Operating Instructions
Translation of the original operating instructions

Power Mower
5400
5400 KL

5400 with
- Planetary Mowing Attachment
  Stroke 85 mm, Crank Stone 45 mm
- Mountain brake

Engines:
- 4-Stroke, Robin EH 17
- 4-Stroke, Robin EH 25

5400 KL with
- Planetary Mowing Attachment
  Stroke 85 mm, Crank Stone 45 mm
- Double-Knife Mowing Attachment
  Stroke 60/24 mm
- Steering Brake Clutch
- Central Brake
- 4-Stroke-Engine, Robin EH 25

5143, 5146, 5321

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

Operating Instructions No. 998 765-B  11.11
Symbols, Name Plate

Please complete:

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<tr>
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<tr>
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<tr>
<td>Engine No.:</td>
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For name plate, refer to page 3, figure A/14; page 7, figure C/14.

For engine type and number, refer to page 66, figure E/13.

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
- Power mower
- Tool kit

**Symbols**

- Warning – Danger
- Important information
- Choke
- Fuel
- Oil
- Glue
- Engine Start
- Engine Stop
- Engine oil level
- Air filter
- Air cooling
- Transmission oil level
- Visual check
- Clutch
- Mowing drive
- Wheel drive
- Forward
- Reverse
- PTO
- Brake
- Tyre air pressure
- Open (unlocked)
- Closed (locked)
- Clockwise
- Anti clockwise

→agria - Service←

= contact your agria workshop

agria Power Mower 5400
Designation of Parts

Figure A
5400 with planetary mowing drive

Figure B
5400 Steering Handle
**Designation of Parts**

**Figure A**

**5400 with planetary mowing drive**

1. Grass distributor / knife driver
2. Mowing drive hood
3. Eyelet for assist rope
4. Tool kit
5. Steering handle
6. Cutter bar
7. Planetary mowing drive
8. Gearbox - oil filler plug, dipstick
9. Gearbox - oil drain plug
10. Wheel flange
11. Hexagonal nut for wheel flange fixing (on both sides)
12. Name plate / machine identification no.
13. Engine

**Figure B**

**5400 Steering Handle**

1. Hand lever for engine stop
2. Safety Circuit
3. Hand lever for clutch and mountain brake
4. Pawl for hand clutch lever
5. Locking screw for steering handle height adjustment
6. Shifter for wheel drive 1st and 2nd speed
7. Shifter for mowing drive OFF / ON
8. Speed control lever
9. Pawl for forward and reverse shifting
10. Hand lever for forward and reverse
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Recommendations

Lubricants and Anti-Corrosive Agents:

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

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

We recommend using bio-slushing oil for preservation of machines and implements (do not apply on painted external covers). Oil can be brushed or sprayed on.

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.

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:

This 4-stroke engine runs smoothly on commercial unleaded regular and supergrade petrol (including E10) as well as Super plus.

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.

For further instructions refer to “Engine Preservation”.

Designation of Parts

Figure C
5400 KL with planetary mowing drive

Figure D
5400 KL steering handle
Designation of Parts

Figure C

With planetary mowing drive and double-knife mowing drive

1. Grass distributor / knife driver
2. Mowing drive hood
3. Eyelet for assist rope
4. Tool kit
5. Steering handle
6. Cutter bar
7. Planetary mowing drive
8. Double-knife mowing drive
9. Gearbox - oil filler plug, dipstick
10. Collar for steering brake clutch Bowden cable
11. Wheel flange with steering brake clutch
12. Gearbox - oil drain plug
13. Name plate / machine identification no.
14. Engine

Figure D

Steering handle

1. Engine-off circuit
2. Safety circuit lever
3. Clutch hand lever
4. Pawl for clutch hand lever
5. Locking bolt for steering handle height adjustment
6. Shifter for wheel drive 1st and 2nd speed
7. Locking bolt for steering handle lateral adjustment
8. Shifter for mowing drive OFF / ON
9. Speed control lever
10. Pawl for F-R shifting
11. Hand lever for F-R shifting
12. Hand lever for steering brake clutch left
13. Hand lever for steering brake clutch right
14. Hand lever for central- and park brake
15. Pawl for park brake
1. Safety Instructions

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

Warning

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

Due use

The power mower is constructed solely for the cutting of grass and similar plants as well as thin non-wooded scrub in land & forest management, green spaces, and other such areas and may also be used as a snow-clearing machine after it has been fitted with a suitable rake blade (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.

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

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

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

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

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 national traffic code applies.

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

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

Teenagers of 16 years or younger may not operate the power mower!

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 mower for safe operation. Compliance is for your own safety.

When transporting the mower on vehicles or trailers outside the area to be mowed, ensure that the engine is turned 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.

Foreign powered parts shear and crush!
Riding on the attachment during operation is not permitted.
Implements and their weight affect the driving, steering, braking, and tip-over characteristics of the mower. Therefore, ensure 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 Hazardous Area

The user is liable to third parties working within the mower’s working range.
Staying in hazardous area is not permitted.
Check the immediate surroundings of the mower 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 turn the engine off quickly and safely in an emergency.
Ensure that all protective devices are mounted and positioned to provide protection.
With no implement mounted, make sure PTO-shaft is covered with the protective cap.

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.
For starting the engine, do not step in front of the mower and the implement.
Do not use assist-starting liquids when using electrical assist-starting devices (jumper cable). Danger of explosion!

Operation
Never leave the operator’s position at the steering handle while mower is at work.
Never adjust the operating handles during work – danger!
During operation the operator must keep at a distance as defined by the steering handle, especially when turning the machine.
1. Safety Instructions

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

If clogging occurs in the implement, turn off the engine and clean the implement with an appropriate tool.

If steering causes problems, immediately bring the mower to a halt and turn it off. Have the malfunction removed without delay.

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

If possible, always work horizontally on the slope!

End of Operation

Never leave the mower unattended with the engine running.

Before you leave the power mower, turn off the engine.

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

Secure mower and implements against rolling off (parking brake, wheel chocks).

Beware of injuries while coupling implements.

Fit implements as specified and only couple at specified points.

Secure mower and implement against unauthorized use and rolling off when you leave the machine. If necessary, install transport or security devices and secure.

Mowing attachment

Handle with care! Sharp blades of the cutter bar may cause injuries! Remove protective knife strips only for mowing and refit immediately after work has finished.

For transport and storage always fit the protective knife strips. Secure finger bars additionally with tension springs.

Do not transport the dismounted cutter bar without protective strips.

Before fitting and dismounting the cutter bar, make sure all blades are protected by the protective strip.

To exchange the mowing knife and to fit/dismount the knife driver, make sure that you turn screws away from cutting edges.

For grinding the mowing knives, always wear safety goggles and gloves.

Implements

Only fit implements with the engine and PTO switched off.

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

For fitting and dismounting implements bring support leg into proper position and ensure stability.
1. Safety Instructions

Weights
Always fit weights onto appropriate weight fitting devices.

Snow clearing
Ensure snow dozer is mounted correctly! Wear slip-proof shoes.
When swivelling the snow dozer watch out for crush and shear points. Adjust working speed to conditions. Operator may be injured when the mache comes in contact with solid objects.

Maintenance
Never carry out any maintenance or cleaning with the engine running.
Before you work on the engine, always remove spark plug connector (petrol engine only).
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. steering handle, coupling devices)!
Keep mower and implement clean to avoid risk of fire.
Check nuts and screws regularly for tight fit and re-tighten, if necessary.
After maintenance and cleaning, ensure that you reinstall all safety and protective devices and adjust them properly.
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 mower in rooms with open heating.
Never park the 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.
Caution with hot engine parts!
The exhaust and other engine parts become very hot, if the engine runs and immediately after turning off. Hold for sufficient distance from hot surfaces and keep children away from the running engine.
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 switched off and cooled down.
Do not spill any fuel, use a proper filling device.
In case of fuel spillage, pull the power mower away from the spillage before you start the engine.
Make sure fuel is of specified quality.
Store fuel in approved cans only.
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.
1. Safety Instructions

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 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 tyres, make sure power mower 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.

