Operating instructions 100/1 for AGRIA Power Hoe Type 1000-4

Contact your authorized AGRIA dealer for service and prompt delivery of spare parts.

Authorized AGRIA dealer

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Important:
You may already have been a demonstration of this power hoe and have had it explained to you by your local Agri service station.
Even so, we advise you to read these operating instructions carefully and in your own time to make yourself fully acquainted with every detail of your machine.

Safety precautions
The operating instructions contained in this manual must be strictly observed when operating the machine.
The operator is responsible for the safety of persons and animals in the immediate vicinity of the machine.
Always wear robust boots or shoes when working with the machine.
Do not fill up with fuel while the engine is running or fast.
Wipe away spill petrol before starting the engine. Caution! Fire hazard! Before performing any work on the power hoe switch off the engine and detach the sparking plug cap. The hoeing knives should be cleaned with a suitable tool and not by hand.
When working with the power hoe, particularly when turning, the operator must take care to ensure that the distance between him and the hoing mechanism is maintained by the handbar. He must not pull the machine when turning. But grasp it in front of him.
The side shields must always be mounted when the power hoe is operated in fenced-in enclosures.
Do not permit unauthorized persons in the working area.
Always switch off the hoing drive when transporting the machine or when changing the working location.
If there is any danger of the machine tipping on steep inclines it should be secured by an assistant holding a rod or a rope attached to it. The assistant should be above the tractor and should keep a safe distance from the implement.
When starting the engine the operator must not stand in front of the power hoe or the implements.
The guards must always be refitted after completion of repairs or changing implements.
Only original Agri spare parts should be used for repairs.

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The technical data, illustrations and dimensions given in this manual are not binding, and no claim can be accepted in this respect.
We reserve the right to introduce improvements without amending this manual.
General Description

Engine
The built-on engine is an aircooled four-stroke petrol engine that should, if possible, be run on unleaded regular grade petrol (or, in exceptional cases, on regular grade petrol).

Air filter
The task of the air filter is to remove the dust from the intake air. If the engine performance drops, check and clean the filter first.

Ignition system
A maintenance-free, contactless ignition system is installed. Have the necessary checks carried out by a specialist only.

Clutch
A belt clutch is installed. The clutch lever is lever-operated (II/11, page 4). When this lever is pulled upwards the clutch is disengaged, i.e. the engine stops rotating the hoeing tools. When the clutch lever is disengaged downwards (safely catch is not engaged) a connection is provided between the engine and the hoeing tools and the latter begin to rotate. This connection is interrupted when the clutch lever is pulled upwards and the hoeing tools stop rotating.  
Caution: Before starting the engine ensure that the clutch lever (II/11, page 4) is always disengaged in the upwards position.

Gearing
The power hoe is equipped with a worm gear with 1 forwards speed.

Adjusting the handlebar to the correct working height:
Remove the star grip (2) from the hexagonal bar (2) and use it for unscrewing screws (1) and for completely removing screws (2). Lift the handlebar to the desired height, insert screw (3) into a suitable hole and tighten it. Retighten screw (1) also.
Push the star grip (4) onto the hexagonal bar (2) again.

Side adjustment of the handlebar
Press down the star grip (2) with the right hand while slightly raising the handlebar as shown in the illustration and swivel it to left or right.
Release the star grip and shift the handlebar a little to left and right until it engages in the toothings.

Folding the hoe to fit in the boot of your car
Using the star grip (2) slacken off the screws (4) and screw off the hex. nuts (5). Swivel the handlebar downwards (as shown on right).
Depending on the mode of transport the handlebar can be folded downwards and the hoeing skid (1) removed.

Mounting the hoeing tools
Push the hoeing tools left and right onto the hoeing shaft. The edge of the hoeing knives must point in the direction of travel. Ensure that when the second hoeing rotor is mounted on the shaft (left or right) the hoeing knives pointing towards the casing are positioned between and not parallel to the same hoeing knives on the other side.
Screw the hoeing tools by screwing the hexagon screws through the hub/wheel shaft hole. Fit the side rail (left or right) and screw on them with the folding pin.

Preparing the machine for service
1. Before operating the power hoe for the first time, fill up with engine oil. Amount of oil required = 0.6 ltrs. multigrade oil SAE 10W-40. Before checking the oil level wipe the oil dipstick (II/7, page 4) with a clean cloth and then turn it while inserting it up to its stop. Remove the oil dipstick again and read off the level.
2. Ensure that there is sufficient fuel in the tank.

Note: Before starting the engine the clutch lever (II/11, page 4) must always be pulled upwards and the safety-catch must be engaged. The operator must stand to the right of the handlebar and behind the hoeing tools.

Starting the engine (with the engine level)
– When the engine is cold push the throttle lever (II/12, page 4) up against the stop into the "Choke" position.
– Open the fuel cock (II/16, page 4) (turn it right over to the left).
– Pull the grip of the recoil starter (II/9, page 4) slowly until the starter engages, then pull the rope briskly in one smooth movement to start the engine. Do not let the rope snap back but guide it back to its seating by the grip.
– As soon as the engine starts up, adjust the throttle lever to the required engine speed.
– When the engine is warm, shift the throttle lever only to the centre position – not into the choke area.

Take care when starting the engine in a confined space! Ensure that there is good ventilation and that the exhaust gases are quickly drawn off! They contain invisible, odourless but highly poisonous carbon monoxide.

Stopping the engine
– Shift the throttle lever to the "Stop" position (do not shift the throttle lever into the choke position to stop the engine).
– Close the fuel cock (turn it to the right as far as it will go).
Hoeing

The hoeing skid has a braking effect on the forward movement of the power hoe. The required hoewing depth is achieved by varying the pressure on the skid. The greater the pressure on the skid the deeper the hoeing tools dig into the soil.

