Two-Wheel Tractor
3400; 3400KL

Versions with:
- Differential
- Steering Brake Clutch
- Safety hillholder
- Petrol Engine EH 34 D
- Diesel Engine L100 AE

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

Operating Instructions No. 998 749-C  04.10
Symbols, Name Plate

Please complete:

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

For name plate, refer to
p3/fig. A/17,
p7/fig. C/17,
p11/fig. E/17,
p15/fig. G/17.

For engine type and number, refer to
p81/fig. J/17,

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
● Two-wheel tractor
● Tool kit
● Assembly hook ring for shifters

Symbols

gria - Service = contact

Your agria-workshop

Warning – Danger
Important information
Fuel
Choke
Speed control
Engine Start
Engine Stop
Battery charge indicator
Clutch
Forward
Reverse
Fast
Slow
Differential lock
PTO
Brake
Hand brake
Closed (locked)
Open (unlocked)
Engine Oil
Transmission Oil
Figure A

3 Tool kit  
4 Handlebar  
5 Hex head bolt for height adjustment of steering handle  
6 Hitch (floating drawbar)  
7 Linch pin  
8 Plug  
9 Transmission oil filling opening and oil dip-stick  
10 Attachment bolts for wings and floating axle stop  
11 Eye bolt with cap nut, top  
12 PTO  
13 Link, PTO engagement  
14 Eye bolt with cap nut, bottom  
15 Weight mounting device and engine protection base  
16 Stand  
17 Name plate (on the right, in travel direction)  
18 Socket (for generator version)  
19 Machine identification no. (on right side, hammered into housing)  
20 Transmission oil drain plug  
21 Hub adapter  
22 Attachment bolt  
25 Disc brake (only version safety hillholder)

Figure B

1 PTO engagement lever  
2 Swivel control lever  
3 Engine shut-off switch  
4 Safety circuit lever  
5 Engine clutch engagement lever  
   (and safety hillholder ! pay attention to model type)  
6 Pawl for clutch lever  
7 Forward/Reverse ball handle (with steering handle swivelled (front attachment) = Gear-shift ball handle)  
8 Gear-shift ball handle (with steering handle swivelled (front attachment) = Forward/Reverse ball handle)  
9 Speed control lever  
10 Differential lock lever  
11 Differential lock pawl
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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.
Designation of Parts:
Diesel Engine / Differential Version

Figure C

3 Tool kit
4 Handlebar
5 Hex head bolt for height adjustment of steering handle
6 Hitch (floating drawbar)
7 Linch pin
8 Plug
9 Transmission oil filling opening and oil dip-stick
10 Attachment bolts for wings and floating axle stop
11 Eye bolt with cap nut, top
12 PTO
13 Link, PTO engagement
14 Eye bolt with cap nut, bottom
15 Weight mounting device and engine protection base
16 Stand
17 Name plate (on the right, in travel direction)
18 Socket
19 Machine identification no. (on right side, hammered into housing)
20 Transmission oil drain plug
21 Hub adapter
22 Attachment bolt for hub adapter
25 Start switch (on E-Start version only)
26 Battery charge control light (on E-Start version only)
27 Battery (on E-Start version only)
28 Disc brake (only version safety hillholder)

Figure D

1 PTO engagement lever
2 Swivel control lever
4 Safety circuit lever
5 Engine clutch engagement lever
   (and safety hillholder! pay attention to model type)
6 Click-and ratchet arrangement for clutch lever
   (Pawl for clutch lever <34018361)
7 Forward/Reverse ball handle (with steering handle swivelled (front attachment) = Gear-shift ball handle)
8 Gear-shift ball handle (with steering handle swivelled (front attachment) = Forward/Reverse ball handle)
9 Speed control lever
10 Differential lock lever
11 Differential lock pawl
**Fuel Recommendations**

**Petrol Engine**  
Robin EH 34 D

This engine runs smoothly on commercial *unleaded regular and supergrade 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.

For further instructions refer to “Engine Preservation”.

**Diesel Engine**  
Yanmar L100 AE

This diesel engine runs on conventional diesel fuel of a min. cetane rating of 45.

Do not use diesel fuel oil substitutes, they may be harmful to the fuel system. Fuel should be free of water or dust.  
**Winter operation:**

To ensure reliable winter operation use “winter diesel fuel”, to be purchased at filling stations. 

**At outside temperatures of below -15°C,** take the following additional precautions:  
add commercial flow conditioners  
or  
add paraffine oil to depress diesel pour-point:

<table>
<thead>
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<th>Paraffine oil:</th>
<th>winter diesel fuel</th>
<th>summer diesel fuel</th>
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<tr>
<td>pour-point</td>
<td>app. -31°C</td>
<td>app. -25°C</td>
</tr>
<tr>
<td>50%</td>
<td>app. -26°C</td>
<td>app. -15°C</td>
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<tr>
<td>30%</td>
<td>app. -20°C</td>
<td>app. -9°C</td>
</tr>
</tbody>
</table>

**As a last resort,** you can add up to 30% of regular petrol to avoid paraffine deposits. However, this has negative effects on consumption rate and performance.
### Electrical Wiring: Petrol Engine Version

**Generator, Petrol Engine Version**

1. Generator 12V 90W (101746)
2. Regulator (56698)
3. Socket (63554)

Ensure AC regulator connection on housing is insulated (not connected to ground)

- ge/we = yellow/white
- ge = yellow
- ro = red
- br = brown

**Safety circuit Circuit, Petrol Engine Version**

1. Engine
2. Magnet ignition system
3. Engine shut-off switch
4. Switch in clutch lever
5. Switch in safety circuit lever

- bl = blue
- br = brown
- rt = red
Designation of Parts:
Petrol Engine / Steering Brake Clutch Version

Figure E

Figure F
Designation of Parts:
Petrol Engine / Steering Brake Clutch Version

Figure E
3 Tool kit
4 Handlebar
5 Hex head bolt for height adjustment of steering handle
6 Hitch (floating drawbar)
7 Linch pin
8 Plug
9 Transmission oil filling opening and oil dip-stick
10 Attachment bolts for wings and floating axle stop
11 Eye bolt with cap nut, top
12 PTO
13 Link, PTO engagement
14 Eye bolt with cap nut, bottom
15 Weight mounting device and engine protection base
16 Stand
17 Name plate (on the right, in travel direction)
18 Socket (for generator version)
19 Machine identification no. (on right side, hammered into housing)
20 Transmission oil drain plug
23 Hex nut on hub
24 Steering brake clutch

Figure F
1 PTO engagement lever
2 Swivel control lever
3 Engine shut-off switch
4 Safety circuit lever
5 Engine clutch engagement lever
6 Pawl for clutch lever
7 Forward/Reverse ball handle (with steering handle swivelled (front attachment) = Gear-shift ball handle)
8 Gear-shift ball handle (with steering handle swivelled (front attachment) = Forward/Reverse ball handle)
9 Speed control lever
12 Steering brake clutch lever, left
13 Steering brake clutch lever, right
14 Central hand brake lever
Electrical Wiring:

Diesel Engine / Recoil Starter Version

1  Generator 12V 90W  
2  Regulator  
3  Socket  

ge  = yellow  
ro  = red  
sw  = black  
ws  = white  
gnws  = green-white


**Diesel Engine / E-Starter Version**

1. Generator 12V 90W  
2. Regulator  
3. Socket  
4. Fuse 15A (glass tube)  
5. Electric starter 12V  
6. Start switch  
7. Battery charge control light, 12V 2W  
8. Battery 12V 20Ah  
9. Central connector for regulator  
10. Work light terminal 12V 55W  

(snip-in receptacle diameter: 4 mm)  

`ge` = yellow  
`ro` = red  
`sw` = black  
`ws` = white  
`gnws` = green-white
Designation of Parts:
Diesel Engine / Steering Brake Clutch Version

Figure G

Figure H
Designation of Parts:
Diesel Engine / Steering Brake Clutch Version

Figure G

3 Tool kit
4 Handlebar
5 Hex head bolt for height adjustment of steering handle
6 Hitch (floating drawbar)
7 Linch pin
8 Plug
9 Transmission oil filling opening and oil dip-stick
10 Attachment bolts for wings and floating axle stop
11 Eye bolt with cap nut, top
12 PTO
13 Link, PTO engagement
14 Eye bolt with cap nut, bottom
15 Weight mounting device and engine protection base
16 Stand
17 Name plate (on the right, in travel direction)
18 Socket
19 Machine identification no. (on right side, hammered into housing)
20 Transmission oil drain plug
21 Hex nut on hub
22 Steering brake clutch
23 Start switch (on E-Start version only)
24 Battery charge control light (on E-Start version only)
25 Battery (on E-Start version only)

Figure H

1 PTO engagement lever
2 Swivel control lever
4 Safety circuit lever
5 Engine clutch engagement lever
6 Click-and ratchet arrangement for clutch lever
   (Pawl for clutch lever <34018361)
7 Forward/Reverse ball handle (with steering handle swivelled (front attachment) = Gear-shift ball handle)
8 Gear-shift ball handle (with steering handle swivelled (front attachment) = Forward/Reverse ball handle)
9 Speed control lever
12 Steering brake clutch lever, left
13 Steering brake clutch lever, right
14 Central hand brake lever
1. Safety Instructions

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

**Warning**

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

**Due Use**

The two-wheel tractor is a hand-controlled automatic single-axle machine which can power and/or pull various implements approved by the manufacturer. Areas of application are for such as turning over the ground, mowing grass and meadowland, snow clearance and sweeping (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 single-axle tractor/the tool carrier/the all-purpose machine is used on public roads, the local national road traffic rules must be observed, e.g. reflectors, lights.

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

Any unauthorized changes to the two-wheel tractor render manufacturer liability null and void.

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**General Instructions on Safety and Accident Prevention**

**Basic Rule:**

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

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

Accordingly, check the two-wheel tractor for road and operational safety each time you take up operation.

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

Teenagers of 16 years or younger may not operate the two-wheel tractor!

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

When transporting the tractor 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.

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 tractor. 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 Danger Zone

The user is liable to third parties working within the tractor's working range. Staying in the danger zone is not permitted.

Check the immediate surroundings of the tractor 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 two-wheel tractor and the implement.

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

Operation

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

Never adjust the operating handles during work – danger!

During operation do not leave the operator’s position at the steering handle, especially not when you turn the machine.

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

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

In case of damage to the two-wheel tractor or to the implement, immediately shut off the engine and have it repaired.

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

To prevent the tractor from sliding 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 diagonally to the slope.

End of Operation

Never leave the two-wheel tractor unattended with the engine running.

Before you leave the two-wheel tractor, shut off the engine. Then close fuel taps.

Secure two-wheel tractor against unauthorized use. If tractor is equipped with ignition key, remove the key. For all other versions, remove spark plug connector.

Implements

Only mount implements with the engine and PTO shut off.

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

For mounting and dismounting implements bring stand into proper position and ensure stability.

Secure two-wheel tractor and implements against rolling off (parking brake, wheel chocks).

Beware of injuries while coupling implements.

Hitch implements as specified and only couple at specified points.