Use appropriate tyre air pressure when fitting weights or implements.

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

Electrical System

Persons having a pacemaker must not touch live parts of ignition system when the engine is running!
2. Specifications

Type: ................................. 5400

Tyre: ................................. 4.00-8 field tyre
................................. optional 5.0-10 field tyre

Tyre air pressure: ........................ 1,5 bar
................................. optional 16 x 6.50-8 Terra Grip

Tyre air pressure: ........................ 0,8 bar

Weight (with fuel tank filled up): .................
................................. with engine EH 17 105,5 kg
................................. with engine EH 25 108,5 kg
(without cutter bar)

Clutch: .................................. Cone clutch

Gearbox: ................. Mechanical gearbox,
................................. F-R reversing gear
................................. 2 forward speeds and 2 reverse
................................. speeds Mountain brake

Filling quantity: ................. approx. 2,0 l.
Transmission oil SAE 90-API GL5
(e.g. BP Energear Hypo)

Travel Speeds (km/h)

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<th>2.</th>
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<td>16x6.50-8</td>
<td>2,2</td>
<td>3,4</td>
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Steering handle: ...... rubber mounted
................................. height adjustable.

Vibration acceleration value:

on handlebar grip
Planetary mowing drive . \( a_{hw} = 16 \text{ m/s}^2 \)
in accordance with EN 12733

Mowing drive

- Centrally driven oil bath rocker
  arm mowing drive

for universal, municipal cutter bar and
cutting bar

Stroke: ......................... 85 mm

Crank Stone: ......................... 45 mm

Grease

Only use lithium based grease **K2 DIN 51502**.

Recommendation: DEA "Paragon EP1",
Mobilgrease MB2, Glisando EP2, ARAL
HL2 or LF2, ESSO Beacon EP2.
2. Specifications

Type: ........................................ 5400 KL
Tyre: ..................................... 4.00-8 field tyre
............................ optional 5.0-10 field tyre
Tyre air pressure: ................. 1,5 bar
.......................... optional 16 x 6.50-8 Terra Grip
Tyre air pressure: ................. 0,8 bar
Weight (with fuel tank filled up): ................... (without cutter bar) 149 kg
Clutch: .................................. Cone clutch
Gearbox: ................... Mechanical gearbox,
.................. F-R reversing gear
2 forward speeds and 2 reverse speeds
Single-wheel steering brake clutch
Central brake
optional: Safety hillholder
Filling quantity: ............. approx. 1,8 l.
Transmission oil SAE 90-API GL5
(e.g. BP Energear Hypo)

Travel Speeds (km/h)

<table>
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<td>2,2</td>
<td>3,4</td>
<td>2,2</td>
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Steering handle:
Anti-vibration steering handle bearing (2-axle-
steering handle bearing - Licenser is
Frauenhofer Gesellschaft zur Förderung der
angewandten Forschung e. V. (German so-
ciety for the promotion of applied research.)
Height-adjustable; side-adjustable without tools.

Vibration acceleration values:

| Tyre         | | | |
|--------------| | | |
| 4.00-8       | | | |
| 5.0-10       | | | |
| 16x6.50-8    | | | |

Dimensions [mm]

Mowing drive (alternatively)

- Centrally driven planetary mowing drive
  for universal, municipal cutter bar and cutting bar
  Stroke .................................. 85 mm
  Crank Stone: .......................... 45 mm

Grease

Only use lithium based grease K2 DIN 51502.
Recommendation: DEA “Paragon EP1”,
Mobilgrease MB2, Glisando EP2, ARAL HL2 or LF2, ESSO Beacon EP2.

- Centrally driven double-rocker mowing drive
  for double-knife cutter bar
  (Holding German patent)
  Stroke: Top knife ...................... 60 mm
  Bottom knife ....................... 24 mm
## 2. Specifications

### Track Width Plan [mm] Power Mower 5400

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<th>Track Width</th>
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1) = Intermediate flange 5519 011

### Track Width Plan [mm] Municipal Power Mower 5400 KL

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<td>425</td>
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<td>970</td>
<td>690</td>
<td>410</td>
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</tbody>
</table>

2) = Intermediate flange 5616 511

3) = Intermediate flange 5519 031
2. Specifications

4-Stroke Engine EH 17

Manufacturer: ................. Robin
Type: .................................. EH 17 D
Version:
Fan-cooled 1-cylinder 4-stroke engine (petrol)

Bore: .................................. 67 mm
Stroke: .................................. 49 mm
Cubic capacity: ..................... 172 ccm
Output: ................... 4,0 kW at 3600 min⁻¹
Torque: ............................ max. 11 Nm at 2600 min⁻¹
Spark plug: ............ BOSCH WR7AC
..................... NGK BR 6 HS
Electrode gap: 0,6 - 0,7 mm

Ignition system:
Contactless electronic magnet ignition, ignition point is preset, radio remote, screened according to VDE 0879

Valve lash (engine cold)
Intake ...................... 0,08 - 0,11 mm
Outlet ...................... 0,08 - 0,11 mm

Starter: .................. Recoil starter
Fuel tank capacity: ...... approx. 3,6 l.
Fuel: ....................... unleaded petrol, refer to fuel recommendations
Air filter: .................. Dry filter element with foamed preliminary filter
Carburettor: ... horizontal throttle float carburettor
Mixture Control Screw:
Base setting approx. 1 3/8 revs. open

Rated speed: .................. 3600 min⁻¹
Top no-load speed: ........ 4000 min⁻¹
Idling speed: ................. 1200 min⁻¹

Engine oil: .................. Filling quantity approx. 0,65 l.
..................... Multi-grade oil SAE 10 W-40 API-SC or higher quality

Operability on Slopes:
Engine is suited for use on slopes (with oil level at “max” = upper level mark):
Continuous operation possible up to 45° inclination (100%)

Noise level:
with planetary mowing drive
In accordance with EN 12733 appendix B:
Noise level at operator’s ear ..........
............................................. \( L_p = 90 \text{ dB(A)} \)

In accordance with 2000/14/EU, appendix III, part B, chapter 32 lawn mower:
Acoustic power level: ..................
............................................. \( L_W = 105,7 \text{ dB(A)} \)
2. Specifications

4-Stroke Engine EH 25

**Manufacturer:** ...................... Robin
**Type:** .............................. EH 25 D
**Version:**
Fan-cooled 1-cylinder 4-stroke engine (petrol)

**Bore:** ................................. 75 mm
**Stroke:** ............................... 57 mm
**Cubic capacity:** ...................... 251 ccm
**Output:** .............................. 5,9 kW at 3600 min⁻¹

**Torque:**
................. max. 16,7 Nm at 2400 min⁻¹

**Spark plug:** ............ BOSCH WR7AC
NGK BR 6 HS
Electrode gap: 0,7 - 0,8 mm

**Ignition system:**
Contactless electronic magnet
ignition, ignition point is preset, radio remote, screened according to VDE 0879

**Valve lash (engine cold)**
Intake ......................... 0,08 - 0,11 mm
Outlet ......................... 0,08 - 0,11 mm

**Starter:** ............................. Recoil starter

**Fuel tank capacity:** ......... approx. 5 l.
**Fuel:** ................................. unleaded petrol,
refer to fuel recommendations

**Air filter:** .......................... Dry filter element
with foamed preliminary filter

**Carburettor:** ........................ horizontal throttle float carburettor

**Mixture Control Screw:**
Base setting approx. 1/4 revs. open

**Rated speed:** ................. 3600 min⁻¹
**Top no-load speed:** ........... 4000 min⁻¹
**Idling speed:** ................. 1200 min⁻¹