The side shields (left, page 3) serve to protect shrubs, trees etc. and to prevent young plants from being covered with earth.

Caution: Never clean the hoeing knives while the engine is running. Remove jammed in objects with a tool such as a stick but never with your bare hands. For cleaning or changing the hoeing tools tilt the machine onto the handlebars only as shown (removing the hoeing skid beforehand).

Ridging

Necessary attachments:
- 1 implement coupling item 1040411
- 1 ridger item 0252011
- 1 set side shields item 1410011

Assembly: Remove additional hoeing tools, if fitted. Screw off both hoeing knives 8 and 10 (on left and right side of hoe) and screw them back on with the points pointing inwards (as shown in adjacent sketch). This results in a hoeing width of 36 cm and special hoeing tools can thus be dispensed with. Fit the side shields. Replace the hoeing skid with the implement coupling (10).

Insert the ridger bar (1) into the skid leg socket, insert the U-bolt (2) as shown and secure it with the spring clip (3). Adjust the slant of the ridger (7) with the hexagon screw (5). After adjusting the ridger (7) to the required depth, secure it with the hexagon screw (6) provided.

The ridging width can be altered by adjusting the side pieces. First unscrew the hexagon screw (6).

After the first few metres adjust the ridger to the desired depth and width.

For transport purposes as well as for light hoeing in narrow cultures the front support wheel – item 1089411 – can be fitted. Push the front support wheel from below into the recess for the cross pin. Push bolt (3) into the top bore and secure it with the split pin.

The front support wheel can also be left on the power hoe when hoeing – for this purpose push the cross pin into the top recess. The power hoe must not be driven over concrete, asphalt etc. with rotating hoeing tools but should be pushed on the fitted front support wheel with the engine switched off.

Care and Maintenance (change the oil when the engine is warm)

Your Agria power hoe will always serve you well if you take care of it and follow these instructions. After each operation clean the power hoe and particularly the hoeing tools. Occasionally lubricate all external moving parts with a little oil or grease.

Caution: Always disconnect the ignition cable from the sparking plug to prevent accidental starting when working on the hoe or the engine.

When hoewing down the hoe with water ensure that the venting slots of the air filter are not sprayed with water. Clean the engine with a cloth only.

The gear oil must only be changed together with the engine oil after draining off the engine oil. This prevents engine oil from entering the combustion chamber of the cylinder when tilting the hoe. First change the oil after 50 operating hours and then after every 250 operating hours. To do so unscrew the screw plug (I/3, page 3) and tip the hoe forwards until the old oil is completely drained off. Amount of oil required 0.25 ltr. hypoid gear oil 90.

Check the oil level in the gearbox every 10 operating hours. With the gear box standing vertical the oil level must be visible in the filler opening (I/3, page 3).

Cleaning the engine oil after the first 5 and then, under normal operating conditions, after every 50 operating hours. Under very rigorous conditions or high outside temperatures change the oil after 25 operating hours. For oil inlet and outlet see I/7, page 4.

When draining off the oil or for maintenance and repair work the machine must be tilted only onto its left side (on the exhaust side). Close the fuel cock.

Amount of oil required: 0.8 lts. ND multigrade oil SAE 10W-40.

Check the oil level every 5 operating hours. Ensure that the engine is level. Clean the area around the oil inlet before removing the oil dipstick. Before checking the oil level clean the dipstick with a clean rag and then while turning it insert the dipstick to its limit. Now remove the dipstick and read off the oil level. Top up with engine oil as necessary.

Air filter

Clean the air filter every 4 months or at the latest every 900 operating hours (under very dusty conditions earlier). Proceed as follows:

- Remove the screw and open the cover downwards.
- Lightly tap the filter clean on smooth surfaces to remove dust (do not use cleaning agents containing petroleum gasoline etc.). Wipe it thoroughly with flowing water from the inside to the outside. Allow the water to drain out completely.
- Let the filter dry completely in the open air before replacing it.
- Do not use the filter or use compressed air.
- If the filter insert is very dirty it should be renewed (Agria part no. 8654).

Note: When the machine is tilted forwards onto the carrier bar (I/1, page 3), even if only briefly, engine oil will run through the engine vent into the air filter housing (I/8, page 4) and oil will filter despite. The greater the oil inflow the poorer the engine performance will be.

The filter insert must then be replaced.

Cleaning the fan screen

After lengthy operating periods the cooling system may be clogged with dust. To prevent overheating and engine damage the intake screen must be cleaned regularly.

The inner cooling ribs and areas must be cleaned every 500 operating hours. For this purpose consult an authorized Agria workshop.

Clean the sparking plug every 50 operating hours and re-adjust the electrode gap to 0.75 mm. Clean the plug with a steel brush only and relate it in a recognised cleaning agent. The sparking plug can be unscrewed by using the star plug key I/8, page 4, which is provided with a sparking plug key.

Laying up the power hoe (in winter)

- In order to prevent various deposits in the carburetor, drain the fuel tank, then let the engine run until it stops and the fuel is exhausted.
- Drain off the engine oil while the engine is still warm, then fill in fresh oil.
- Unscrew the sparking plug and pour approx. 15 cm³ into the cylinder. Turn the engine slowly to distribute the oil and screw in the sparking plug again.

Points of special importance:

Never garage the machine in damp rooms, as rooms where artificial lighting is stored, in basements, stables or adjacent rooms, as this can cause severe corrosion.

Always park the machine in dry. A piece of plywood and cover it with a plastic sheet, for instance, to protect it against dust and adverse weather conditions.