Secure two-wheel tractor and implement against unauthorized use and rolling off when you leave the machine. If necessary, install transport or security devices and secure.
1. Safety Instructions

Hoeing Attachment
Adjust protective cover of hoeing attachment so that only those parts of tools which penetrate the soil are not covered. When hoeing, make sure depth bar is adjusted properly.

Mowing Implement
Handle with care! Sharp blades of the cutter bar may cause injuries! Remove knife guards only for mowing and refit immediately after work has finished.
For transport and storage always mount the knife guards. Secure finger bars additionally with tension springs.
Do not transport the dismounted cutter bar without knife guards.
When mounting and dismounting the cutter bar, make sure all blades are protected by the knife guards.
To exchange the knife and to mount/dismount the knife driver, make sure that you turn screws away from cutting blades.
For grinding the mowing knives, always wear safety goggles and gloves.

Trailer
Make sure to not exceed permissible tongue load of trailer hitch, floating drawbar or hitch.
When coupling the drawbar, make sure manoeuvrability at coupling point is sufficient.
Do not exceed gross axle weight rating, towing capacity and gross weights.
Before driving, check brake function and rear lighting for proper operation.
Regularly check brake systems closely.
Have adjustments and repairs on the brake system carried out by a professional workshop or an authorized brake service station only.
When driving with mounted trailer, do not use single-wheel braking.
On tractors equipped with single-wheel transmission do not engage single-wheel transmission. Single-wheel transmission must be locked!
For tractors equipped with differential lock; do not use differential lock when driving in curves.
Only one passenger may ride on the trailer, provided a safe passenger seat is available.
No additional passengers may be carried.
When driving downhill, shift into lower gears in time. On slopes never de-clutch to change gears.

Weights
Fit weights properly and at specified points.
1. Safety Instructions

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. hitch)!

Keep two-wheel tractor and implement clean to avoid risk of fire.

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 two-wheel tractor in rooms with open heating.

Never park the two-wheel tractor in closed rooms with fuel left in tank. Fuel vapours are hazardous.

Engine, Fuel, and Oil

Never let the engine run in closed rooms. Extreme danger of intoxication! For the same reason, also replace damaged exhaust pipe immediately.

Be careful when 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 (e.g. funnel).

In case of fuel-spillage, pull the two-wheel tractor away from the spillage before you start the engine.

Make sure fuel is of specified quality.

Store fuel in approved cans only.
1. Safety Instructions

Liquids leaking under high pressure, e.g. fuel, can penetrate the skin and cause severe injuries. Immediately see a doctor.

Store anti-corrosive agents and stabilizing liquids out of reach of children. If sickness and vomiting occur, see a doctor. If fuel has contacted eyes, rinse them thoroughly, avoid inhaling of vapours.

Read and observe enclosed instructions.

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

Be careful when draining hot oil, danger of burns.

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

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

Tyres and Tyre Air Pressure

When working on tyres, make sure two-wheel tractor 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 for operation with implements.

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

Electrical System and Battery

When working on the electrical system, make sure the battery is disconnected (negative pole) (for tractors equipped with battery).

Make sure to connect battery properly – first connect positive pole and then negative pole. Disconnect in reverse order.

Be careful with battery gases – explosive!

Avoid spark discharge and open flames near batteries.

Remove plastic cover (if included) to recharge battery to prevent highly explosive gases from building up.

Careful when handling battery acid!

Only use specified circuit breakers. Strong circuit breakers will destroy the electrical system – danger of fire.

Always cover positive pole with specified cover or terminal cap.

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

Explanation of Warning Signs

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

Before any cleaning, maintenance, and repair work shut off the engine and pull ignition key.

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

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

With engine running, keep at a safe distance from cutting knife.

Do not touch moving machinery parts. Wait until they have come to a complete stop.

With engine running, keep at a safe distance from tractor.

Signs

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

Wear protective gloves.

Wear solid shoes.
2. Specifications:

Two-Wheel Tractor

Dimensions:

* *s = refer to track widths table

<table>
<thead>
<tr>
<th>Type</th>
<th>Width (mm)</th>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
<th>e</th>
<th>f</th>
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<td>610</td>
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<td>270</td>
<td>55</td>
<td>195</td>
<td>900-1200</td>
<td>1750</td>
</tr>
</tbody>
</table>

Tyre: (Accessory)

- 2490 041 4.00-8 Field tyre
- 0190 112 5.00-10 Field tyre
- 3490 411 5.00-12 Field tyre
- 3490 511 20x8.00-10 Grass tyre
- 3490 611 21x11.00-8 Terra Grip

Tyre air pressure at:
- 4.00-8; 5.00-10; 5.00-12 1.5 bar
- 21x11.00-8; 20x8.00-10 0.8 bar

For mounting drive-wheel and use refer to p41–44.

3221 051 Pair of wheel weights. 52 kg
for the steering brake clutch version
additional customised wheel bolts are required.................... parts kit 760 33
2. Specifications:

**Clutch:** ............. Single disc dry clutch

**Gearbox:** ............ Mechanical gearbox, 4 forward and 4 reverse gears, depending on version:
- lockable differential
- single-wheel steering brake clutch
- safety hillholder

**Transmission oil:** ............. approx. 2.0 l
Transmission oil SAE 90 - API - GL5 (e.g. BP Energear Hypo)

**Transmission oil:** ............. approx. 2.0 l
Transmission oil SAE 90 - API - GL5 (e.g. BP Energear Hypo)

**Travel Speeds [km/h]:**
* 6.1 / 7.1 / 8.2 km/h for gearbox version “slow / cultivation”
* 14.5 / 16.9 / 19.5 km/h for gearbox version “fast / travelling”

**PTO:** .......................... 825 rpm gear independent at 3600 engine rpm direction of rotation:
clockwise, looking on PTO, constant in forward and reverse

**Steering handle:** ..... height adjustable:
side adjustable without tools, swivels 180°
for mounting front implements

**Vibration acceleration value:**
on handlebar grip:
Petrol engine EH 34 D ... $a_{hw} < 2.5 \text{ m/s}^2$
Diesel engine L100AE ... $a_{hw} = 6.2 \text{ m/s}^2$
in accordance with EN 709 and EN 1033

**Weights:**
Empty weight: without drive-wheels 5.00-10

**Differential versions:**
Petrol engine
EH 34 D 103 kg 120,5 kg

Diesel engine L100AE
(Recoil starter) 122 kg 139,5 kg

Diesel engine L100AE
(Electric starter) 133 kg 150,5 kg

**Steering brake clutch versions:**
Petrol engine
EH 34 D 133 kg 150,5 kg

Diesel engine L100AE
(Recoil starter) 155 kg 172,5 kg

Diesel engine L100AE
(Electric starter) 165 kg 182,5 kg

Permissible total weight ........... 250 kg

Permissible tongue load
on coupling point: ....................... 85 kg

Permissible towing capacity,
trailer with brake: ...................... 650 kg

**Hitch:**
SK14 Approval Sign M3280

**Generator** ............ alternating current
with petrol engine (accessory, item no. 3479 021) ............ 12V 90W
with diesel engine ............ 12V 90W
## Wheel combination and Track Widths Table 3400 Diff.

### 2. Specifications:

<table>
<thead>
<tr>
<th>Differential Version</th>
<th>30</th>
<th>60</th>
<th>90</th>
</tr>
</thead>
<tbody>
<tr>
<td>220</td>
<td>5516 021</td>
<td>5519 031</td>
<td>5616 511</td>
</tr>
<tr>
<td>220A</td>
<td>5519 011</td>
<td>5519 031</td>
<td>5616 511</td>
</tr>
<tr>
<td>V</td>
<td>5916 211</td>
<td>762 32</td>
<td></td>
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<tr>
<td>S</td>
<td>762 32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gf (10&quot;)</td>
<td>5817 511</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gf (12&quot;)</td>
<td>5917 541</td>
<td></td>
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<tr>
<td>G (10&quot;)</td>
<td>5917 011</td>
<td></td>
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<tr>
<td>G (12&quot;)</td>
<td>5917 021</td>
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</tbody>
</table>

### Track Widths Table 3400 Diff.

#### (mm)

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<thead>
<tr>
<th></th>
<th>60</th>
<th>60</th>
<th>90</th>
<th>90</th>
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</thead>
<tbody>
<tr>
<td>4.00-8 AS</td>
<td>460</td>
<td>460</td>
<td>470</td>
<td>470</td>
</tr>
<tr>
<td>16x6.50-8 AS</td>
<td>740</td>
<td>740</td>
<td>750</td>
<td>750</td>
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<tr>
<td>21x11.00-8 Terra</td>
<td>1110</td>
<td>1110</td>
<td>1120</td>
<td>1120</td>
</tr>
<tr>
<td>4.50-10 AS</td>
<td>470</td>
<td>470</td>
<td>480</td>
<td>480</td>
</tr>
<tr>
<td>5.00-10 AS</td>
<td>480</td>
<td>480</td>
<td>490</td>
<td>490</td>
</tr>
<tr>
<td>20x8.00-10 R</td>
<td>560</td>
<td>560</td>
<td>570</td>
<td>570</td>
</tr>
<tr>
<td>5.00-12 AS</td>
<td>470</td>
<td>470</td>
<td>480</td>
<td>480</td>
</tr>
<tr>
<td>23x8.50-12 AS</td>
<td>740</td>
<td>740</td>
<td>750</td>
<td>750</td>
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</tbody>
</table>

#### (mm)

<table>
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<tr>
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<td>470</td>
<td>470</td>
<td>480</td>
<td>480</td>
</tr>
<tr>
<td>23x8.50-12 AS</td>
<td>740</td>
<td>740</td>
<td>750</td>
<td>750</td>
</tr>
</tbody>
</table>

#### Wheel combination and Track Widths Table 3400 Diff.
### Wheel combination and Track Widths Table
#### 3400 KL

#### Specifications:
Steering Brake Clutch Version

| B | A | S | i | A | S | i | A | S | i | A | S | i | A | S | i | A | S | i | A | S | i | A | S | i |
| 1 | 4.00-8 AS | 630 | 530 | 430 | 640 | 540 | 440 | 750 | 650 | 550 | 700 | 600 | 500 | 810 | 710 | 610 | 1070 | 430 | 1090 | 430 | 8 |
| 2 | 16x6.50-8 AS | 760 | 590 | 420 | 880 | 710 | 540 | 720 | 550 | 380 | 940 | 770 | 600 | 1200 | 1080 | 420 | 1220 | 420 | 8 |
| 3 | 21x11.00-8 Terra | 960 | 685 | 410 | 960 | 685 | 410 | 1884 | 410 | 10 |
| 4 | 4.50-10 AS | 670 | 550 | 430 | 640 | 520 | 400 | 790 | 670 | 550 | 700 | 580 | 460 | 850 | 730 | 610 | 1110 | 430 | 1154 | 430 | 10 |
| 5 | 5.00-10 AS | 680 | 550 | 420 | 650 | 520 | 390 | 800 | 670 | 540 | 710 | 580 | 450 | 860 | 730 | 600 | 1120 | 420 | 1164 | 420 | 10 |
| 6 | 20x8.00-10 R | 830 | 640 | 450 | 800 | 610 | 420 | 890 | 700 | 510 | 1 |
| 7 | 5.00-12 AS | 720 | 565 | 410 | 840 | 685 | 530 | 720 | 565 | 410 | 900 | 745 | 590 | 1160 | 410 | 1 |
| 8 | 23x8.50-12 AS | 800 | 585 | 370 | 920 | 705 | 490 | 980 | 765 | 550 | 1240 | 1170 | 370 | 1 |