**Engine oil:** .................. Filling quantity
........................................ approx. 0,65 l.
Multi-grade oil SAE 10 W-40 API-SC
or higher quality

**Operability on Slopes:**
Engine is suited for use on slopes
(with oil level at “max” = upper level mark) Continuous operation possible
up to 45° inclination (100%)

**Noise level:**
with double knife mowing drive 125 cm
In accordance with EN 12733 appendix B:
Noise level at operator’s ear ..............
........................................... \( L_P = 88 \text{ dB(A)} \)

In accordance with 2000/14/EU,
appendix III, part B, chapter 32 lawn mower:
Acoustic power level: \( L_w = 101 \text{ dB(A)} \)
with planetary mowing drive
In accordance with EN 12733 appendix B:
Noise level at operator’s ear ............
........................................... \( L_P = 96,4 \text{ dB(A)} \)

In accordance with 2000/14/EU,
appendix III, part B, chapter 32 lawn mower:
Acoustic power level: .....................
........................................... \( L_w = 106,6 \text{ dB(A)} \)
3. Devices and Operating Elements

The power mower agria type 5400 is suited for all common applications and tasks in farming and forestry and for winter service operation.

Available attachments:
- Cutter bars in different versions and work widths.
- Snowplough
- For a choice of further attachments, e.g. strake wheels, refer to our price-list.

Engine

The four-stroke petrol engine runs on commercial petrol (refer to fuel recommendations p 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.*

Cooling system

Cooling system is fan-cooled. Therefore keep grille 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 taken in. A clogged filter affects engine output.

Ignition system

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

Speed control lever

The speed control lever (B/9 or D/9) on the steering handle is for stepless control of engine speed from min = IDLING GAS to max = FULL THROTTLE to fit requirements.
Engine-off-switch

The power mower is equipped with an electric off-switch (B/1 or D/1). On pressing the switch, the ignition is turned on or off (engine is switched off).

Position "I" = Operation
Position "0" = Engine off

The engine-off-switch also serves as emergency-off-switch. Set the switch to "0" for fast switch-off!

Safety Circuit

- **Stop position:**
  When releasing the security lever (B/2 or D/2), the ignition system is switched off lever, the ignition system is switched off (engine is off).
  - Beware! engine keeps running due to centrifugal mass.

- **Start position:**
  For starting the engine and for short breaks, pull the hand clutch lever (B/3 or D/3) and fasten with pawl (B/4 or D/4).

- **Operating position:** To operate the machine press safety lever (B/2 or D/2).

  **Do not fasten safety lever.**

  **Release the safety lever for fast engine switch-off. The lever automatically goes to STOP position.**
3. Devices and Operating Elements

Clutch / Mountain Park Brake

Power Mower 5400

Operation of clutch and mountain park brake is via the hand lever (B/3). The mountain park brake serves to stop and to change gears on slopes.

- The machine is decoupled when you pull the hand lever to position "0", the engine stops driving the mower.
- The pulled hand lever can be locked with pawl (B/4).
- When You keep pulling the hand lever, the mountain park brake is engaged.

Clutch

Power Mower 5400 KL

The operation of the dry bevel clutch is via the hand clutch lever (D/6).

- The machine is decoupled when you pull the hand lever to position "0", the engine stops driving the mower.
- The pulled hand lever can be locked with pawl (D/7).

- Watch for the correct clutch play to avoid clutch slipping away during operation.

With engine running, don’t park mower with hand clutch lever pulled for a longer period, this may damage the clutch.
With engine stopped, always park mower with hand clutch lever pulled (pawl locked in place). Otherwise, clutch problems may result due to corrosion.
3. Devices and Operating Elements

Gearbox

Only change gears with machine decoupled and engine stopped!

FR-Change

The mower is equipped with a 2-gear reversing transmission. In both gears F/R drive is possible.

1. Move F/R-hand lever (B/11 or D/11) down (pawl B/10 or D/10 is unlocked) = the power mower travels forward.

2. Move hand lever up = the power mower travels reverse.

3. In centre position (pawl is locked) = the machine is in neutral.

The machine can be pushed in F/R neutral.

Gear-Change

Change gears 1 – 2 via shifter (B/6 or D/6)!
1st gear = shifter pushed forward
2nd gear = shifter pulled backward

There is no neutral position

Engaging Mowing Drive

Mowind drive shifter (B/8 or D/8) pushed forward
= mowing drive engaged

Mowind drive shifter pulled backward
= mowing drive disengaged
Single-Wheel Steering
Brake Clutch

For easy turning, the power mower is equipped with an easy-use steering brake clutch for both wheels.

1. To turn right, pull the hand lever (D/14). The right drive-wheel decelerates and the power mower turns right with forward speed engaged.

2. To turn left, pull the hand lever (D/13).

⚠️ When turning on banks, always turn the machine towards the slope.

Central Brake

The combined central / park brake serves to decelerate and park the power mower on banks.

1. Central Brake

Swivel eccentric lever (D/12) backwards - both drive-wheels are decoupled and decelerate.

Release eccentric lever and the lever swivels back to original position – brake is released.

2. Park Brake

Swivel eccentric lever (D/12) backwards beyond the dead centre. Eccentric lever automatically comes to a stop - both drive-wheels are decoupled and blocked.

To release park brake, swivel eccentric lever back to original position – brake is released.
3. Devices and Operating Elements

Steering Handle Height Adjustment

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

- Unfix ball handle levers A on either side until the detents B are free.
- Bring left and right steering handle to the desired height and introduce into the respective detent.
- Tighten ball handle levers A again.

Eyelet for Loading

1 For transport facilities and for fixing the security rope when working on slopes, the power mower 5400 is equipped with a hook (A/3) and the 5400 KL with a ring (C/3).

Do not use any loading devices with sharp edges (e.g. sharp-edged hooks, eyelets etc.).

Never walk or remain under moving loads. Danger!

Fixing Points

2 For towing away, recovering and tying down and to ensure a safe transport, use the fixing points at the hook (A/3) or eyelet (C/3) and engine food guard.
3. Devices and Operating Elements

**Planetary Mowing Attachment**

**Centrally driven planetary mowing drive**

Stroke: ............................. 85 mm  
Crank stone ......................... 45 mm

\[ M_{8} = 23 \text{ Nm} \]  
\[ M_{12} = 76 \text{ Nm} \]

---

**Mounting Cutter Bar**

- Switch off engine, Remove spark plug connector!
- Wear safety gloves!

1. Mount the knife driver onto the cutter bar.
   - a) Universal-SC- and Municipal cutter bar (Pos. 3 - 6)
   - b) Finger cutter bar (Pos. 7 - 9)

2. Mount the cutter bar (16) onto the planetary moving drive (2).
   - Universal- and finger cutter bar (Pos. 13 - 15)
   - Municipal cutter bar (Pos. 13 - 14)

3. Mount the grass distributor (10).

---

**Dismounting the cutter bar**

In reverse order.

**Exchanging Mowing Knives**

- Refer to operating instructions cutter bar
- Switch off engine, Remove spark plug connector!
- Wear safety gloves!

---

The cutter bar is exposed to extreme strain. Therefore, it evidently must be maintained and adjusted with special care.
**3. Devices and Operating Elements**

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**Single Rocker Mowing Drive**

1. Mower hood
2. Upper rocker
3. Lower rocker
4. Knife driver
5. Cutter bar

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**Cutter Bar Assembly**

- **Switch off engine, Remove spark plug connector!**
- **Wear safety gloves!**

1. Remove both knives (see page 27).

2. Place the cutter bar onto the centring sleeves (6).
   - Attach the cutter bar to the cutter bar carrier using bolts (7) and washers (8) - tighten evenly at **45 Nm**.

3. Mount the mowing knives (see page 28).

**Dismounting** the cutter bar is in reverse order.
3. Devices and Operating Elements

Mowing Knife Removal

1. Fold up pivot arms.
2. Loosen clamping bolts.
3. Grab top knife with both hands and pull out to the front. Pull with little tipping movements.
4. Lift bottom knife out of pivot arms. Use a screwdriver or similar tool. Pull with little tipping movements.

Before you put down both mowing knives, mount knife guard!

Switch off engine, Remove spark plug connector!
Wear safety gloves!
3. Devices and Operating Elements

Mowing knife attachment

⚠️ Switch off engine, Remove spark plug connector!

เติมWear safety gloves!(564,276),(679,336)

ℹ️ Only fit straight and sharp knives.

1. Loosen clamping bolts (4 - 6) all the way. Then remove the link pins (2).
2. Insert the link pin (2) into the knife driver (1) on the bottom and the top knife.
3. Fold up the upper pivot arms.
4. Fit the bottom knife (3) with link pin fitted into the catch on the lower rocker.
   • Lock all mushrooms in the bottom pivot arms
   • Fit the top knife with link pin fitted into the catch on the upper rocker.
5. Mount the clamping bolts (4 - 6) of the link pins.
6. Fold the pivot arms into place and lock them onto the mushrooms on the knife.
   • Check top and bottom knives for even gliding and smooth contact.
     Check the bottom knife and the knife support in the same way.
7. Tighten the clamping bolts at 100 Nm.

ℹ️ Tighten the clamping bolts at 100 Nm to secure the link pins holding the top and bottom knives after fitting the mowing knives and before each operation!
3. Devices and Operating Elements

Cutter Bar Running Bases
There are height-adjustable running bases to prevent the cutter bar from being damaged by stones, etc. during operation. This specification depends on the cutter bar version or is optional equipment.

Height adjustment:
- Loosen hex nuts (1).
- Lift the cutter bar off the ground and adjust the running base (2) to the desired height.
- Retighten hex nuts (1).

Set all running bases to the same height.

Extra weights for cutter bars
Optional: item no. 5547 931
If the cutter bar is not heavy enough for slope operation (this applies in particular to the Universal cutter bar), it is possible to replace the outer skids by extra weights (item no. 5547 931).

In addition, a second pair of extra weights can be attached in place of the running bases. This takes a long hex head bolt M 8 x 45.
3. Devices and Operating Elements

Wheel Attachment Bolts

A: Version hex head bolt with ball spring ring
B: Version double-end stud with ball spring ring and hex head nut

Damp the short threaded end of double end studs with LOCTITE 270 or UHU-Plus and screw tightly into wheel flange respectively hub adapter.

- Fit the countersunk side of the ball spring ring into countersink-type holes of disc wheel
- Tighten the wheel attachment bolt respectively the wheel nuts at 100 Nm

Drive-Wheels

For full tractive power, mount wheels with pointed parts of lugs showing in travel direction (wheels seen from above).

Extra Wide Drive-Wheels

Item no. 5490 611: 16×6,50 - 8 Terra Grip
Usage: Mowing on soft (boggy) ground

Snow Chains

When working with snow chains fitted on wheels, observe manufacturer’s instructions, make sure there is sufficient clearance between chains and machine parts.

- We recommend using strake wheels or twin wheels for operation on extremely steep slopes.

Strake wheels

Item 5417 511 for drive-wheels 4.00-8
Item 5517 521 for drive-wheels 5.0-10

- Wheel attachment bolts version B must be fit
- Fit drive-wheels with flanges (3) and ball spring rings + ball spring rings between wheel bowl and flanges (centring)
- Fit strake wheels (6) on hexagonal full dog points and tighten with tommy screws (7).
- Make sure that wheel carriers point to machine, when looked into travel direction (see fig.).
- Block the tommy screw by positioning the spring (9).
3. Devices and Operating Elements

**Twin wheels with wheel track expansion**
- Use wheel attachment bolts version B.
- Mount the internal drive wheels on the wheel hubs of the basic machine.
- Mount the wheel track expansion device (4) on the wheel bowl with ball spring rings (2) + ball spring rings between wheel bowl and wheel track expansion (centring).
- Mount the outer drive wheels on the wheel track expansion.

**Twin wheels with Differential Hubs**
- Use wheel attachment bolts version B.
- Mount the internal drive wheels on the wheel hubs of the basic machine.
- Mount the differential hubs (4) on the wheel bowl with ball spring rings (2) + ball spring rings between wheel bowl and differential hub (centring).
- Fit the anti-winding tubes (11) onto the differential hubs.
- Mount the external drive wheels to the differential hubs.

**Lubrication**
- Lubricate the wheel flange lube nipple (8 or 3) at intervals of 50 operating hours or after cleaning with a pressure washer. Use a grease gun (Bio lubrication grease).

**Setting**
- The machine is supplied with differential hubs being set to give differential action.
- Rigid position

Remove snap ring (4) with a pair of pliers.
Position the wheel flange (2) with the tang nocken between both tang pins and fit the snap ring.
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.

- Check transmission oil level (see page 43)

⚠️ 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 (see page 38)!**
4. Commissioning and Operation

Before starting the engine

1. Sufficient fuel is filled into the tank?

2. Air filter clean?

3. Check the engine oil level

4. Check the transmission oil level

5. Grease the crank stone (planetary mowing drive)

6. Check all bolts and nuts for tight fit

⚠️ Only take power mower 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.
Starting the 4-Stroke-Petrol-Engine

1 Position the spark plug connector.
2 Open fuel tap (E/3).
3 **CHOKE**
   - **Cold engine**: Turn CHOKE lever (E/5) to position "CHOKE".
   - **Warm engine**: Leave CHOKE in operating position or turn half way.
4 Set engine-off-switch (B/1 or D/1) to operating position ("I").
5 Set speed control lever (B/9 or D/9) to approx. 1/3 throttle.
6 Position hand clutch lever to start position (lock pawl (B/4 or D/4)).
7 Pull the starter rope on the handle (E/6) 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.
8 As soon as the engine has warmed up, move the CHOKE back to the operating position (if it was operated).
4. Commissioning and Operation

**Shutting off the Petrol Engine**

1. Set speed control lever to idle position "min" and let engine run idle for approx. half a minute.

2. Set engine-off-switch to "0"

3. Close the fuel tap.

4. Secure the machine against unauthorised use. Remove the spark-plug connector.

---

*Engine-off-switch (B/1 or D/1) also serves as emergency off-switch. If necessary, set switch to “0” to turn engine off.*

*To down the machine for a long period of time, do not press the engine shut-off-switch to stop the engine. Instead, close the fuel tap and operate the engine until it comes to a stop by lack of fuel. This is to ensure the carburettor is empty and to avoid resin deposits.*
4. Commissioning and Operation

**Mowing**

1. Grease the crank stone (Planetary mowing drive)
2. Remove knife guard..
3. Grease the cutter bar.
4. Start the engine.

**Commissioning**

- Check safety circuit function
- only operate the machine if the safety circuit is working.

5. Wear protective ear plugs and solid shoes.
7. Engage mowing drive.
8. Engage wheel drive.
9. Pull hand clutch lever slightly while pressing the throttle.

**After mowing and in case of grass clogging:**

1. Move F/R hand lever to "neutral". The mower comes to a stop but not the knives, thus freeing the cutter bar from grass.
2. Disengage mowing drive.
4. Refit knife guard.

**For direction change from forward to reverse, proceed as follows:**

1. Engine to idle speed.
2. Pull hand clutch lever and hold.
3. Move the shifter to "R" and hold.
4. Slowly release the hand clutch lever while you are pressing the throttle.

Re-tighten all nuts and screws of the mowing drive and the cutter bar after commissioning and when changing the knife after about 15 - 30 operating minutes and than every 4 operating hours (particularly of the cutter bar carrier, knife driver and cutter bar mounting flange).
4. Commissioning and Operation

Caution with hot engine parts!
The exhaust and other engine parts become very hot, if the engine runs and immediately after turning off. Hold for sufficient distance from hot surfaces and keep children away from the running engine.

Danger Zone

Keep out of the mower’s danger zone during starts and operation.

Mowing on Slopes

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

For operation on banks, always turn machine towards the slope!

Starting the engine on slopes

1. Keep the mowing drive and the travelling drive in engaged mode; braking effect.
2. Move the hand clutch lever and emergency-off-switch to "Start" position.
3. Start the engine.
5. Maintenance: 4-stroke engine

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

Please note:

⚠️ Only do all maintenance work with the engine switched off and spark plug connector disconnected!

⚠️ When working on mowing knives, wear safety gloves!

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**Engine**

**Check Oil Level**

each time you take up operation and after every 8 operating hours,

- only with engine switched off and in horizontal position.
- Clean oil plug and surrounding parts.
- Remove oil plug, clean dipstick with a clean cloth and dip back into oil tank (do not screw in), take out dipstick and read oil level.
- In case oil level is below lower mark "min", refill engine oil (refer to “Specifications”) until oil level reaches rim of oil filler neck "max".

**Changing Engine Oil**

The first oil change is after 25 operating hours, Following oil changes are after every 50 operating hours. Change oil while engine is still warm, but not hot – danger of burns!

- Clean filling- and drain plug and surrounding parts.
- Change the oil and dispose of properly.

Check sealing washer for good condition and exchange, if necessary!

- For engine oil quality refer to “Specifications”.

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A: 8 h

25 h (50 h)
Dry Air Filter EH 17

When you take up operation check the air filter (E/4) on dirt, clean it if necessary. Clean the air filter at least every 25 operating hours or at 3-month intervals, after some hours in very dusty conditions:

1. Clean the air filter and surrounding parts.
2. Take off the filter cap.
3. Carefully remove the foamed preliminary filter.
4. Wash the foamed preliminary filter in warm lye (do not use petrol).
5. Squeeze the foamed preliminary filter like a sponge and dry it.
6. Remove the filter element.
7. Tap the filter element against a smooth surface.
8. Do not clean the foamed preliminary filter and the filter element using compressed air and do not soak it in oil!
9. Reinstall the filter element and the foamed preliminary filter.
10. Reposition the filter cap

- Replace the filter element after 5 cleaning actions or approx. every 200 operating hours.
- Replace immediately damaged filter elements.
**5. Maintenance: 4-stroke engine**

**Dry Air Filter EH 25**

When you take up operation check the air filter (E/4) on dirt, clean it if necessary.

Clean the air filter at least every 25 operating hours or at 3-month intervals, after some hours in very dusty conditions:

1. Clean the air filter and surrounding parts.
2. Loosen the wing nut and take off the filter cap.
3. Carefully remove the foamed preliminary filter.
4. Wash the foamed preliminary filter in warm lye (do not use petrol).
5. Squeeze the foamed preliminary filter like a sponge and dry it.
6. Remove the filter element.
7. Tap the filter element against a smooth surface.
8. Do not clean the foamed preliminary filter and the filter element using compressed air and do not soak it in oil!
9. Reinstall the filter element and the foamed preliminary filter.
10. Reposition the filter cap and fasten the wing nut.

- Replace the filter element after 5 cleaning actions or approx. every 200 operating hours.
- Replace immediately damaged filter elements.
5. Maintenance: 4-stroke engine

Cleaning the Cooling System
Clogging of dirt and dust may occur to the cooling system. This may heat up and damage the engine.

- Regularly check the cooling-air screen (E/7) and clean from dust and sucked-in plant trash.
- Remove the fan case at least once a year, preferably before the season starts and clean the cooling fins on cylinder, cylinder head, guide plates and cooling-air screen, both serving for good air circulation.

Cleaning the Spark Plug and Readjusting the Electrode Gap
After every 100 operating hours or ignition problems:

- Clean the electrodes on the spark plug from dust and dirt using a wire brush.
- Check spark plug gap and, if necessary, readjust it to 0,6 - 0,7 mm.

Exchange the spark plug at approx. 200-hour intervals.

Fuel Hoses
Exchange after every 2 years, Exchange leaking fuel hoses immediately.

Cleaning the Fuel Strainer
Check the strainer on the fuel tap (E/3) at least once a year for water and other impurities.

- Close the fuel tap.
- Remove the fuel strainer and remove the impurities, replace if damaged.
- Rinse the strainer container in fuel.
- Then screw it back on correctly, to avoid fuel leakage.

Exhaust
Regularly clean surrounding parts of muffler (E/9) Free from grass, dirt and inflammable deposits.

Danger of fire! Check each time before you take up operation.
Caution with hot engine parts!

The exhaust and other engine parts become very hot, if the engine runs and immediately after turning off. Hold for sufficient distance from hot surfaces and keep children away from the running engine.
5. Maintenance: 4-stroke engine

Cleaning the Cylinder Head
After every 400 hours of operation take off cylinder head and remove carbon deposits on the cylinder head, piston crown and valves with a steel brush. Afterwards, clean with soft brush. Exchange the gasket and reassemble it to the cylinder head. Tighten cylinder head screws in turn at 25 Nm.

Readjusting the Valve Lash
After every 400 hours of operation, readjust the valve lash. Intake and outlet valve are at 0.08–0.11 mm when the engine is cold.

Cleaning the carburettor
Clean the carburettor every 400 operation hours and then readjust the idle speed.

Idle speed adjusting
Always ensure that idling-speed is adjusted correctly. With the speed control lever set to idle, the engine is supposed to run smoothly and without run-out at low engine speed.

At low speeds, the engine is supposed to continue running smoothly when the speed control lever is at a stop in idling. Adjust the engine speed while the engine is still warm from operation. For this purpose, readjust the limiter screw (2) and the mix control screw (1) for idling speed. Then turn the attachment or adjusting screw to adjust the throttle cable for no play. (For idling speeds refer to “Specifications”).

Governor
For proper function of the engine speed governor and to adjust the upper idling speed, the governor spring has to be in the appropriate hole, see fig.

Any changes to the position of the spring increases the risk of accident and will render the warranty and type approval null and void!

Keep governor spring, lever and linkages free from dirt and plant trash at all times.
5. Maintenance

**Machine**

**Gearbox**
Check transmission oil level before you take up operation and after every 50 operating hours (oil dipstick (A/9)). The machine parked in horizontal position, the oil level is between the notches max. and min.

- Remove oil dipstick, clean with a clean cloth and put it back in.
- Remove the dipstick again and read the oil level, refill transmission oil, if necessary.

**Change transmission oil** after the first 50 operating hours and after every 200 operating hours while the engine is still warm.

1. Clean the oil filler plug (A/9) and the drain plug (A/13) as well as the surrounding parts.
2. Change oil, collect the old oil in a proper container and dispose of properly.
3. Check and exchange o-rings, if necessary. Tighten the drain plug!

For filling quantity and oil quality refer to "Specifications".

**Drive wheels**

- When commissioning the mower and each time you change wheels, check and tighten wheel bolts and nuts after the first 2 operating hours with 100 Nm; Proceed likewise when doing maintenance work.
- Retighten the wheel flange locking nuts (A/12) after the first 2 operating hours, then every 50 operating hours with 100 Nm.
- Check the tyre air pressure regularly. For smooth driving, make sure that there is the same pressure in both tyres.
5. Maintenance

**Power Mower 5400**

**Steering Handle Central Mounting**
Re-tighten adjustment nut (3) with 20 Nm after the first 4 operating hours, then after every 50 operating hours.

**Steering Handle Pendulum Stop**
This steering handle bearing provides optimum dampening, when the two stop buffers are adjusted to a play of \( A = 0.5 \) mm (in position zero, with no load on steering handle) between stop plate and buffers.

However, the pendulum stop can also be set to provide a rigid steering handle (without play).

**Adjustment:**
1. Loosen hexagonal nuts (2).
2. Adjust stop buffer (1) by turning it to the above stated play.
3. Re-tighten hexagonal nuts (2) (lock)

---

**Municipal Mower 5400 KL**

**Steering Handle Locking Bolt**
Occasionally lubricate nipple on locking bolt of steering handle with Bio-lubrication grease. Lubricate at least once a year and after cleaning with air-compressed water jets.
5. Maintenance

**Municipal Mower 5400 KL**

**Steering Handle Central Mounting**

Re-tighten adjustment nut (3) with 100 Nm after the first 4 operating hours, then after every 50 operating hours.

- Remove pin retention to unscrew fastening nut for steering handle (5).
- Remove steering handle and place aside.
- Loosen lock nut (4).
- Tighten adjustment nut (3) with 100 Nm.
- Re-tighten lock nut (4) (lock).
- Mount steering handle. Brush some lubrication grease onto gliding faces, if necessary.
- Screw on fastening nut (5) until steering handle is without play but can still be swivelled. Secure with pin.

**Steering Handle Pendulum Stop**

This 2-axle-steering handle bearing provides optimum dampening when each of the two stop buffers is adjusted to a play of \( A = 0.5 \text{ mm} \) (in position zero, with no load on steering handle) to the stop plate.

**Adjustment:**

1. Loosen hexagonal nuts (2).
2. Adjust stop buffer (1) by turning it to the above stated play.
3. Re-tighten hexagonal nut (lock).

---

1. Stop buffer
2. Lock nut for stop buffer
3. Adjustment nut for steering handle central mounting
4. Lock nut
5. Fastening nut for steering handle
Safety circuit

Check safety circuit for proper function each time you take up operation and each time you do maintenance work on the machine.

- When you release lever (B/2 or D/2) and engaged clutch 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 take up operation and each time you do maintenance work on the machine.

- The engine-off-switch in position „0“, the engine must come to a stop.
- Check electric conductors and connections for good condition.

→agria - Service←
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 clutch lin-ings).

**Clutch:**

\[ X = 3 - 5 \text{ mm} \]

(47)

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

**Steering brake:**

(5400 KL)

\[ X = 3 - 5 \text{ mm} \]

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

**Hand lever for F/R shifting:**

Adjust Bowden cable in such a way that transmission is set to neutral when pawl is locked (B/10 or D/10).

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

---

Adjustment:

1. Remove retaining spring (2) and remove cable end (3) and adjusting pin (4) out of bracket in hand lever.

2. Screw the adjusting pin (4) in or out to a play of \( X \).

3. Place cable end and adjusting pin back into bracket and fit retaining spring (2).

---

1. Hand lever
2. Retaining spring
3. Threaded end of cable
4. Adjusting pin
5. Maintenance

Mountain Park Brake

Power Mower 5400

- Every time you start operation, check the mountain brake on proper function.

Adjustment

1. Adjust clutch.

2. Place the clutch hand lever on position "0" (pawl locked).

3. Loosen the hex head nuts (1) on both sides.

4. Move the park brake carter against the brake disc (3) by a slight pressure on the brake carter until the brake shoe (4) fits slightly.

5. Fasten the hex head nuts (1) on both sides.

6. Check the brake function, readjust if necessary.

7. Check the brake free wheel.
   - F-R shifter on "idle"
   - Clutch on "0"
   - The brake disc must turn easily by hand, readjust if necessary.

Check brake lining

Every 100 operating hours check the brake linings (4 + 5) on wear and tear (visual check). The linings should have a min. thickness of 3 mm, replace the linings if necessary.

Replace brake lining

- Loosen and unscrew the hex head nut (1) on both sides.
- Dismount the angles (2) with discs and brake housing.
- Replace the brake linings (4 + 5).
- Mount the park brake in the opposite order.
- Adjust
5. Maintenance

Planetary Mowing Drive

Stop the engine, remove spark plug connector!

1. After commissioning and each time you change knives after approx. **15 - 30 operating minutes** and then at intervals of **4 operating hours** retighten all bolts and nuts on the mowing drive and the cutter bar (in particular the cutter bar attachment, the knife driver and the mowing drive coupling).

2. Lubricate lubrication nipple on **crank stone** before each operation and after every **8 operating hours**. Leave a grease collar on crank end - protection from penetration of water and dirt.

3. Planetary drive after each **50 operating hours** (4 strokes with a manual grease gun).

4. Lubricate the rocker bearing every **50 operating hours**. Leave a grease collar on the neck - protection from penetration of water and dirt.

Only use lithium based grease **K2 DIN 51502**. Recommendation: DEA "Paragon EP1"; Mobilgrease MB2; Glisando EP2; ARAL HL2 or LF2; ESSO Beacon EP2

5. **Mowing knife**

Lubricate gliding parts before each time you take up operation and after every **8 operating hours**. Use Bio-lubricating oil.

6. **Knife driver with exchangeable distance plates**

The play between crank stone and knife driver is set to max 0.3 mm. When the play is 0.5 mm, replace one distance plate. If the problem re-occurs, also exchange distance plate on opposite side.

The attachment bolts M 6×16 must not project inwards.
5. Maintenance

Double Knife Mowing Drive

Stop the engine, remove the spark plug connector!

1 After commissioning and each time you change knives after approx. 1/2 - 1 operating hours, and then at intervals of 4 operating hours retighten all bolts and nuts on the mowing drive and the cutter bar (in particular the cutter bar attachment, the knife driver and the mowing drive coupling).

2 Every 25 operating hours check the pressure (130 - 160 N) of the cutter bar's pivot arms and adjust, if necessary (use conventional spring balance).

3 Lubricate the lower rocker bearings every 4 operating hours; in case of very humid working conditions: Use a water resistant grease (agria no. 604 80, cartridge 400 g) instead of the Bio-lubrication grease!

4 Every 8 operating hours lubricate the back pivot arm, the knife driver and the crankshaft bearing!

5 Grease the rocker bearing every 50 operating hours. Leave a grease collar on the neck - protection from penetration of water and dirt.

6 Mowing knife

Lubricate gliding parts before each time you take up operation and after every 8 operating hours. Use Bio-lubricating oil. Apply some grease on the mushrooms of the top and the bottom knife.
5. Maintenance

Cutter Bar

Stop the engine, remove the spark plug connector!

Wear safety gloves!

Always attach the knife guard before laying the mowing knife aside!

For mounting or dismounting the mowing knives as well as for the maintenance of the cutter bar refer to operating instructions cutter bar

Regrinding the Mowing Knives

Wear safety goggles and safety gloves.

After 4–20 operating hours, depending on the strain the mowing knives are exposed to, they become blunted and regrinding is necessary.

For this purpose, we recommend to use a hand grinder of 15,000 to 20,000 rpm with a pot-shaped grinding pin of 25 mm in diameter and approx. 35 mm in length or a special grinding tool.

Grinding of mowing knives is essential for clean and smooth mowing.

- For grinding, use front of grinding pin and slide it from knife back to blade tip.
- Blades must not heat up. They are destroyed when they turn blue (glowed out and soft).
- Do not round-off the tips of the blades (P).
- Do not grind the blades in a bow (P).
- Remove any burr with a hand grinding stone.
5. Maintenance

General Maintenance

- Every time you take up operation watch out for fuel and oil leakage, repair if necessary.
- Regularly check bolts and nuts for tight fit, re-tighten, if necessary.

After every 50 operating hours, at least once a year and after cleaning:

- Lubricate all gliding and moving parts with Bio-lubricating grease or Bio-lubricating oil (e.g. speed hand lever, handle bearing etc.).

Mowing Drive and Machine

After cleaning with air-compressed water jets immediately lubricate the pivot arm bearing on the moving drive lubrication points on the machine and operate mowing drive for a short time to press out penetrated water. Apply grease generously to leave a grease neck around bearing to prevent water, plant sap and dirt from penetrating.

Engine

Clean engine only with a cloth. Avoid spraying with water jets, as water might penetrate into ignition and fuel system and cause malfunctions.

Cleaning

Cutter bar

After each mowing, clean cutter bar thoroughly with water. Remove the knife and remove dirt collected between knife blades. After cleaning, apply Bio-lubricating oil or Bio-lubricating grease to all gliding parts.

Fit knife guard!
5. Maintenance

Storage

For longer periods of no operation:

a) Clean thoroughly
   Repair paint coat

b) Spray all shining parts, in particular cutter bar, with Bio-slushing oil.

c) Engine preservation
   - Drain fuel completely or fill the fuel tank, add fuel stabilizer (agria No. 799 09) to the fuel tank - observe instructions.

   Operate the engine for approx. 1 minute.
   - Change the engine oil.
   - Fill a teaspoon of engine oil (approx. 0.03l) into the spark plug opening. Slowly crank the engine.
   - Reinstall the spark plug and set the valves on compression using the recoil starter (pull the starter rope until you feel resistance), the valves are closed.
   - Crank the engine slowly at 2–3 week intervals (spark plug connector is removed!) and set the valves on compression again.

d) Drive-wheels
   Support drive-wheels in such a way that tyres have no ground contact. Pneumatic tyres are quickly destroyed, if left standing under load and uninflated.

e) Clutch
   Always park mower with hand clutch lever pulled (pawl locked in place). Otherwise, clutch problems may result due to corrosion.

f) Storing the machine
   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.

g) Protect machine
   with cloth or a similar cover.
Accessories for cutter bar

**Pair of running bases**  
5547 961  
height-adjustable, ecological,  
cutting height: 3-12 cm

**Pair of running bases**  
5547 951  
rigid, ecological,  
cutting height: approx. 9 cm

**Pair of running bases**  
713 22  
adjustable,  
cutting height: up to approx. 5 cm
Accessories for cutter bar

Grass distributor
Double-knife cutter bar
optional
agria 690 55

Cutter bar limit stops,
Double-knife cutter bar
Pair: 719 85
### 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>
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<th>Problem</th>
<th>Possible cause</th>
<th>Remedy</th>
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<td>- Spark plug connector not connected</td>
<td>Connect spark plug connector</td>
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<tr>
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<td>- Choke is not pulled</td>
<td>Set Choke-lever to right position</td>
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<tr>
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<td>- Engine-off-switch is set to “0”</td>
<td>Set engine-off-switch to “I”</td>
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<tr>
<td></td>
<td>- Safety circuit is not set to start position</td>
<td>Set safety circuit to start position</td>
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<td>- Fuel tank empty or poor fuel</td>
<td>Fill fresh fuel</td>
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<td></td>
<td>- Fuel line clogged</td>
<td>Clean fuel line</td>
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<tr>
<td></td>
<td>- Defective spark plug</td>
<td>Clean, adjust or exchange spark plug</td>
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<td></td>
<td>- Engine too much fuel (“flooded engine”)</td>
<td>Dry and clean spark plug and start at full throttle</td>
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<tr>
<td></td>
<td>- Engine-off-line defective</td>
<td>Check line and connections</td>
<td>*</td>
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<tr>
<td></td>
<td>- Inleaked air due to loose carburettor and suction line</td>
<td>Tighten fastening screws</td>
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<tr>
<td>Misfirings</td>
<td>- Engine running in CHoke range</td>
<td>Set CHOKE-lever to operating position</td>
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<tr>
<td></td>
<td>- Ignition cable not fixed</td>
<td>Fix spark plug connector on the spark plug, fix ignition cable retaining device, fix spark plug connector on the ignition cable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Clogged fuel line or poor fuel</td>
<td>Clean fuel line, fill fresh fuel</td>
<td>*</td>
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<tr>
<td></td>
<td>- Vent opening in fuel tank cap clogged</td>
<td>Exchange fuel tank cap</td>
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<td>- Water or dirt in fuel system</td>
<td>Clean fuel filter</td>
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<td>- Air filter clogged</td>
<td>Clean air filter or exchange</td>
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<tr>
<td></td>
<td>- Carburettor misadjusted</td>
<td>Readjust carburettor</td>
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<tr>
<td>Excessive temperature</td>
<td>- Low engine oil level</td>
<td>Refill oil immediately</td>
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<td>- Impaired cooling</td>
<td>Clean cooling fan grille, clean internal cooling fins</td>
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<tr>
<td></td>
<td>- Air filter clogged</td>
<td>Clean air filter or exchange</td>
<td>39, 40</td>
</tr>
<tr>
<td></td>
<td>- Carburettor misadjusted</td>
<td>Readjust carburettor</td>
<td>* 42</td>
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<tr>
<td>Misfirings at high speeds</td>
<td>- Short firing intervals</td>
<td>Adjust spark plug</td>
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<td></td>
<td>- Incorrect idle mix</td>
<td>Adjust carburettor</td>
<td>* 42</td>
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<tr>
<td>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>- Carburettor misadjusted</td>
<td>Readjust carburettor</td>
<td>* 42</td>
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<tr>
<td></td>
<td>- Air filter clogged</td>
<td>Clean air filter</td>
<td>39, 40</td>
</tr>
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</table>
### 6. Troubleshooting

<table>
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<tr>
<th>Problem Description</th>
<th>Possible Cause</th>
<th>Remedy</th>
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<td>- Speed control linkages clogged or jammed</td>
<td>Clean speed control linkages</td>
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<tr>
<td>Engine does not stop when set to stop</td>
<td>- Defective engine-stop-line, earth missing</td>
<td>Check line and connection, check earth contact</td>
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<tr>
<td>Engine output too low</td>
<td>- Air filter clogged</td>
<td>Clean air filter</td>
<td>39, 40</td>
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<tr>
<td></td>
<td>- Loose cylinder head or damaged sealing</td>
<td>Tighten cylinder head, exchange sealing</td>
<td>42</td>
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<td></td>
<td>- Poor compression</td>
<td>Have engine checked</td>
<td></td>
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<tr>
<td>Clutch does not decouple</td>
<td>- Hand clutch lever misadjusted</td>
<td>Adjust clutch free play</td>
<td>46</td>
</tr>
<tr>
<td>Clutch slips</td>
<td>- Hand clutch lever misadjusted</td>
<td>Adjust clutch free play</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>- Worn out clutch</td>
<td>Exchange clutch disc</td>
<td></td>
</tr>
<tr>
<td>Excessive vibration</td>
<td>- Loosened fastening screws</td>
<td>Tighten fastening screws</td>
<td>52</td>
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<tr>
<td>Mowing output suddenly declines</td>
<td>- Dull knives</td>
<td>Exchange knives or re-grind knives</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Remove any burr with a hand grinding stone</td>
<td></td>
</tr>
<tr>
<td>Uneven cut/plant trash gets caught between knives</td>
<td>- Dull mowing knives</td>
<td>Re-grind mowing knives</td>
<td>51</td>
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<tr>
<td></td>
<td>- Knives not straight</td>
<td>Have knives removed and realigned</td>
<td></td>
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<td></td>
<td>- Blades are not aligned</td>
<td>Have blades realigned</td>
<td>51</td>
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<tr>
<td></td>
<td>- Bottom pivot arms warped</td>
<td>Adjust bottom pivot arms</td>
<td>51</td>
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<tr>
<td>Blade tips of bottom knife work into blades of top knife</td>
<td>- Top knife protrudes too far over bottom knife</td>
<td>Adjust knife guides</td>
<td></td>
</tr>
<tr>
<td>Blades are not on top of each other</td>
<td>- Bent blades or knives, twisted knife back</td>
<td>Check whether knives are straight, realign, if necessary, until blades align as well</td>
<td></td>
</tr>
</tbody>
</table>

* = Contact your agria workshop!

MB = Refer to cutter bar operating instructions
Varnishes, Wear Parts

Electric Circuit

799 09 Fuel stabilizer

Glues (for locking bolts), Surface sealing:
559 94 Glue (medium) Loctite 242
559 95 Glue (medium) Loctite 270
559 96 Glue (medium)
559 97 Surface sealing (liquid) Loctite 573

Varnishes:
181 03 Spray varnish birch-green
181 04 Spray varnish blood orange
509 68 Spray varnish black

Wear Parts:
749 00 Air filter set (paper element + pre-filter), for 4-stroke engine, Robin EH 17
707 91 Air filter set (paper element + pre-filter), for 4-stroke engine, Robin EH 25
671 87 Spark plug Bosch WR7AC, for 4-stroke engine, Robin EH 17 and EH 25
009 05 O-ring 14 x 20 x 1,5 (engine oil drain plug), for 4-stroke engine
684 16 O-ring (dip stick for engine oil), for 4-stroke engine
009 16 O-ring 16 x 22 x 1,5 (drain plug gear box housing / dip stick)

Emergency Tyre Repair:
713 13 Tyre sealing gel Terra-S

Spare Part Lists:
997 022 Power Mower 5400, Municipal Mower 5400 KL
997 077 Robin Engines

Electric Circuit

1 Engine
2 Magnet ignition system
3 Engine-off-switch
4 Switch in clutch lever
5 Switch in safety lever
Lubrication Chart

Power Mower 5400

A = Each time before You take up operation
B = Once a year and after every cleaning
   with air-compressed water jets
J = Once a year

<table>
<thead>
<tr>
<th>No.</th>
<th>Area</th>
<th>A: 8 h; B 50 h</th>
<th>A: 8 h; B (25 h) 50 h</th>
<th>A: 8 h; B (50 h) 200 h</th>
<th>A: 8 h; B 50 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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</tbody>
</table>

Municipal cutter bar
Lubrication Chart

Municipal Mower 5400 KL
With planetary mowing drive

A = Each time before You take up operation
B = Once a year and after every cleaning with air-compressed water jets
J = Once a year

1. A; 8 h
2. (25 h) 50 h
3. 50 h
4. (50 h) 200 h
5. 50 h
6. A; 8 h; B
7. A; 8 h; B
8. Municipal cutter bar A; 8 h; B
9. J, B
10. 50 h, B

Municipal cutter bar

Each time before You take up operation
Once a year and after every cleaning with air-compressed water jets
Once a year

Lubrication Chart
agria Power Mower 5400
Lubrication Chart

Municipal Mower 5400 KL
With double-knife mowing drive

A = Each time before You take up operation
B = Once a year and after every cleaning with air-compressed water jets
J = Once a year

A; 8 h; B

1

A; 8 h

10

J, B

50 h, B

14

A; 8 h; B

9

15

(25 h) 50 h

11

4 h; B

12

8 h; B

13

50 h; B

4

(50 h) 200 h

3

50 h

agria Power Mower 5400

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## Inspection and Maintenance Chart

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<tr>
<th>Operation</th>
<th>P</th>
<th>A</th>
<th>2</th>
<th>4</th>
<th>8</th>
<th>25</th>
<th>50</th>
<th>100</th>
<th>200</th>
<th>400</th>
<th>min. after 3 months</th>
<th>J</th>
<th>B</th>
<th>page</th>
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</thead>
<tbody>
<tr>
<td>Check bolts and nuts</td>
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<td>K</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td>52</td>
</tr>
<tr>
<td>Clean surrounding parts of exhaust</td>
<td>K</td>
<td>K</td>
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<td>Clean spark plug, adjust gap</td>
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<td>Replace spark plug</td>
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<td>Replace air filter insert, earlier, if required</td>
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<td>Replace fuel hoses</td>
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<td>Clean fuel filter</td>
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Designation of Parts

4-Stroke Petrol Engine,
Robin EH 17 D and EH 25 D

Figure E
1. Fuel tank cap
2. Fuel tank
3. Fuel tap
4. Air filter
5. Choke lever
6. Starter lever
7. Cooling screen
8. Spark plug / spark plug connector
9. Exhaust
10. Engine oil filling plug with dip stick
11. Engine oil drain plug
12. Engine designation and engine no.
13. Carburettor

\[ P = \text{Position lubrication chart} \]
\[ A = \text{Each time You take up operation} \]
\[ B = \text{After each cleaning particularly with air-compressed water} \]
\[ J = \text{Every year} \]

\[ \text{K = Checks and maintenance to be executed by operator} \]
\[ W = \text{Maintenance to be executed by professional workshop} \]
\[ F = \text{Maintenance to be executed by agria workshop} \]
\[ * = \text{after 2 years} \]
\[ BM = \text{Refer to cutter bar operating instructions} \]
Designation of Parts

Figure E

4-Stroke Petrol Engine, Robin EH 17 D

4-Stroke Petrol Engine, Robin EH 25 D
Conformity Declaration

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

D F GB NL
Wir Nous We Wij
agria-Werke GmbH
Bittelbronner Str. 42
D-74219 Möckmühl/Württ.

erklären, dass das Produkt
déclaraons que le produit
herewith declare that the product
verklaren dat het produkt

Motormäher
Motofaucheuse
Motor mower
Motormaaier

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-Richtlinie:
2004/108/EG

est conforme à toutes les exigences respectives selon la directive relative aux machines 2006/42/CE.
La machine est aussi conforme à toutes les exigences respectives selon la directive CE suivante:
2004/108/EC

conforms to all relevant specifications of the Directive on Machinery 2006/42/EC.
It is also conform to all relevant specifications of following EC directive:
2004/108/EC

voldoet aan de desbetreffende bepalingen van de EG-machinerichtlijn 2006/42/EG.
De machine voldoet ook aan de desbetreffende bepalingen van het volgende EG-richtlijne:
2004/108/EG

Folgende harmonisierte Normen (oder Teile davon) oder techn. Spezifikationen wurden angewendet:
Les normes harmonisées (ou extraits de celles-ci) ou les spécifications techniques suivantes ont été appliquées:
Following harmonized standards (or parts of it) or technical specifications have been applied:


Möckmühl, den 11.11.2011

Siegfried Arndt
Geschäftsführer

Rudolf Tigges
Leiter Entwicklung & Konstruktion

Managing Director
Bedrijfsleider

Herr Tigges ist bevollmächtigt die technischen Unterlagen zusammuzustellen.
Monsieur Tigges est habilité à agencer la documentation technique.
Mr. Tigges is authorized to assist the technical documents.
De heer Tigges is gemachtig om de technische documentatie op te stellen.
Anschrift/Adresse/address/adresse:
agria Werke GmbH, Bittelbronner Str. 42, D-74219 Möckmühl

agria Power Mower 5400

67
Agria-Werke GmbH
Bittelbronner Straße 42
D-74219 Möckmühl
Tel. +49 62 98 39-0
Fax +49 62 98 39-111
e-mail: info@agria.de
Internet: www.agria.de

Your local agria specialist dealer: