>3</td>
<td>Air filter clean?</td>
</tr>
<tr>
<td>4</td>
<td>Fuel quantity in tank sufficient?</td>
</tr>
<tr>
<td>5</td>
<td>Open the fuel tap</td>
</tr>
</tbody>
</table>
| 6   | Cold engine:  
Set the speed control lever (A/4) to ”START” ("CHOKE" \[\text{\textbullet}\]) position. |
| 7   | Warm engine:  
Do not use the CHOKE (operating position), move the speed control lever to 1/3 position.  
Pull the clutch hand lever (A/6) and lock it with pawl (start position). |
| 8   | Start engine from a position outside the hazardous area  
- Pull the starter rope on the handle until the starter clutch engages. Then pull **hard and fast** to pull the rope all the way out. After the start, let the rope glide back. Do not let it snap back. |
| 9   | Set the speed control lever slowly to ”min”. |
4. Commissioning and Operation

Shutting off the engine

1. Set the speed control lever to idling position and let the engine run with idling speed for approximately 1/2 minute.

2. Move the speed control lever completely to the STOP position.
   
   For shutting off the engine, do **not** set the control lever to the CHoke position – risk of fire!

3. Close the fuel tap.

4. Withdraw spark plug connector - protection against unauthorised use!

Have the engine cooled down before parking the power hoe in closed rooms.

The speed control lever also serves as **engine shut-off lever**. When necessary, move the speed control lever to STOP to stop the engine.
4. Commissioning and Operation

Hoeing

- Check safety circuit function - Only operate the machine if the safety circuit is working!

Wear individual protective ear plugs and solid shoes.

Before you start working, remove all hard objects from the area to be cultivated. While working, watch out for hard objects.

Before moving off, check the immediate surroundings, e.g. for children.

- Start the engine (refer to “Starting the engine”).
- Slightly pull the clutch lever (A/6), unlock the pawl (A/7), release the clutch lever and simultaneously increase the engine speed using the speed control lever (A/4).

The hoeing tools start rotating.

To adjust the desired working depth, set the depth bar to one of the two depth settings (refer to "depth bar").

- Do not transport or move the power hoe with the hoeing tools still rotating and on concrete and asphalted ground. Instead, use the front wheel and shut off the engine.

To clean and exchange the hoeing tools, only recline the machine backwards onto the handlebar (before, remove the depth bar).

Danger zone

- Keep out of the machine’s danger zone during starting and operation.

Warning: Do not clean the hoeing tools while the engine is running. Shut off the engine and remove the spark plug connector. Remove jammed objects only by means of tools, e.g. a wooden stick.

Working on slopes

During slope operation, always turn the machine towards the slope.
5. Maintenance

Apart from adhering to operating instructions for the power hoe, it is also important to observe the following maintenance instructions.

⚠️ Warning: Only do maintenance work with the engine shut off.

To prevent accidental start while working on the hoe or the engine, always remove the spark plug connector from the spark plug.

The power hoe will operate reliably at all times, if it receives proper servicing. After each operation clean the power hoe, especially the hoeing tools. Lubricate all visible and moving parts now and then with Bio-lubricating oil or Bio-lubricating grease (steering handle pivot bearing, bearing of clutch handle lever), especially after cleaning the machine with a pressure washer.

Transmission

Check the transmission oil level every 8 operating hours. With the transmission housing in vertical position, the oil level must be visible within the filling opening.

Only carry out a transmission oil change in combination with an engine oil change, i.e. after draining the engine oil. This is to prevent engine oil from running into the combustion chamber of the cylinder when tilting the hoe. First oil change after 50 hours, all further oil changes after 250 operating hours.

- Screw out the filler plug (A/18).
- Tilt the hoe forwards so that the used oil can be drained completely.
- Fill in fresh transmission oil (filling capacity and quality see specifications).
- Check the O-ring and replace if necessary.

Only carry out an oil change with the engine warmed up.

Check the transmission for oil leakages. Any damaged or leaking seals and O-rings must be replaced immediately.
5. Maintenance

Clutch lever

The free play at the clutch lever must amount to 0.5 to 1.0 mm. It is checked in operation, i.e. with the hoeing tools rotating.

Any re-adjustment is made using the set screws (A/11) at the transmission housing or in the clutch lever.

1. Remove retaining spring (2) and use set pin (3) to press cable end (3) out of bracket in clutch lever.

2. Adjust the set pin (4) to a play of “X” or idling position at position “0”.

3. Hook the cable end into the bracket with the set pin and fit retaining spring (2).
5. Maintenance

Engine

Checking the engine oil level

Before each operation and after 5 operating hours!
- Only with the engine shut off and in horizontal position.
- Clean the oil fill plug (B/4) and its immediate surrounding.
- Remove the oil fill plug, clean the dipstick with a clean rag and re-insert it all the way – do not screw it in.
- Remove the dip-stick and read the oil level.
- Refill oil, if the oil level is below the lower dip-stick mark. Refill engine oil (see “Specifications”) up to upper level mark on dip-stick.

Changing the engine oil

For the first time after 5 operating hours, after that after every 50 operating hours or annually (whatever comes first). Under high loads or in high environmental temperatures, change the oil already after 25 operating hours.

Only change oil while the engine is still warm, but not hot - danger of burns!
- Drain and filler plug (B/4).
- To drain the oil, pivot the steering handle upwards. Tilt the power hoe backwards and to the left. Then drain the oil into a suitable container (fig. M). (We recommend to drain the fuel into a fuel can before draining the oil).

Alternatively, use a suction pump to pump the oil from the machine.
- Dispose of the waste oil properly!
- Fill in fresh engine oil. Oil filling capacity and quality see specifications.

Fill in the oil using a funnel or similar device where ever possible.
5. Maintenance

Air Filter

Check the air filter each time you take up operation for dirt and clean, if necessary.

Clean the air filter insert at **3-month intervals** but not later than **25 operating hours** (earlier in very dusty conditions). To do this, proceed as follows:

- Clean the air filter and its surrounding area.
- Open the snap mechanism (2), fold down the filter cover (1) and remove it.
- Remove the paper element (3).
- Tap the element against a smooth surface or blow compressed air against the inside of the filter.

**Never brush the filter because this would press the dirt into the fibres.**

- Replace the filter element if it is extremely dirty.
- Inspect the filter element carefully for holes or other damage and replace it if necessary.

- Replace the filter element
- Attach the cover and snap the latches (4) into place.

ℹ️ Do not wash the paper element (tap it or blow it out).
5. Maintenance

Fuel System

- Each time you maintain the machine, check fuel hose, fuel tank, and carburetor for leakages and repair, if necessary. Immediately replace leaking or porous fuel hoses.
- Replace fuel hoses after every 2 years.
- Clean the fuel tank at 100-hour intervals.

Excessive fuel supply

- After excessive fuel supply to the engine, remove the spark plug, clean and dry it. Then crank the engine with the recoil starter a number of times. Afterwards screw the spark plug in and move the speed control lever to "VOLLGAS"/"FULL THROTTLE". Then start the engine via the recoil starter.
5. Maintenance

Spark plug

- After 50 operating hours, clean the spark plug and re-adjust the electrode gap to 0.7–0.8 mm. Only clean the spark plug using a wire brush and wash it out with a commercial cleaning agent.

- Replace the spark plug at 100-hour intervals or when it shows significant wear or if the insulator is damaged.

Correct spark plug assembly:

Screw the spark plug into the cylinder head by hand. Then continue with a spark plug wrench. Turn wrench at 90° or at a torque of 20…30 Nm.

Checking the ignition sparks:

Remove the spark-plug, clean it and place it back into the plug connector. Use the lateral electrode to make contact with the engine, pull the starter rope and wait for sparking. If there are no sparks, replace the spark plug.

Cleaning the cooling fan grille

After prolonged operation, the cooling system may become clogged by dirt etc. To avoid any overheating and damage to the engine, regularly clean the cooling fan grille (B/3). Check before each operation!

Air cooling system

1) Clean the rotating strainer at 50-hour intervals as a minimum (earlier in very dusty and trashy conditions). To do this, remove the recoil starter. See the illustration below.

2) Clean the internal cooling fins and surfaces at 100-hour intervals as a minimum (earlier in very dusty and trashy conditions).
5. Maintenance

**Governor**

For smooth engine performance keep governor linkages, springs and actuating devices clean and free from dust and dirt. Do not bend or twist parts. (Governor linkages on carburetor B/6).

**Exhaust system**

Regularly clean the area around the exhaust (B/9) from grass, dirt, and inflammable deposits.

– **Risk of fire!**

Check before each operation.

**Speed Control**

Devices for actuating engine speed must be adjusted correctly to start, operate and shut off the engine at correct speed rates.

**Carburetor settings**

To compensate for fuel, temperature, height or load variations, a slight carburetor re-adjustment may become necessary. Only let the engine run with the air filter and air filter cover mounted.
5. Maintenance

Safety circuit lever

Check the function of the safety circuit lever during each maintenance or repair work.

- When releasing the lever (A/5) and with the travelling clutch engaged, the engine must be stopped automatically.
- Check all electrical lines and plug connections for their proper condition and replace all defective parts.

>agria - Service<

General

1. Watch out for fuel and oil leakage and repair, if necessary.
2. Regularly check bolts and nuts for tight fit and retighten, if necessary.
3. Slightly grease all gliding and moving parts (e.g. speed control lever, hand lever bearing, etc.) with Bio-lubricating grease and Bio-slushing oil.

Cleaning

Machine

After each cleaning with a pressure washer lubricate all lubrication points, oil and let power hoe run for a short time to press water out.

Apply grease generously to leave a grease ring around bearings to prevent water, plant sap, and dirt from penetrating.

Engine

Clean the engine only with a cloth. Avoid spraying with a pressure washer, as water might leak into ignition and fuel system, causing malfunctions.
5. Maintenance

Storage

For longer periods of no operation prepare the power hoe for storage. Proceed as follows:

a) Clean thoroughly
Repair paint coat

b) Spray all shining parts and hoeing tools with bio-slushing oil.

c) Engine preservation
- Drain fuel completely and let the engine run until it comes to stop due to lack of fuel
or
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.
- Set the piston to compression with the recoil starter to keep the valves closed.
- Slowly crank the engine after every 2–3 weeks (spark-plug connector is removed). Then set the piston to compression again.

d) Clutch
Always park the machine with clutch lever pulled (“0” – pawl locked in place). Otherwise, clutch problems may result due to corrosion.

f) Storage
Because of severe corrosion do not park the machine
- in humid rooms
- in rooms where fertilizer is stored
- in stables or adjacent rooms.

To park, transport, or store the power hoe, do not tilt it forward. When positioned at a forward angle, engine oil may get into the cylinder and into the combustion chamber, which may result in starting problems and heavy oil carbonization.

g) Protect machine
with cloth or a similar cover.
Varnishes, Wear Parts

Varnishes:
- 181 03 Spray varnish, birch green
- 712 98 Spray varnish red, RAL 2002
- 509 68 Spray varnish black

Wear parts:
- 761 98 Air filter element
- 759 99 Spark plug NGK BPR 6ES; BOSCH WR 7 DC
- 009 16 O-ring for hoeing drive Ø16 x 22 x 2
- 711 65 Hoe blade, left
- 711 66 Hoe blade, right

Spare parts list:
- 997 007 Power hoe 1000

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Electrical Wiring

1 Engine
2 Magnetic ignition system
3 Engine OFF switch (at engine-side of speed control lever)
4 Electrical connector
5 Switch within the safety circuit lever
6 Switch within the clutch lever

bl = blue
br = brown

Power Hoe 1000
### 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>Possible solution</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Engine does not start</strong></td>
<td>- Spark plug connector not connected</td>
<td>Connect spark plug connector</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Speed control lever not in position CHOKE</td>
<td>Move speed control lever to position “CHOKE”</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>- Fuel tank empty or poor fuel</td>
<td>Fill fresh fuel</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>- Fuel line clogged</td>
<td>Clean fuel line</td>
<td></td>
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<tr>
<td></td>
<td>- Defective spark plug</td>
<td>Clean, adjust or exchange spark plug</td>
<td>31</td>
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<tr>
<td></td>
<td>- Engine too much fuel (&quot;flooded engine&quot;)</td>
<td>Dry and adjust spark plug and start at full throttle</td>
<td>30, 31</td>
</tr>
<tr>
<td></td>
<td>- Inleaked air due to loose caburetor and suction line</td>
<td>Tighten attachment bolts</td>
<td></td>
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<tr>
<td><strong>Misfirings in engine</strong></td>
<td>- Engine running in CHOKE range</td>
<td>Move speed control-lever to position OPERATING, if necessary, adjust speed control</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>- Loose ignition cable</td>
<td>Fit connector tightly on spark plug</td>
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<tr>
<td></td>
<td>- Clogged fuel line or poor fuel</td>
<td>Fix ignition cable retaining device</td>
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<td></td>
<td>- Vent opening in fuel tank cap clogged</td>
<td>Fit connector tightly on ignition cable</td>
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<td></td>
<td>- Water or dirt in fuel system</td>
<td>Clean fuel line, fill fresh fuel</td>
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<td></td>
<td>- Air filter clogged</td>
<td>Exchange fuel tank cap</td>
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<td></td>
<td>- Carburetor misadjusted</td>
<td>Drain fuel and fill fresh fuel</td>
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<td></td>
<td>Clean air filter or exchange</td>
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<td></td>
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<td>Re-adjust carburetor</td>
<td>30</td>
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<tr>
<td><strong>Excessive temperature in engine</strong></td>
<td>- Low engine oil level</td>
<td>Refill oil immediately</td>
<td>28</td>
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<tr>
<td></td>
<td>- Impaired cooling</td>
<td>Clean cooling fan grille, clean internal cooling fins</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>- Air filter clogged</td>
<td>Clean air filter</td>
<td></td>
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<td></td>
<td>- Carburetor misadjusted</td>
<td>Re-adjust carburetor</td>
<td>29</td>
</tr>
<tr>
<td><strong>Misfirings in engine at high speeds</strong></td>
<td>- Short firing intervals</td>
<td>Adjust spark plug</td>
<td>30</td>
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<tr>
<td></td>
<td>- Incorrect idle mixture</td>
<td>Adjust carburetor</td>
<td>31</td>
</tr>
<tr>
<td><strong>Engine frequently stalls in idle</strong></td>
<td>- Air filter clogged</td>
<td>Clean air filter</td>
<td>29</td>
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<tr>
<td></td>
<td>- Firing interval too long, defective spark plug</td>
<td>Adjust or replace spark plug</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>- Carburetor misadjusted</td>
<td>Re-adjust carburetor</td>
<td>30</td>
</tr>
</tbody>
</table>
# 6. Troubleshooting

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause</th>
<th>Possible solution</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine does not run smoothly</td>
<td>- Speed control linkages are clogged or jammed</td>
<td>Clean speed control linkages</td>
<td>32</td>
</tr>
<tr>
<td>Engine does not stop when set to stop</td>
<td>- Speed and engine stop are not properly adjusted</td>
<td>Readjust speed control</td>
<td>*</td>
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<tr>
<td>Engine output too low</td>
<td>- Air filter clogged</td>
<td>Clean the air filter</td>
<td>*</td>
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<tr>
<td></td>
<td>- Loose cylinder head or damaged gasket</td>
<td>Tighten cylinder head, exchange gasket</td>
<td>29</td>
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<tr>
<td></td>
<td>- Poor compression</td>
<td>Have engine checked</td>
<td>*</td>
</tr>
<tr>
<td>Hoeing shaft does not come to a stop in idling position</td>
<td>- Speed control lever not properly adjusted</td>
<td>Adjust speed control lever</td>
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<tr>
<td></td>
<td>- Idling speed not properly adjusted</td>
<td>Adjust idling speed</td>
<td>*</td>
</tr>
<tr>
<td>Tools slip</td>
<td>- Too little clutch play (overload clutch)</td>
<td>Adjust clutch free play</td>
<td>27</td>
</tr>
</tbody>
</table>

* = For this purpose contact your agria workshop.
## 7. Inspection and Maintenance Chart

<table>
<thead>
<tr>
<th>Task</th>
<th>A</th>
<th>5</th>
<th>8</th>
<th>25</th>
<th>50</th>
<th>100</th>
<th>250</th>
<th>min. every 3 months</th>
<th>min. yearly</th>
<th>B</th>
<th>page</th>
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<tbody>
<tr>
<td>Check safety circuit function</td>
<td>K</td>
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<tr>
<td>Clean fan grille</td>
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<td>Check air filter</td>
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<tr>
<td>Clean surrounding parts of exhaust</td>
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<tr>
<td>Check engine oil level, refill, if necessary</td>
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<td>First engine oil change</td>
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<tr>
<td>Subsequent oil changes</td>
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<tr>
<td>Transmission oil level</td>
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<td>26</td>
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<tr>
<td>Clean governor linkages</td>
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<tr>
<td>Clean engine, check bolts and nuts</td>
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<td>Clean air filter insert</td>
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<td>Clean rotating strainer</td>
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<tr>
<td>Replace air filter insert, earlier, if required</td>
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<tr>
<td>Clean spark plug, adjust spark plug gap</td>
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<td>31</td>
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<tr>
<td>First transmission oil change, subsequent changes</td>
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<td>Replace spark plug</td>
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<td>Clean fuel tank</td>
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<td>Clean fuel strainer</td>
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<tr>
<td>Clean guide plates of fan grille and cooling fins – earlier, if required</td>
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<td>Check clutch free play</td>
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</tr>
<tr>
<td>Lubricate all gliding parts</td>
<td>K</td>
<td>K</td>
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<tr>
<td>Replace fuel hoses</td>
<td>W*</td>
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<td>30</td>
</tr>
</tbody>
</table>

A = Each time before you take up operation  
B = After each cleaning  
K = Checks and maintenance to be executed by operator  
W = Maintenance to be executed by professional workshop  
* = after 2 years
Conformity Declaration

EG-Konformitätserklärung  
CE Déclaration de conformité  
EC Declaration Conformity  
EG conformiteitsverklaring

agria-Werke GmbH  
Bittelbronner Str. 42  
D-74219 Möckmühl/Württ.

Wir erklären, dass das Produkt
Motorhacke
mit folgenden EG-Richtlinien übereinstimmt:
98/37/EG, 89/336/EWG, 2000/14/EG
Angewendete Normen:
EN 709

Nous déclarons que le produit
Motobineuse
est conforme aux spécifications des directives CE suivantes:
98/37/CE, 89/336/CEE, 2000/14/CE
Standards appliqués:

We herewith declare that the product
Motor hoe
conforms to the specifications of the following EC directives:
98/37/EC, 89/336/EEC, 2000/14/EC
Applied standards:

verklaren dat het produkt
Motorfrees
overeenkomt met de desbetreffende EG-richtlijn:
98/37/EG, 89/336/EG, 2000/14/EG
De volgende normen zijn toegepast:

Möckmühl, 02.01.2002

Siegfried Amròt
Geschäftsführer
Directeur
Managing Director
Bedrijfsleider

Karl Graf
Entwicklung & Konstruktion  
Développement et études  
Research and Development
Ontwikkeling en constructie

Power Hoe 1000