### Conversion Values

- \(30 = 2516\ 011\)
- \(60 = 5516\ 021\)
- \(90 = 5519\ 031\)
- \(220 = 5616\ 511\)
- \(220A = 5519\ 011\)
- \(G (10\") = 5917\ 011\)
- \(G (12\") = 5917\ 021\)
- \(Gf (10\") = 5817\ 511\)
- \(Gf (12\") = 5917\ 541\)
- \(S = 762\ 32\)

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*agria Two-Wheel Tractor 3400; 3400KL*
2. Specifications: Petrol Engine Version

**Petrol Engine**

**Manufacturer:** ................. Robin
**Type:** ............................... EH 34 D
**Version:** ............................ Fan-cooled
1-cylinder-4-stroke engine (petrol) OHV
**Bore:** ................................. 84 mm
**Stroke:** .............................. 71 mm
**Cubic capacity:** ........... 338 ccm
**Output:** .................. 8.1 kW (11 DIN-HP) at 3600 rpm

**Max torque:** ...... 24.1 Nm at 2500 rpm
**Spark plug:** ............... Bosch WR7CC
NGK BR6ES, Champion RN4
**Spark plug gap** ............ 0.6–0.7 mm
**Ignition system:** .......... Contactless electronic magnet ignition, ignition point is pre-set, radio remote screened according to VDE 0879

**Valve lash** (engine cold)
**Intake:** ............................ 0.10 mm
**Outlet:** .............................. 0.10 mm

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

**Fuel:** ...................... Commercial petrol
**min. octane number 90 RON**
(refer to fuel recommendations)

**Fuel tank capacity:** ........ approx. 8 l

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

**Carburetor:** ............... Horizontal float carburetor

**Main jet:** ......................... 97.5
**Idle jet:** ......................... 40

**Mixture control screw:** ...... Base setting 7/8 revs. open

**Rated speed:** .................. 3600 rpm
**Top no-load speed:** ........... 4000 rpm
**Idling speed:** ................... 1400 rpm

**Engine oil:**
Filling quantity ............... approx. 1.2 l
Multi-grade oil
at ambient temperature -15° to +45°C:
SAE 10W-40 API-SC (or higher)
at ambient temperature -25° to +15°C:
SAE 10W-20 API-SC (or higher)

**Noise level:**
Noise level at operator’s ear ............... 84 dB(A)
(in accordance with EN 709 and EN 1553)

**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%)
2. Specifications:

**Diesel Engine**

**Manufacturer:** Yanmar

**Type:**
- Electric starter version ............. L100
- Recoil starter version .............. L100

**Version:** Fan-air-cooled 1-cylinder-4-stroke diesel engine

- **Bore:** 86 mm
- **Stroke:** 70 mm
- **Cubic capacity:** 406 ccm
- **Output:** 7.4 kW at 3600 rpm
- **Max torque:** 27 Nm at 1700 rpm

**Injection pressure:** 200 bar

**Valve lash** (engine cold)
- Intake: 0.15 ± 0.02 mm
- Outlet: 0.15 ± 0.02 mm

**Starter:** Recoil or electric starter, depending on version

**Battery:** 12V 20Ah

**Glass fuse:** 15A (30 x 6.5 mm)

**Fuel:** conventional fuel, Min. cetane rating: 45
(refer to fuel recommendations)

**Fuel filter:**
- Coarse-mesh strainer ...... in filler neck
- Fine-mesh strainer .......... in fuel tank drain hole

**Fuel tank capacity:** approx. 5.5 l

---

**Air filter:** Dry filter element with foamed preliminary filter and cyclone pre-separator

**Rated speed:** 3600 rpm

**Top no-load speed:** 3800 rpm

**Idling speed:** 1700 rpm

**Lubrication:** Pressure lubrication via gear pump
- Full flow oil filter

**Engine oil:**
- Filling quantity: approx. 1.65 l
- Multi-grade oil at ambient temperature -15° to +45°C: SAE 10W-40 API-SC (or higher)
- at ambient temperature -25° to +15°C: SAE 5W-20 API-SC (or higher)

**Noise level:**

- Noise level at operator’s ear: 88 dB(A)
  (in accordance with EN 709 and EN 1553)

- Acoustic power level: 99 dB(A) in accordance with EC 84/538/EEC at 85% of engine rated speed

**Operability on Slopes:**

- Engine is suited for use on slopes (oil level at “max” = upper mark)
- Continuous operation possible up to 20° inclination (37%)

---

2
The two-wheel tractor 3400 is a basic motorised unit and is always used with an implement. Therefore it is most suitable for normal use in landscape gardening and in agriculture and forestry work for such as turning over the ground, mowing grass and meadowland, snow clearing and sweeping.

When the two-wheel tractor is used on public roads, the local national road traffic rules must be observed, e.g. reflectors, lights.

Available implements (among others):

- Rear implements for
  - hoeing and tilling
  - draft implements for soil cultivation
  - two-wheel trailers
  - gravel and salt spreading

- Front implements for
  - mowing
  - sweeping
  - snow clearing and tilling
  - gravel and salt spreading

For a choice of further attachments refer to our price-list.

### Engine

- The **four-stroke petrol engine** runs on commercial petrol (refer to fuel recommendations p9).

#### Ignition System

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

- The **four-stroke diesel engine** runs on commercial diesel fuel (refer to fuel recommendations p9). See to using proper fuel in winter.

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 screen at recoil starter and cooling fins of cylinder clean and free from sucked-in plant trash.

### Idling Speed

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

### Air Filter

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

**Speed Control Lever**

**Petrol Engine Version**

The speed control lever (B/9, F9) on the steering handle is for stepless setting of engine speed from min. = idle to max. = full throttle.

**Engine Shut-off Switch**

**Petrol Engine Version**

The two-wheel tractor is equipped with an electric shut-off switch (B/3, F/3). On pressing the switch, the ignition is turned off (engine is shut off).

Position 1 = Operation
Position 2 = Engine off

The engine shut-off switch also serves to shut off the engine in an emergency. Set the switch to “0” for fast shut-off.

**Speed Control Lever, Engine Shut-off Switch**

**Diesel Engine Version**

The speed control lever (D/9, H/9) on the steering handle is for stepless setting of engine speed from min. = idle to max. = full throttle. The lever also is for shutting the engine off.

The engine speed control lever also serves to shut off the engine in an emergency. It then goes into STOP position.
3. Devices and Operating Elements

Safety circuit

Petrol Engine Version

Diesel Engine Version >34018362

1. **Stop position:** When releasing the safety circuit lever (4), the engine is shut off.
   Beware – engine keeps running due to centrifugal mass.

2. **Start position:** For starting the engine and for short breaks, pull the clutch lever (5) and fasten with pawl (6).

3. **Operating position:** To operate the machine press safety circuit lever (4).

   - **Do not fasten safety circuit lever.**
   - The safety circuit lever also serves to **shut off the engine in an emergency.** Release the safety circuit lever for fast engine shut-off. The lever automatically goes to STOP position.

Safety circuit

Diesel Engine Version <34018361

The two-wheel tractor is equipped with a safety circuit lever (lever D/4; H/4).

1. **Stop position:** When releasing the lever (D/4; H/4), the engine is shut off.
   Beware – engine keeps running due to centrifugal mass!

2. **Start position:** For starting the engine and for short breaks, press the safety circuit lever (D/4; H/4), pull the clutch lever (D/5; H/5) and lock with pawl (D/6; H/6).

3. **Operating position:** For machine operation, press safety circuit lever (D/4; H/4).

   - **Do not fasten safety circuit lever.**
   - The safety circuit lever also serves to **shut off the engine in an emergency.** Release the safety circuit lever for fast engine shut-off. The lever automatically goes to STOP position.
3. Devices and Operating Elements

Petrol Version
Diesel Version
>34018362

<table>
<thead>
<tr>
<th>Diesel Version</th>
<th>&lt;34018361</th>
</tr>
</thead>
</table>

**Clutch**

The single disc dry clutch is operated via the clutch lever (5).

- With clutch lever pulled up to position “0”, the clutch is decoupled, i.e. the engine stops driving the two-wheel tractor.

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

**Clutch/Safety hillholder**

- Do not park the machine with the clutch pulled and the engine running. This may damage the clutch release bearing.

Ensure the lever is pulled and locked (pawl is locked in place) when you park the machine with the engine stopped, otherwise clutch problems might arise due to corrosion.

- The safety hillholder serves to stop on slopes or during shifting.

The clutch and the safety hillholder are operated via the hand lever (B/6).

- The machine is decoupled when you pull the hand clutch lever to position “0”. Now, the engine stops driving the tool carrier.

- The pulled hand clutch lever can be locked with pawl (B/7).

- The safety hillholder is operated by further pulling the hand lever upwards.
3. Devices and Operating Elements

Gearbox

The tractor is equipped with a 4-gear reversing transmission, giving you four gears for forward speed and four gears for reverse.

*i* Only change gears with the machine decoupled and stopped.

FR-Changing

(B/7; D/7; F/7 or H/7)

↑ When you move the F/R-ball handle forwards, the two-wheel tractor goes forward

↓ When you move it backwards the tractors travels reverse.

◆ Centre position ("0") means idling-gas.

Edge (1) of gearshift lever indicates selected gear on shift gate.

Gearshifting

Gears 1–2–3–4 are engaged via gear-shift handle (B/8, D/8, F/8 or H/8).

There is no neutral position here.

◆ Edge (1) of gearshift lever indicates selected gear on shift gate.

In general, you can only drive the two-wheel tractor, if FR-change is either in forward or reverse, no matter whether gear is engaged or not.

When steering handle is swivelled 180° (for mounting front attachment) the ball handles change sides (refer to p39).

◆ The two-wheel tractor is delivered with a factory-fit screw on the shift-gate and is assembled in position "4th gear locked".

This prevents accidental change into 4th gear to reverse (when working with attachments mounted).

For drives with mounted trailer, this screw can be set to position "4th gear unlocked". Loosen hexagonal nut slightly, move screw to position "unlocked" and tighten nut.

⚠️ After driving, set screw back to position “locked”.

---

34 agria-Two-Wheel Tractor 3400; 3400KL
3. Devices and Operating Elements

Differential Gear

Differential can be locked in severe conditions to improve traction. The lever for differential lock and unlock is on the right side of the handle bar. On the lever there is a pawl to lock the disengaged differential.

Because of the tractor’s easy steering, the differential should be unlocked when driving with the trailer mounted, especially in curves.

Keep differential locked only as long as necessary.

Engaging the Differential Lock:
(rigid wheel shaft)
On the move:
- Release throttle.
- Pull lever for differential lock slightly (B/10 or D/10).
- Unlock pawl (B/11 or D/11).
- Slowly release lever while pressing the throttle.

Disengaging the Differential Lock:
- Pull lever for differential lock until pawl locks into place.
3. Devices and Operating Elements
Steering Brake Clutch Version

**Single-Wheel Steering Brake Clutch**

For easy turning, the two-wheel tractor is equipped with an easy-use steering brake clutch for both wheels.

To turn right, pull lever (F/13 or H/13) to decelerate the right drive-wheel. With forward speed engaged, the machine turns right.

To turn left, pull lever (F/12 or H/12) to decelerate the left drive-wheel. With forward speed engaged, the machine turns left.

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

After swivelling the steering handle through 180°, reroute the cables that operate the steering brake clutch to ensure the right steering brake lever acts on the right wheel, etc. (see page 40).

**Central Brake**

To slow down or park the machine on hilly ground, use the combined central hand brake.

**Central Brake**

Swivel the eccentric lever (F/14 or H/14) backwards and up – both drive-wheels are braked and clutch is disengaged.

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

> **If the attached implement is prone to overload, you can operate the central brake without engaging the clutch. This disengages the wheel drive but not the PTO.**

Once the overload is overcome, release the central brake to re-engage the wheel drive.

**Hand Brake**

Swivel the eccentric lever (F/14 or H/14) backwards and up beyond the dead centre. The eccentric lever automatically comes to a stop – both drive-wheels are blocked and clutch is disengaged. To release hand brake, swivel eccentric lever back to original position – brake is released.
3. Devices and Operating Elements

PTO

The PTO (A/12; C/12; E/12; G/12) cannot be turned off (i.e., it rotates whenever the engine is running). PTO speed is changed on the PTO driven implements. However, the PTO speed shift lever (B/1; D/1; F/1; H/1) is positioned on the two-wheel tractor and is connected to the speed shift lever on the implement via the PTO connecting stick (A/13; C/13; E/13; G/13).

Exception: For hoeing/tilling attachments, the shift lever is positioned on tilling drive for ease of use.

PTO Protective Cap

If no implements are mounted (e.g., trailer, plough, harrow), clothes might be caught and wound up by PTO. Therefore, PTO must be covered with PTO protection cap.

Installing the cap:

- Hold protection cap against mounting flange.
- Fold both eye bolts into slots of protection device.
- Evenly tighten both cap nuts.

For de-installation proceed in reverse order.

Reversing Lock

The two-wheel tractor is equipped with a reversing lock (safety pin) for the hoeing attachment. This lock prevents that PTO is engaged from hoeing attachment while the tractor is in reverse. Also, it prevents that reverse gear is engaged while PTO is at work.

- When mounting the hoeing attachment, the FR-lever must be set to idling position, too (Safety pin on gearbox protruding approx. 5 mm).
3. Devices and Operating Elements

Steering Handle

⚠️ Never re-adjust a steering handle when the machine is in operation – danger!

Steering Handle Height Adjustment

- Loosen hexagonal nut (A/5; C/5; E/5; G/5) until the notches are free.
- Bring steering handle (A/4; C/4; E/4; G/4) to the desired height and fit it in the appropriate notch.
- Re-tighten hexagonal nut.

Steering Handle Side Adjustment

From normal centre position the steering handle can be swivelled 30° to the right or left.

- Push up swivel control lever (B/2; D/2; F/2; H/2) and swivel steering handle to the right or left into desired position.
- Push swivel control lever back down and swivel steering handle slightly to the left and right until it locks into place.
3. Devices and Operating Elements

Swivel Steering Handle

⚠️ Only swivel steering handle when the engine is shut off.

For mounting front attachment, swivel steering handle 180°.

- Remove W-clips (5) from gear shifters (1+3), using ring hook provided in tool kit.
- Push swivel control lever (B/2; D/2; F/2; H/2) up. At the same time swivel steering handle anti-clockwise 180° to the left (see figure below).
- Push swivel control lever back down and slightly rock steering handle to the left and right until it locks into place.
- Reconnect both gear shifters with outer shift levers (2+4) and secure with W-clips.

Note: The gear-shift ball handle is now located on the left side of the steering handle. The FR-ball handle is now on the right.

For 1st gear, now shift forwards, for 4th gear backwards (looked into driving direction).

For forward speed, you still shift forwards, for reverse backwards.

Steering handle side adjustment (approx. 30°) is also possible with steering handle swivelled for front attachments.

On steering brake clutch machines, re-route the cables that operate the steering brake clutch to ensure the right steering brake lever acts on the right wheel, etc. – see following page.
3. Devices and Operating Elements
Steering Brake Clutch Version

Re-routing steering brake clutch cables

On steering brake clutch machines it is necessary to re-route the cables that operate the steering brake clutch after the steering handle was swivelled through 180° to ensure the right steering brake lever acts on the right wheel, etc.

- Remove the steering brake clutch cables (5) at the bottom of the machine:

  A Remove R-clip (4).
  B Remove cables (5) from retarders (3), pulling them down and out.
  C Swivel the cables outward.
  D Remove the cables from the cross-bar (2).

- Re-attach each cable (5) to the opposite end of the cross-bar and reverse the above order to re-attach them to the retarders.

- Remember to refit the R-clip (4) to secure the cables from working loose.

The illustration to the right illustrates the location of the cables:

- two-wheel tractor operated as haulage machine or with rear-mounted attachments.
- two-wheel tractor operated as tool carrier with front-mounted attachments.

1 Steering brake cable, top end
2 Cross-bar
3 Retarder
4 R-clip
5 Steering brake cable, bottom end
3. Devices and Operating Elements

**Drive-Wheels**

For full tractive power, mount wheels with pointed parts of lugs showing in driving direction (wheels seen from above). Fit the countersunk side of spring-lock washer into countersink-type holes of disk wheel (see fig. “Wheel Attachment Bolts”).

The wheels can also be mounted either on their inner or outer sides for variable track widths (see track widths table, p20).

**Differential Version**

The drive-wheels are mounted onto the inner or outer part of the hub adapter, depending on their use.

**Wheel Attachment Bolts**

Version A wheel bolt with spring-lock washer.

Version B locking bolt with spring-lock washer and wheel nut.

Screw short thread end of locking bolt tightly into hub, if possible, glue with LOCTITE 270 (or similar glue).

Fit countersunk side of spring-lock washer onto disk wheel.

On a new machine or after wheel change, re-tighten wheel bolts and nuts after the first 2 operating hours with 100 Nm. Retighten bolts and nuts in each maintenance.

**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.
3. Devices and Operating Elements

Drive-Wheel Use

<table>
<thead>
<tr>
<th>Tyre</th>
<th>Tread Profile</th>
<th>Use</th>
<th>Item No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.00-8</td>
<td>field tyre</td>
<td>tilling, from 42cm work width</td>
<td>2490 041</td>
</tr>
<tr>
<td>5.00-10</td>
<td>field tyre</td>
<td>tilling, from 50cm work width, driving</td>
<td>0190 112</td>
</tr>
<tr>
<td>5.00-12</td>
<td>field tyre</td>
<td>ploughing, harrowing</td>
<td>3291 051</td>
</tr>
<tr>
<td>20x8.00-10</td>
<td>grass tyre</td>
<td>grass maintenance</td>
<td>3490 511</td>
</tr>
<tr>
<td>21x11.00-8</td>
<td>Terra Grip</td>
<td>mowing on soft (boggy) ground</td>
<td>3490 611</td>
</tr>
</tbody>
</table>

Wheel-track extension system

Steering brake clutch machine

- Item 2416 011 used for mounting the 66cm outer width drive-wheels (with 5.00-10 agricultural tyres) for tillage work to give an outer width of 70cm.

- Item 5516 031 used to fit Terra Grip drive wheels 21 x 11.00-8 TG.
3. Devices and Operating Elements

It is recommended to use twin wheels, wheel centres or strake wheels for mowing areas on extremely steep slopes.

**Twin Wheels**

It is necessary to fit between the individual wheels:

**Wheel-track extension for steering brake clutch machines**

Item 5616011

Mounting 1 - 5

Please note with regard to:

1. Use wheel attachment bolts version B (double end stud).
2. Fit ball spring rings between wheel bowl and wheel-track extension (centring).

**Differential Hubs for differential version machine**

Item 5519011

Mounting 1 - 5

Please note with regard to:

1. Use wheel attachment bolts version B (double end stud).
2. Fit ball spring rings between wheel bowl and differential hub (centring).

**Lubrication**

Use a grease gun to lubricate the wheel flange nipple (3) (with Bio-grease) after every 100 operating hours or after cleaning the machine with a pressure washer.

**Adjustment**

The differential hubs are factory-set to differential effect, mounting of rigid position see fig.
3. Devices and Operating Elements

**Strake Wheel**

Item 5417 511 for drive-wheels 4.00-8
Item 5517 521 for drive wheels 5.00-10

**Differential Version**

Mounting 1 - 4

Please note with regard to:

1. Fit drive-wheels on inner part of hub adapters.
2. Fit strake wheel flanges to outer part of hub adapters.
3. Make sure that the strake wheel webs face the machine in travel direction (see fig.).
4. Attach the tension spring to secure the tommy screw.

**Steering Brake Clutch Version**

Mounting 1 - 5

Please note with regard to:

1. Use wheel attachment bolts version B (double end stud).
2. Fit ball spring rings between drive wheel and flange.
3. Ensure the strake wheel webs face the machine in travel direction (see fig.).
4. Attach the tension spring (9) to secure the tommy screw.
3. Devices and Operating Elements

Front Weights and Wheel Weights

It is possible to attach front weights and wheel weights to improve traction.

**Attaching Wheel Weights**

Item. No. 3221 051

for drive-wheels 5.00-10, 5.00-12

**Differential Version**

Attach the weights to the wheels with the hex head bolts, hex nuts and serrated washers.

Tighten the hex nuts well!

**Steering Brake Clutch Version**

Attach the drive wheels to the tractor using 2 customised wheel bolts (4; parts kit no. 760 33) instead of the standard wheel bolts and tighten them to a torque of 100 Nm.

Attach the wheel weights to the customised wheel bolts using the hex head bolts, hex nuts and serrated washers.

Tighten the hex nuts well!

**Front weight**

Item no. 3228 011

We recommend to use a front weight to improve weight distribution when a heavy implement is attached to the machine.

**Stand**

For parking the two-wheel tractor with no implement mounted and for better coupling of implements, the two-wheel tractor is equipped with a stand (A/16 or C/16) which is positioned at the front under the engine protection base. For parking the tractor, push the leg down and forward. For parking, push it back up.
Engine cover

Removing the engine cover

- Pull on the cover at its rear end and lift it
- Pull on the cover at its front end and remove it

Replacing the engine cover

- Place the rubber cups onto the ball-heads
- Then press gently on the front and rear cover ends to lock the cups onto the ball-heads.

For an easier assembly, apply Bio-lubrication grease on the rubber cups.

Fuse

A 15 amps fuse (J/26) is located between the regulator and electric starter to protect the regulator and generator from a short circuit induced from outside.

Replace the fuse if it is defective. To do this, remove the panel (23) and open the protective bracket (J/25). Inside this bracket you will find a spare fuse. Ensure to provide another spare fuse in time.
3. Devices and Operating Elements
Diesel Engine / E-Starter Version

**Battery**

There is no dry pre-charging of batteries on the new machines or trailers. Therefore the battery must be filled with accumulator acid and charged (charging current = 1/10 of battery capacity).

**Starter Switch**

The ignition start switch (2) for electric starter has 3 settings

- **0** = Charging current off, key removable
- **I** = Operation
- **= Start position, ignition key automatically goes into operating position „I“

**Battery Charge Indicator**

Battery charge indicator (26) flashes when ignition key is in position „I“ and goes out as soon as the engine runs and the generator starts charging the battery.

It also goes out when the ignition key is in position “0” or is removed.

If the battery charge indicator flashes while the engine is running, the generator does not charge the battery correctly.

**Warning Signal**

Additionally to the battery charge indicator a beeper is inserted.

The warning signal sounds when ignition key is in position “I” and the engine is at a standstill, and goes out as soon as the engine runs and the generator starts charging the battery.

It also goes out when the ignition key is in position „0“ or is removed.

If the warning signal sounds while the engine is running, the generator does not charge the battery correctly.

**Warning**: Do not set ignition start switch to “0” while the engine is running. This can damage the charging regulator.
3. Devices and Operating Elements

Mounting and Dismounting Implements

Only Mount and Dismount Implements with Engine off.

Mounting Implements

Ensure that coupling surfaces on two-wheel tractor and implement are clean.

1. For PTO driven implements, set shift lever (4) on implement to position “0”.

2. Coupling sleeve should be slightly greased with bio-grease.

3. When mounting hoeing and tilling implement, set FR-lever to “0”, to prevent safety pin for reversing lock from protruding from coupling flange on base machine.

4. Slide pegs (2) of base machine into hooks (3) of implement.

5. Fold both eye bolts (1) over coupling flange.

Note:

- Are flanges (5) properly centred?
- Are flanges flat fitted?
- Tighten cap nuts evenly.

6. For PTO driven implement, press PTO link (6) onto shift lever (4) until it locks into place. Insert circlip (8) and secure.

For dismounting, proceed in reverse order.
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

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
4. Commissioning and Operation

Petrol Engine Version

Starting Petrol Engine

Never start engine in closed rooms. Exhaust fumes contain carbon monoxide, which acts toxic when inhaled.

1. Check the engine oil level
2. Air filter clean?
3. Sufficient fuel is filled into the tank?
4. Mount spark plug connector
5. Open both fuel taps (K/3 + 15)
6. Choke
   - **Cold engine**: pull CHOKE knob (K/5).
   - **Warm engine**: leave CHOKE knob in normal operating position or pull out half way.
7. Set ON-OFF switch (B/3; F/3) to operating position (“I”).
8. Set speed control lever (B/9; F/9) to 1/3 throttle.
9. Pull hand clutch lever (B/5; F/5) and lock pawl (B/6; F/6).
10. Start engine from a position outside the danger zone.
    Pull starting-rope on handle (K/6) until you feel starter clutch engage. Then **pull hard and fast** to start the engine. After the start, carefully let rope glide back. Do not let snap.
11. Once the engine has started, let it warm up for some time. Slowly push choke back into operating position, if necessary.
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 diesel, ensure timely provision of “winter diesel fuel”

Only use approved fuel cans to be purchased in special shops. Rusty sheet metal cans or fuel cans not suited for diesel are not permitted.

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

Be careful when dealing with fuel.

- 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 fill the fuel tank beyond the red mark on the filler strainer for the fuel to expand.

- Check transmission oil level

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
4. Commissioning and Operation
Diesel Engine / Recoil Starter Version

Starting Diesel Engine
Recoil Starter Version

Never start engine in closed rooms. Exhaust fumes contain carbon mono-
xide, which acts toxic when inhaled.

Check the engine oil level

Air filter clean?

Sufficient fuel is filled into the tank?

Open the fuel tap (J/3)

Differential version: Engage differential lock (D/10) – rigid axle.

Steering brake clutch version: Engage central brake (H/14) to improve machine stability.

Set speed control lever (D/9; H/9) to “max.”.

Set safety circuit lever (D/4; H/4) and clutch lever (D/5; H/5) to start position.

Pull starting-rope on handle (J/6) until you feel resistance (piston in compressing posi-
tion).

Pull decompression rope (J/14) downwards.

Start engine from a position outside the danger zone.

Pull starting-rope (J/6) hard and fast to start the engine. After the start, carefully let rope glide back. Do not let snap.

Decompression automatically goes back into former position.

Slowly set speed control lever to centre position (half throttle) and let engine warm up for some time.
4. Commissioning and Operation
Diesel Engine / E-Starter Version

Starting Diesel Engine
E-Starter Version

Never start engine in closed rooms. Exhaust fumes contain carbon monoxide, which acts toxic when inhaled.

1. Check the engine oil level
2. Air filter clean?
3. Sufficient fuel is filled into the tank?
4. Open the fuel tap (J/3)
5. Set speed control lever (D/9; H/9) to “max.”.
6. Set safety circuit lever (D/4; H/4) and clutch lever (D/5; H/5) to start position.
7. Insert key into ignition-start-switch (C/25; G/25) and turn right to position “I” - even when started using the reverse starter.
8. Battery charge indicator (C/26; G/26) flashes and warning signal sounds (if beeper available).
9. Turn ignition key further to the right to position “START”.

As soon as the engine starts, let go ignition key – it automatically moves back into position “I”.

If the engine does not start and re-start is necessary, turn key back to position “0” to repeat start (re-start lock).

10. Slowly move speed control lever to centre position (half throttle) and let engine warm up for some time.

<table>
<thead>
<tr>
<th>Step</th>
<th>Image</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><img src="image1" alt="Image" /></td>
<td>? ok</td>
</tr>
<tr>
<td>2</td>
<td><img src="image2" alt="Image" /></td>
<td>? ok</td>
</tr>
<tr>
<td>3</td>
<td><img src="image3" alt="Image" /></td>
<td>? ok</td>
</tr>
<tr>
<td>4</td>
<td><img src="image4" alt="Image" /></td>
<td>Open the fuel tap (J/3)</td>
</tr>
<tr>
<td>5</td>
<td><img src="image5" alt="Image" /></td>
<td>Set speed control lever (D/9; H/9) to “max.”.</td>
</tr>
<tr>
<td>6</td>
<td><img src="image6" alt="Image" /></td>
<td>Set safety circuit lever (D/4; H/4) and clutch lever (D/5; H/5) to start position.</td>
</tr>
<tr>
<td>7</td>
<td><img src="image7" alt="Image" /></td>
<td>Insert key into ignition-start-switch (C/25; G/25) and turn right to position “I”.</td>
</tr>
<tr>
<td>8</td>
<td><img src="image8" alt="Image" /></td>
<td>Battery charge indicator (C/26; G/26) flashes and warning signal sounds (if beeper available).</td>
</tr>
<tr>
<td>9</td>
<td><img src="image9" alt="Image" /></td>
<td>Turn ignition key further to the right to position “START”.</td>
</tr>
<tr>
<td>10</td>
<td><img src="image10" alt="Image" /></td>
<td>Slowly move speed control lever to centre position (half throttle) and let engine warm up for some time.</td>
</tr>
</tbody>
</table>
4. Commissioning and Operation

Petrol Engine

Shutting off Petrol Engine

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

2. Set engine-off-switch to “0”.

3. Close both fuel taps.


Engine-off-switch (B/3) also serves as emergency off-switch. If necessary, set switch to “0” to turn engine off.

For parking the machine for longer periods of no operation, do not use engine-off-switch to turn off engine, but close fuel taps and let engine run until it slowly comes to a complete stop. This ensures carburetor to be empty and no resin residue to deposit.
4. Commissioning and Operation

Diesel Engine

Shutting off Diesel Engine

1. Before you shut off the engine let it run at increased idling speed for 1 minute to cool down and to avoid carbon to deposit on the injection valve. This ensures continued and reliable operation.

2. Set speed control lever (D/9; H/9) to “STOP”.

For shutting off the engine never activate decompression, as this might damage the valves.

3. Electric-starter version: turn key back to position “0” – battery charge indicator goes out.

4. Close the fuel tap (J/3).

5. Secure two-wheel tractor against unauthorized use
   Electric starter version: – remove ignition key.
4. Commissioning and Operation

Operations

1. Start engine as described in “Starting the Engine”.

Check safety circuit function

- Only operate the machine if safety circuit works!

2. Wear individual protective ear plugs and solid shoes.

3. Engage appropriate gear.

When using the working mode "4. gear = 16,9 km/h", and particularly when cultivating the ground, do not use the 4th gear! - Danger of accident!

4. For operations with PTO-powered attachments:
   Move PTO speed shift lever (B/1, D/1, F/1, H/1) forwards in driving direction – implement drive is turned on.

5. Move F/R drive to position forward or reverse.

6. Release the brake.

7. Slowly release the hand clutch lever while pressing the throttle.

Changing the travelling direction from forward to reverse:

1. Set speed control lever to idling position.

2. Pull hand clutch lever and hold.

3. Move F/R drive to position reverse.

4. Slowly release hand clutch lever while pressing the throttle.

Proceed vice versa for direction change from reverse to forward.

Never leave two-wheel tractor unattended with the engine running.
4. Commissioning and Operation

**Danger Zone**

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

**Working on Slopes**

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

*If possible, always work across the slope.*

**Starting the Engine on Slopes**

1. Keep gears for attachment drive and travelling drive in engaged mode; braking effect.

2. Steering brake clutch version: Engage central brake.

3. Move clutch lever and safety circuit lever to start position.

4. Petrol engine version: Move engine stop-switch (B/3, F/3) to operating position (“I”).

5. Re-start engine.
Driving with Mounted Trailer

When driving the two-wheel tractor on public roads (whether with or without trailer), adhere to traffic rules, e.g. in respect of tail lights.

**Only differential version machines fitted with 5.0-10 drive wheels are permitted to tow a trailer on public roads.**

The two-wheel tractor must be equipped with a generator and the trailer with lighting and flash-lights in accordance with national traffic rules.

Besides, the operator is required to carry a type approval both for the two-wheel tractor and the trailer attached.

**Required Accessories:**

1 pair of drive-wheels 5.00-10 ........................................... Item No. 0190 112
1 pair of wings .......................................................... Item No. 3424 011
1 two-wheel trailer ...................................................... 650 kg permissible total weight ........................................... Item No. 3481121

(Recommended gearbox version: 4th gear = 16.9 km/h)

**It is not allowed to ride on the trailer if attached to a steering brake clutch machine – risk of accident!**

Preparations

- Fit drive-wheels (refer to page 41).
- Fit wings to gearbox housing with attachment bolts (A/10; C/10; E/10; G/10).
4. Commissioning and Operation

**Coupling**
- Mount trailer drawbar (1) onto tractor hitch (A/6; C/6; E/6; G/6).
- Insert socket pin (A/8; C/8; E/8; G/8) and secure with linch pin (A/7; C/7; E/7; G/7).
- Connect cable and connector (2) to socket (A/18; C/18; E/18; G/18) of two-wheel tractor.

**Setting the brake**

The two-wheel trailer is equipped with a combined operating/park brake. This must be set accordingly.

- **Operating brake** = (○)
  - Insert linch pin (7)
- **Park brake** = (□)
  - Remove linch pin (7)
4. Commissioning and Operation

**Driving**

- Before you start, switch on main switch (14) on the switch box. After driving, make **absolutely sure to switch off**, otherwise the battery will discharge.
- Check lighting and flash indicators.
- Check whether foot brake and hand brake of the trailer are operational.
- Set brake function to operating brake to ride on the combination. **Check braking.**
- Check tyre air pressure:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Two-wheel tractor</td>
<td>1.5 bar</td>
</tr>
<tr>
<td>Two-wheel trailer</td>
<td>2.5 bar</td>
</tr>
</tbody>
</table>

For smooth driving, make sure that tyre air pressure on rear and front pair of wheels is the same, respectively.
- Observe the permissible total weight of trailer; **avoid any overloading.**
- Hoeing and tilling implements must not be attached.
- Downhill-driving only with gear engaged! For steep downhill-drives engage 2nd gear.
- **Do not lock the differential (the tractor steers easily, especially when travelling in curves).**

**Danger Warning**

Driving with the trailer requires a great deal of attention in order to guard against a loss of control and the danger of injury as a result of an imbalance effects on the pulling tractor.

The danger increases over-proportionately at increased speed, when travelling in curves and when travelling uphill and downhill.

When driving in reverse this danger is additionally increased through the discrepancy in alignment between the line of vision and body position, as well as the altered powers of steering and steering reaction.

Generally, and particularly when driving in reverse, you should observe the following rules:

1. Look out for obstacles, particularly those at ground level.
2. Only drive at a speed at which you are always able to stop in time when confronted with any possible danger.
3. Only drive in reverse in 1st and 2nd gear.
4. When driving in curves, as well as when going uphill or downhill, adjust the speed accordingly.
5. Only brake using the trailer brake.
Raised areas and dips in the ground, stones etc. could cause sudden shocks and throw the tractor to the side or vertically. Tractor steering control could be completely lost and the tractor could dip down a small amount at the rear as a result of large impacts on the steering, increased by shocks from the side. When driving in curves and across inclines, additional lateral forces are present which could possibly throw the operator out of his seat.

These effects and their consequences are increased even more at high speeds, when transporting loads, when driving in curves and/or driving uphill and downhill.

There is a danger of the operator losing control of the vehicle and being injured by the link handle or being flung from his seat. There is the possibility, as a result of this, of material damage and that people standing nearby, or the operator himself, could be injured by the vehicle.

⚠️ Constant attention needs to be paid to the ground conditions. Where possible clear objects out of the way beforehand or drive slowly and in an ordered manner over them. Constantly keep possible dangers in mind. Drive slowly past obstacles, in curves, on inclines and on sloping areas.

Adjust your speed to the conditions on the ground and the weather situation.

Secure the vehicle against rolling away when parked on a slope.

The operator should position himself so that in any dangerous situations he cannot be hit or injured by the steering wheel, that he cannot be thrown from his seat, and that he is always able to control the steering forces.

Select the steering lock according to the conditions of use, such that the lateral forces can be constantly kept under control by the operator.

Do not approach any obstacles at high speed.

Stop immediately in dangerous situations (Disengage the clutch and brake using the trailer. If necessary turn the engine off).
5. Maintenance

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

Please note:

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

⚠️ When working on mowing knives, wear safety gloves!

Engine

Checking Oil Level

- Each time you take up operation and after every 8 operating hours,
- Only with engine shut off and tractor in horizontal position.
- Clean oil filler plug and surrounding parts.
- Remove oil filler 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, refill engine oil (refer to “Specifications”) until oil level reaches rim of oil filler neck.

Changing Engine Oil

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

- Clean oil filler plug, 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”
5. Maintenance

Petrol Engine

Dry-Type Air Filter

When you take up operation check the air filter (K/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

Petrol Engine

Cleaning the Spark Plug and Readjusting the Electrode Gap

The spark plug (3) is arranged underneath the fuel tank:

1. Fold up fuel tank (1).

If fuel tank does not stay up in folded position, tighten hinge screws (2) slightly until fuel tank stays up and still folds easily up and down.

2. Place back:
fold back fuel tank and lock onto ball button (4).

After every 100 operating hours or ignition problems:

- remove soot from spark plug electrodes with a steel brush,
- check spark plug gap and set to 0.6…0.7mm.

Exchange spark plugs after approx. 200 hours of operation.
5. Maintenance

Petrol Engine

Cleaning the Cooling System
Clogging of plants and dust may occur in the cooling system. Operation with the cooling system clogged lets the engine heat up and causes damage.
- Always check cooling-air screen (K/7) and remove dirt and plants sucked in.
- Clean fan system at least once per year, preferably before the season starts. Take off fan case and clean cooling fins on both, cylinder and cylinder head, clean guiding plates and cooling-air screen, both serving for good air circulation. → agria - Service

Exhaust System
Check exhaust system (K/9) on a regular basis for plant trash and clean, if necessary. Otherwise

⚠️ danger of fire results.
Check each time before you take up operation.

Fuel Hoses
Exchange fuel hoses every 2 years. Leaking hoses must be exchanged immediately.

Cleaning the Fuel Strainer
Check the strainer on the fuel tap (C/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.
5. Maintenance

**Cleaning Cylinder Head**
After every 400 hours of operation take off cylinder head and remove carbon deposits on cylinder, cylinder head, piston crown and valves with a steel brush. Afterwards, clean with soft brush. Renew head gasket and reassemble to cylinder head. Tighten cylinder head bolts in turn. Tighten with a torque of 26 Nm.

**Re-adjusting Valve Lash**
After every 400 hours of operation, re-adjust valve lash. Intake and outlet valve are at 0.1mm when the engine is cold.

**Cleaning the Carburetor**
Clean the carburetor every 400 operation hours and then readjust the idle speed.

**Idling Speed**
Always ensure that idling engine speed is adjusted correctly. Ensure smooth running of engine by positioning speed control lever to idling position at stop.

To set engine speed, adjust idling speed control screw (2) and idling speed mix control screw (1) in turn. Then adjust throttle control cable to no play with adjusting or locking screw. Do this while the engine is warm. (For idling speed rates refer to “Specifications”).

**Idling Speed Governor**
For correct functioning of the governor on the engine and for adjustment of upper idle speed ranges the governor spring must be in the appropriate place, see fig.

Any changes to the position of the spring cause warranty and type approval to become void.

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

Diesel 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 shut off and spark plug connector disconnected.
- When working on mowing knives, wear safety gloves!

### Engine

#### Checking Oil Level

- Each time you take up operation and after every 8 operating hours.
- Check only with engine switched off and machine in horizontal position.
- Clean oil dip stick and surrounding parts.
- Unscrew the oil dip stick, clean the dip-stick with a clean rag, re-insert it all the way and screw it in.
- Unscrew the oil 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; do not overfill!

#### Changing Engine Oil

The first oil change is after 50 operating hours. Subsequent oil changes are after 200 operating hours or once a year, depending on which period is completed first. At extreme strain and high temperatures, change oil after 100 operating hours while the engine is still warm, but not hot – danger of burns!

- Clean oil filler plug, drain plug and surrounding parts.
- Open the filling plug and the drain plug and drain the oil into a suitable container and dispose of properly!
- Each time you change engine oil, wash engine oil filter in diesel fuel. Replace damaged filter.
- Fill fresh engine oil into the oil filling opening.
- Check sealing washer for good condition and exchange, if necessary!

Refer to Specifications for oil quantity and quality. Use a funnel or a similar device to fill the oil reservoir.
5. Maintenance

Diesel Engine

Dry-Type Air Filter

When You take up operation check the air filter (J/4) on dirt, clean it if necessary. Clean air filter (J/4) after a maximum of every 50 operating hours or at least after 3 months, in case of heavy dust occurrence even earlier.

1. Clean air filter and outside surrounding parts.
2. Remove the wing nut and air filter cap including the cyclone pre-filter.
3. Rotate the air filter cap to allow any dirt inside the cyclone pre-filter drop out.
4. Carefully remove foamed pre-filter.
5. Wash foamed pre-filter in detergent and water (no petrol).
6. Squeeze foamed pre-filter and dry it.
7. Remove paper filter element
8. Slightly tap the element on a smooth surface.
9. Do not use compressed air to blow out dust of foamed pre-filter and paper filter element. Do not treat with oil.
10. Re-insert the filter element and attach the foamed pre-filter.
11. Reposition air filter cap and fasten with wing nut.

Replace paper filter element after every 400 operating hours or at least once a year.

Replace immediately damaged filter elements.
5. Maintenance

**Diesel Engine**

**Draining fuel**
- Provide a proper container with funnel or similar.
- Remove the drain plug (16) and drain the fuel into a proper container.
- Re-attach the drain plug (16) with O-ring and tighten it (check the O-ring and replace it if necessary)

**Fuel filter**

Clean the fuel filter insert at approx. 200 operating hour intervals, earlier, if engine output drops.

**Filter disassembly/assembly:**
- Drain the fuel.
- Remove hex head nuts (X/7)
- Remove the filter insert (X/4) from the fuel tank through the filling hole.
- Clean the fuel filter with diesel oil and replace the insert if it is damaged.
- Reverse the above order to reassemble the fuel filter after checking and replacing (if necessary) the gasket (X/5) and o-ring (X/6).
- Tighten the hex nuts.
- Fill fuel and check the fuel system for leakages.
- Bleed the fuel system.
- Exchange the fuel filter after 400 hours.

**Fuel Hoses**

Exchange after every 2 years; exchange leaking fuel hoses immediately.

---

**Bleeding the Fuel System**

The engine is equipped with an automatic bleeding system, however after the fuel tank was emptied completely or after exchanging or cleaning the fuel-filter/fuel hoses proceed as follows:
- Fill diesel fuel into fuel tank.
- Crank engine several times with recoil starter or electric starter and start engine.
- Let engine run for approx. 1 minute.
5. Maintenance

Diesel Engine

Cleaning the Cooling System
After a long period of operation the cooling system may become clogged by dirt and plant trash. Uninterrupted operation with a clogged cooling system causes the engine to heat up and become damaged.

- Always check cooling-air screen (J/10) and free from dirt and plant trash taken in.
- After every 100 operating hours or at least once a year before season starts remove fan case to clean cooling fins on cylinder and cylinder head as well as guiding plates and cooling-air screen, both serving for smooth air circulation.

Exhaust System
Constantly check exhaust system (J/9) for plant trash and clean, if necessary. Otherwise danger of fire!

Re-adjusting Valve Lash
After every 400 operating hours re-adjust valve lash. Re-adjust outlet and intake valve lash to be 0.15±0.02mm when the engine is cold.

Injection Jet
After every 400 operating hours, clean and check injection jet.

Idling Speed
Always ensure that idling engine speed is adjusted correctly. At low speeds, the engine is supposed to run smoothly, with speed control lever at stop in neutral.
5. Maintenance

Machine

Gearbox: Base Machine

Check oil level in gearbox each time before you take the machine into operation and after every 50 operating hours (oil dip-stick and filling opening (A/9; C/9; E/9; G/9). With the tractor parked in horizontal position, the oil level is between the notches “max” and “min”.

- Screw out oil dip-stick, clean with clean cloth and screw back in.
- Take dip-stick out again and read oil level, refill transmission oil, if necessary.

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

1. Clean oil filler plug (A/9, C/9, E/9, G/9) and drain plug (A/20, C/20, E/20, G/20) as well as surrounding parts.
2. Change the oil and dispose of properly.
3. Check sealing washer for good condition and exchange, if necessary!

- For transmission oil quality refer to “Specifications”

Drive-Wheels

1. When commissioning the tractor and each time you change wheels, check and tighten wheel bolts and nuts after the first 2 operating hours with 100 Nm (10 kpm). Proceed likewise when doing maintenance work.
2. After the first two operating hours and after every 50 operating hours, retighten the hex nuts (A/22; C/22) on the hub adapters to 100 Nm and the nuts (E/23; G/23) on the wheel hubs to 160 Nm.
3. Check tyre air pressure regularly. For smooth driving, make sure that there is the same pressure in front and rear tyres respectively.
5. Maintenance

Safety circuit

Check safety circuit function each time you take up operation and each time you maintain the machine.

- At release of lever (B/4 or D/4), the engine must automatically come to a stop.

Petrol engine: Check electric lines and connections and exchange, if necessary.

Diesel engine: If necessary, correct STOP-Bowden cable with Bowden cable set screw.

Engine Shut-off Switch

Check function of engine shut-off switch each time you do maintenance work.

- Petrol engine: With shut-off switch in position “0” the engine must come to a stop.

- Check electric lines and connections.

Diesel Engine: If the speed control lever is in “STOP” position, the engine must come to stop. If necessary, correct engine speed cable or STOP-Bowden cable on Bowden cable set screws.

Steering Handle

- Yearly lubricate nipples on steering handle and hitch. After cleaning with compressed air, lubricate with bio-lubricating grease.

Apply grease generously to leave a grease neck around bearings to prevent water and dirt from penetrating.

Battery

There is no dry pre-charge of batteries on new machines or trailers, therefore batteries must be totally charged after filling them with accumulator acid (charge current = 1/10 of battery capacity).

If the machine or trailer will not be used for a long period, the battery must be kept fully charged with a current of 0.06A and checked every 4 weeks and recharged, if necessary. Before recharge, disconnect negative pole.

Never leave battery in uncharged state. Note manufacturer’s instructions. Avoid sparking and open flames near batteries. Careful when handling battery acid!

Only use specified circuit breakers. If circuit breakers are too strong, the electric system will be destroyed.

⚠️ danger of fire!
5. Maintenance

**Adjustments on Levers**

Check clutch play or clutch adjustment each time you operate the machine. If necessary, re-adjust (especially after commissioning the machine, during break-in period, and after exchanging clutch linings and brake pads).

**Petrol Engine Version**

**Diesel Engine Version >34018362**

**Clutch:**

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

(Clutch play)

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

**Diffential gear, Central brake, Steering brake:**

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

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

**Adjustment:**

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

3. Adjust the adjusting pin (4) (+ -) to a play of \( X \).

**Diesel Engine Version <34018361**

- Set the adjustment screw (1) to a play of “A”. Turn screw in to reduce play, turn screw out to increase play.
- Then fix adjustment screw with a lock nut (2).

Free play of clutch and differential lock: \( A = 5\text{–}6 \text{ mm} \)

For adjusting the steering brake clutch levers refer to “Petrol Engine Version”.

---

*agria*-Two-Wheel Tractor 3400; 3400KL 73
5. Maintenance

Vers. Safety Hillholder

Safety Hillholder

- 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, re-adjust 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

General Maintenance

1. Every time you take up operation watch out for fuel and oil leakage, repair if necessary.

2. Regularly check bolts and nuts for tight fit, re-tighten, if necessary.

3. At least once a year and after cleaning: Slightly grease all gliding and moving parts (e.g. speed control lever, lever bearing, etc.) with bio-lubricating grease and bio-lubrication oil.

Cleaning

Engine

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

Machine

After each operation immediately clean the tilling tools and the protective hood. Therefore dismount the protective hood. Grease all gliding parts with Bio-ubricating grease and Bio-slushing oil.

After each cleaning with air-compressed water jets lubricate all lubrication points, oil and let two-wheel tractor 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.
5. Maintenance

Storage

For longer periods of no operation prepare two-wheel tractor for storage. Proceed as follows:

a) Clean thoroughly

Repair paint coat.

b) Spray all shining parts and the cutter bar with Bio-slushing oil.

c) Engine preservation

● Petrol Engine
  – Drain fuel completely or fill fuel tank and add fuel stabilizer (agria No. 799 09).
  - Observe enclosed instructions.
  Let engine run for approx. 1 minute.
  – Change the engine oil.
  – Fill a tea-spoon (approx. 0.03l) of engine oil into the spark plug opening. Slowly crank the engine.
  – Reinstall the spark plug and set the piston to compression via the recoil starter (pull the starter grip until resistance is felt) – valves are closed.
  – Slowly crank the engine after every 2–3 weeks (spark-plug connector is removed). Then set the piston to compression again.

● Diesel Engine
  – Change engine oil.
  – For longer storage, close exhaust pipe and air filter opening with crape or similar tape.

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 unsupported.

e) Clutch

Always park two-wheel tractor with clutch lever pulled (pawl locked in place). Otherwise clutch problems may result due to corrosion.

f) Parking

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

g) Covering the machine

Protect the machine with cloth or a similar cover.
# 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>Petrol engine:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engine does not start</td>
<td>- Spark plug connector not connected</td>
<td>Connect spark plug connector</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Choke is not pulled</td>
<td>Set choke lever to position CHoke</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>- Engine shut-off switch is set to “0”</td>
<td>Set engine shut-off switch to “I”</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>- Safety circuit is not set to start position</td>
<td>Set safety circuit to start position</td>
<td>31; 50</td>
</tr>
<tr>
<td></td>
<td>- Fuel tank empty or poor fuel</td>
<td>Fill fuel</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Fuel line clogged</td>
<td>Clean fuel line</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>- Defective spark plug</td>
<td>Clean, adjust or exchange spark plug</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>- Engine too much fuel</td>
<td>Dry and clean spark plug and start at full throttle</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- (&quot;flooded engine&quot;)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Engine-off-line defective</td>
<td>Check line and connections</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>- Inleaked air due to loose caburetor and suction line</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Misfirings in engine</td>
<td>- Engine running in CHoke range</td>
<td>Set CHoke lever to operating position</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>- Loose ignition cable</td>
<td>Fix ignition cable retaining device, fit connector tightly on ignition cable, fit connector tightly on spark plug</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>
</tr>
<tr>
<td></td>
<td>- Vent opening in fuel tank cap clogged</td>
<td>Exchange fuel tank cap</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Water or dirt in fuel system</td>
<td>Drain fuel and fill fresh fuel</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Air filter clogged</td>
<td>Clean air filter or exchange</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td>- Carburetor misadjusted</td>
<td>Re-adjust carburetor</td>
<td>* 66</td>
</tr>
<tr>
<td>Excessive temperature in engine</td>
<td>- Low engine oil level</td>
<td>Refill oil immediately</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>- Impaired cooling</td>
<td>Clean cooling fan grid, clean internal cooling fins</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>- Air filter clogged</td>
<td>Clean air filter</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td>- Carburetor misadjusted</td>
<td>Re-adjust carburetor</td>
<td>* 66</td>
</tr>
<tr>
<td>Misfirings in engine at high speeds</td>
<td>- Short firing intervals</td>
<td>Adjust spark plug</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>- Incorrect idle mixture</td>
<td>Adjust carburetor</td>
<td>* 66</td>
</tr>
<tr>
<td>Engine frequently stalls in idle</td>
<td>- Firing interval too long, defective spark plug</td>
<td>Adjust or replace spark plug</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>- Carburetor misadjusted</td>
<td>Re-adjust carburetor</td>
<td>* 66</td>
</tr>
<tr>
<td></td>
<td>- Air filter clogged</td>
<td>Clean air filter</td>
<td>63</td>
</tr>
</tbody>
</table>
# 6. Troubleshooting

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause</th>
<th>Remedy</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine does not run smoothly</td>
<td>- Speed control linkages clogged or jammed</td>
<td>Clean speed control linkages</td>
<td>66</td>
</tr>
<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 ground contact</td>
<td></td>
</tr>
<tr>
<td>Engine output too low</td>
<td>- Air filter clogged</td>
<td>Clean air filter</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td>- Loose cylinder head or damaged gasket</td>
<td>Tighten cylinder head, exchange gasket</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Poor compression</td>
<td>Have engine checked</td>
<td></td>
</tr>
</tbody>
</table>

**Diesel engine:**

<table>
<thead>
<tr>
<th>Engine does not start</th>
<th>- Speed control lever set to “STOP”</th>
<th>Move speed control lever to “Max”</th>
<th>52, 53</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Fuel tank empty or poor fuel</td>
<td>Fill fresh fuel</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Fuel line or fuel filter clogged</td>
<td>Clean fuel line or filter</td>
<td>69</td>
</tr>
<tr>
<td></td>
<td>- Injector nozzle or injection line clogged</td>
<td>Clean injector nozzle or injection line</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>- Wrong injection pressure</td>
<td>Check pressure</td>
<td></td>
</tr>
<tr>
<td>Misfirings in engine</td>
<td>- Clogged fuel line or poor fuel</td>
<td>Clean fuel line, fill fresh fuel</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Vent opening in fuel tank cap clogged</td>
<td>Exchange fuel tank cap</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Water or dirt in fuel system</td>
<td>Drain fuel and fill fresh fuel</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Air filter clogged</td>
<td>Clean air filter</td>
<td>68</td>
</tr>
<tr>
<td></td>
<td>- Injector nozzle or injection line clogged</td>
<td>Clean injector nozzle or injection line</td>
<td>70</td>
</tr>
<tr>
<td>Excessive temperature in engine</td>
<td>- Lack of engine oil</td>
<td>Refill engine oil immediately</td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>- Impaired cooling</td>
<td>Clean fan grid, clean internal cooling fins</td>
<td>70</td>
</tr>
<tr>
<td>Misfirings at high speeds</td>
<td>- Injector nozzle clogged</td>
<td>Clean injector nozzle</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>- Wrong injection pressure</td>
<td>Re-adjust injection pressure</td>
<td></td>
</tr>
<tr>
<td>Engine frequently stalls in idle</td>
<td>- Air filter clogged</td>
<td>Clean air-filter</td>
<td>68</td>
</tr>
<tr>
<td>Engine does not stop when set to “STOP”</td>
<td>- Improper adjustment of engine-off-cable</td>
<td>Re-adjust engine-off-cable</td>
<td>72</td>
</tr>
</tbody>
</table>
## 6. Troubleshooting

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause</th>
<th>Remedy</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine output too low</td>
<td>- Air filter clogged</td>
<td>Clean air filter</td>
<td>68</td>
</tr>
<tr>
<td></td>
<td>- Loose cylinder head or damaged gasket</td>
<td>Tighten cylinder head, exchange gasket</td>
<td>∗</td>
</tr>
<tr>
<td></td>
<td>- Poor compression</td>
<td>Have engine checked</td>
<td>∗</td>
</tr>
</tbody>
</table>

### E-Start version:

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause</th>
<th>Remedy</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-starter does not start</td>
<td>- Battery is empty</td>
<td>Charge or replace the battery</td>
<td>47; 72</td>
</tr>
<tr>
<td></td>
<td>- Glass fuse is defective</td>
<td>Replace the glass fuse</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>- Harness, E-starter damaged</td>
<td>Inspect harness and E-starter</td>
<td>∗</td>
</tr>
<tr>
<td>No battery charge control when engine stops</td>
<td>- Start switch not activated</td>
<td>Move start switch to &quot;I&quot;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Control light is defective</td>
<td>Replace control light</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Glass fuse is defective</td>
<td>Replace glass fuse</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>- Harness is damaged</td>
<td>Inspect harness</td>
<td>∗</td>
</tr>
<tr>
<td></td>
<td>- Regulator is defective</td>
<td>Inspect regulator</td>
<td>∗</td>
</tr>
<tr>
<td>Battery charge control comes on during operation</td>
<td>- Glass fuse is defective</td>
<td>Replace glass fuse</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>- Harness is damaged</td>
<td>Inspect harness</td>
<td>∗</td>
</tr>
<tr>
<td></td>
<td>- Regulator is defective</td>
<td>Inspect regulator</td>
<td>∗</td>
</tr>
<tr>
<td></td>
<td>- Generator is defective</td>
<td>Inspect generator</td>
<td>∗</td>
</tr>
</tbody>
</table>

### Machine in general:

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause</th>
<th>Remedy</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clutch does not decouple</td>
<td>- Clutch lever misadjusted</td>
<td>Adjust clutch free play</td>
<td>73</td>
</tr>
<tr>
<td>Clutch slips</td>
<td>- Clutch lever misadjusted</td>
<td>Adjust clutch free play</td>
<td>73</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 attachment bolts</td>
<td>Tighten attachment bolts</td>
<td>74</td>
</tr>
</tbody>
</table>

∗ = For this purpose contact your agria workshop.
Varnishes, Wear Parts

agria Order No.

Fuel Stabilizer for Petrol Engine

799 09 Fuel stabilizer pouch 5g

Varnishes

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

Glues (for screw fastening), Surface Sealing

559 94 Glue (medium) LOCTITE 242 bottle 50ml
559 95 Glue (strong) LOCTITE 270 bottle 50ml
559 96 Glue (ultra strong) LOCTITE 638 bottle 50ml
509 68 Surface sealing (liquid) LOCTITE 573 tube 250ml

Wear Parts

707 91 Air filter set, Robin engine
707 92 Spark plug, Bosch WR7CC
684 16 O-ring, oil dip-stick, Robin engine
009 05 O-ring 14x20x1.5, oil drain plug, Robin engine
415 008 Air filter element, Yanmar engine
415 010 Fuel filter, Yanmar engine
415 011 Fuel filter gasket, Yanmar engine
021 43 O-ring 14x1.6, Fuel tap, Yanmar engine
009 16 O-ring 16x22x1.5, oil drain plug, Yanmar engine
768 99 Fuse 15A (30x6.5mm)
009 16 O-ring 16x22x1.5, oil dip-stick and oil drain plug, gearbox

Lists of Spare Parts

997 012 Base machine 3400
997 083 Implements for 3400
997 077 Robin Engines
997 147 Yanmar Engines
997 062 Cutter Bar
Designation of Parts

Diesel Engine

Figure J

Engine L100

1. Fuel tank cap
2. Fuel tank
3. Fuel tap
4. Air filter
5. Preliminary air filter
6. Starter grip
7. Cooling air grille
8. Decompression lever
9. Exhaust
10. Electric switch (E-Start Version)
11. Engine oil filler opening, dip-stick
12. Engine oil drain plug
13. Engine oil filter
14. Decompression cable
15. Injection pump
16. Fuel drain plug
17. Engine type plate; engine I.D.
18. Ball-head, engine cover
19. Hex head bolt (E-Start Version)
20. Serrated washer (E-Start Version)
21. Panel (E-Start Version)
22. Distancer (E-Start Version)
23. Fuse holder (E-Start Version)
24. Fuse 15 amps (E-Start Version)
Designation of Parts

Diesel Engine

Figure J

Engine L100

Figure J

Engine L100
*Petron Engine*

- **B** = yearly and after each cleaning with a high-pressure cleaner.

*Diesel Engine*

- **B** = yearly and after each cleaning with a high-pressure cleaner.
<table>
<thead>
<tr>
<th>Operation</th>
<th>Periodicity</th>
<th>After operating hours</th>
<th>min. every 3 months</th>
<th>min. yearly</th>
<th>Page</th>
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<tbody>
<tr>
<td>Check dead stop function</td>
<td>K</td>
<td>2 5 8 25 50 100 200 400</td>
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<tr>
<td>Check engine shut-off switch function</td>
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<td></td>
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<tr>
<td>Check free play of levers</td>
<td>K</td>
<td></td>
<td></td>
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<td>73</td>
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<tr>
<td>Check safety hillholder function</td>
<td>O</td>
<td>K</td>
<td></td>
<td></td>
<td>74</td>
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<tr>
<td>Clean cooling-screen</td>
<td>K</td>
<td></td>
<td></td>
<td></td>
<td>65, 70</td>
</tr>
<tr>
<td>Check air-filter</td>
<td>K</td>
<td></td>
<td></td>
<td></td>
<td>63, 68</td>
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<tr>
<td>Clean surrounding parts of exhaust</td>
<td>K K</td>
<td></td>
<td></td>
<td></td>
<td>65, 70</td>
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<tr>
<td>Check engine oil level, refill, if necessary</td>
<td>1 K K</td>
<td></td>
<td></td>
<td></td>
<td>62, 67</td>
</tr>
<tr>
<td>Check transmission oil level</td>
<td>2 K K</td>
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<td></td>
<td></td>
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<tr>
<td>Retighten the hex nuts on the hub adapters and the nuts on the wheel hubs</td>
<td>K K</td>
<td></td>
<td></td>
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<td>71</td>
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<tr>
<td>Tighten wheel bolts and nuts</td>
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<tr>
<td>Check or clean speed control linkages</td>
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<tr>
<td>Cleaning</td>
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<td>75</td>
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<tr>
<td>Check bolts and nuts</td>
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<tr>
<td>Clean air-filter insert</td>
<td>K K</td>
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<td>Clean air-filter insert</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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<td>67</td>
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<tr>
<td>subsequent oil changes</td>
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<td>Clean engine oil filter first time,</td>
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<td>subsequent cleaning</td>
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<td>First transmission oil change,</td>
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<td>subsequent oil changes</td>
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<td>Clean spark plug, adjust electrode gap</td>
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<td>Check brake liners of safety hillholder</td>
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<td>K</td>
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<tr>
<td>Lubricate differential hubs of twin-wheels</td>
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<tr>
<td>Clean guide plates, cooling fins –</td>
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<td>65, 70</td>
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<tr>
<td>earlier, if required</td>
<td>F</td>
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<tr>
<td>Replace spark plug</td>
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<td></td>
<td>64</td>
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<tr>
<td>Replace air filter insert,</td>
<td>K</td>
<td></td>
<td></td>
<td></td>
<td>63</td>
</tr>
<tr>
<td>earlier, if required</td>
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<td>68</td>
</tr>
<tr>
<td>Clean fuel filter</td>
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<td>W</td>
<td></td>
<td></td>
<td>69</td>
</tr>
<tr>
<td>Replace air filter insert,</td>
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<td></td>
<td></td>
<td></td>
<td>69</td>
</tr>
<tr>
<td>earlier, if required</td>
<td></td>
<td>K</td>
<td></td>
<td></td>
<td>68</td>
</tr>
<tr>
<td>Replace fuel filter</td>
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<td>W</td>
<td></td>
<td></td>
<td>69</td>
</tr>
<tr>
<td>Clean carburetor and adjust</td>
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<td>F</td>
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<td></td>
<td>66</td>
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<tr>
<td>Clean cylinder head</td>
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<td>F</td>
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<td></td>
<td>66</td>
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<tr>
<td>Clean injection jet and check</td>
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<td>F</td>
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<td></td>
<td>70</td>
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<tr>
<td>Adjust valve lash</td>
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<td></td>
<td>66, 70</td>
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<tr>
<td>Lubricate steering handle/trailer hitch</td>
<td>3</td>
<td>K K</td>
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</tr>
<tr>
<td>Lubricate all gliding parts</td>
<td>4</td>
<td>K K</td>
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<tr>
<td>Replace fuel hoses</td>
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<td>W*</td>
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<td>65, 69</td>
</tr>
</tbody>
</table>
Designation of Parts

**Petrol Engine**

---

**Figure K**

**Engine EH 34 D**

1. Fuel tank cap
2. Fuel tank
3. Fuel tap, right
4. Air filter
5. Choke pull-knob
6. Starter handle
7. Recoil starter/air-cooling screen
8. Spark plug connector
9. Exhaust
10. Engine oil filler neck with oil dip-stick
11. Engine type
12. Engine oil drain plug
14. Speed control lever and linkages
15. Fuel tap, left

---

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>■</td>
<td>Petrol Engine only</td>
</tr>
<tr>
<td>◆</td>
<td>Diesel Engine only</td>
</tr>
<tr>
<td>○</td>
<td>only vers. with safety hillholder</td>
</tr>
<tr>
<td>○○</td>
<td>nur Ausf. mit Bergsicherheitsbremsen</td>
</tr>
<tr>
<td>P</td>
<td>Item in lubrication plan</td>
</tr>
<tr>
<td>A</td>
<td>Each time before you take up operation</td>
</tr>
<tr>
<td>B</td>
<td>After each cleaning</td>
</tr>
<tr>
<td>K</td>
<td>Checks and maintenance to be executed by operator</td>
</tr>
<tr>
<td>W</td>
<td>Maintenance to be executed by professional workshop</td>
</tr>
<tr>
<td>F</td>
<td>Maintenance should be carried out by your agria workshop</td>
</tr>
<tr>
<td>*</td>
<td>after 2 years</td>
</tr>
</tbody>
</table>
Designation of Parts

Petrol Engine

Figure K
Engine EH 34 D
Conformity Declaration

EG-Konformitätserklärung
EC Declaration of Conformity

D: Wir
F: Nous
GB: We
NL: Wij

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

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

Einachsschlepper
Motoculteur
Two-wheeled tractor
Eenassige tractor

3400 513, -514, -523, -524, -534, -544, -811, -813, -831, -851

mit allen einschlägigen Bestimmungen der EG-
Maschinenrichtlinie 2006/42/EG in Übereinstimmung ist.
Die Maschine ist auch in Übereinstimmung mit allen einschlägigen
Bestimmungen der folgenden EG-Richtlinien:
2004/108/EG, 2000/14/EG

Folgende harmonisierte Normen (oder Teile davon) oder techn. Spezifikatio-
nen 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 18.01.2010

Siegfried Arndt
Geschäftsführer
Directeur
Managing Director
Bedrijfleider

Rudolf Tiggес
Leiter Entwicklung & Konstruktion
Responsable développement et études
Head, Research and Development
Hoofd ontwikkeling en constructie

Herr Tiggес ist bevollmächtigt die technischen Unterlagen zusammenzustellen.
Monsieur Tiggе est habilité à agencer la documentation technique.
Mr. Tiggė is authorized to assort the technical documents.
De heer Tiggес is gemachtigd om de technische documentatie op te stellen.
Anschrift/adresse/address/adresse:
agria Werke GmbH, Bittelbronner Str. 42, D-74219 Möckmühl
Your local agria specialist dealer: