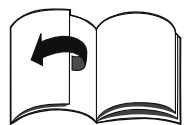
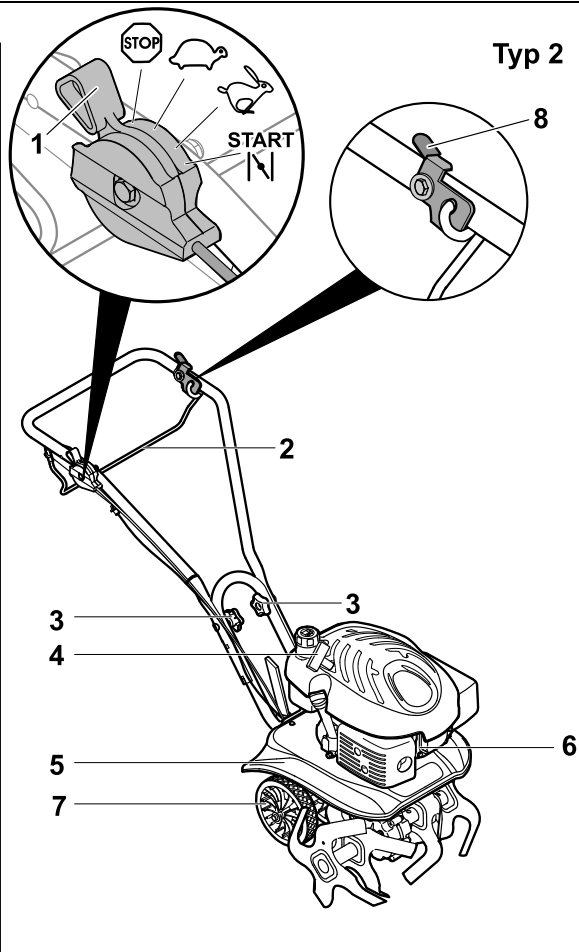
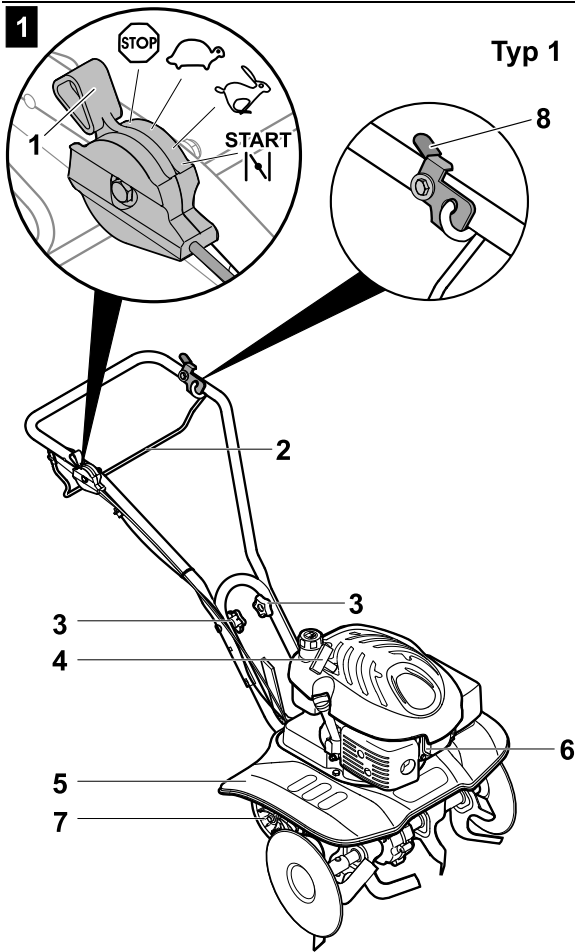
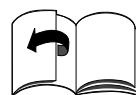
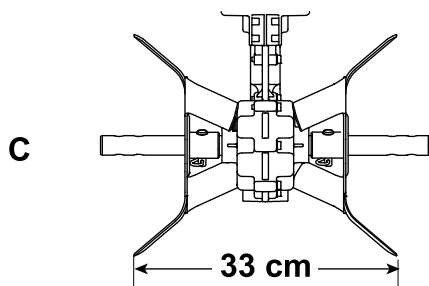
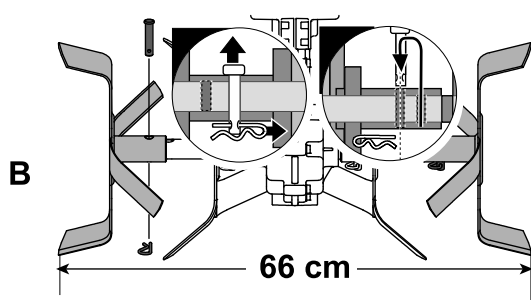
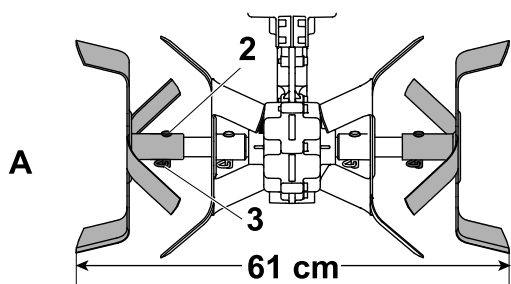


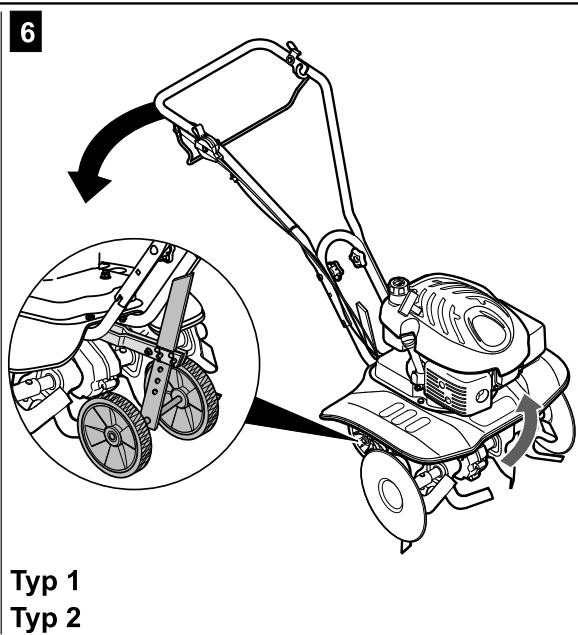
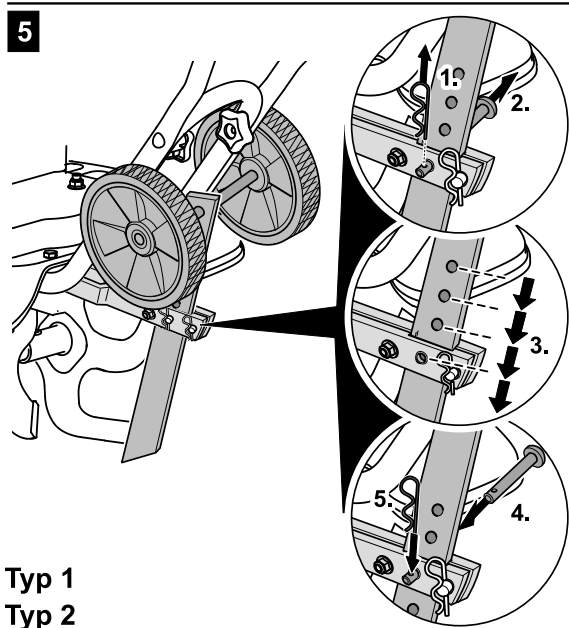
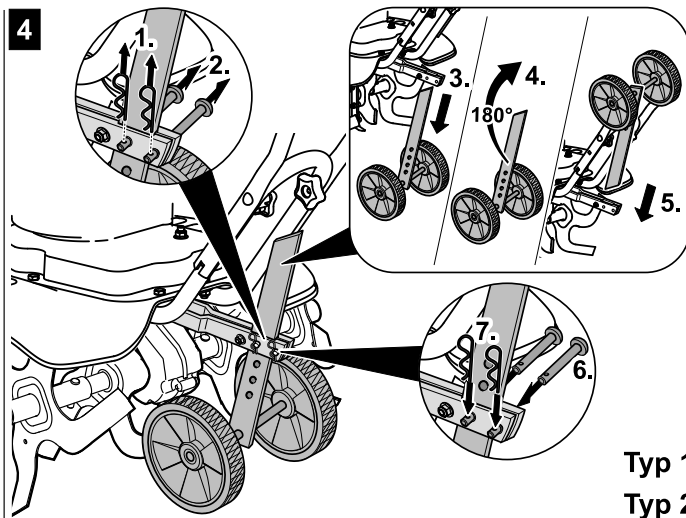
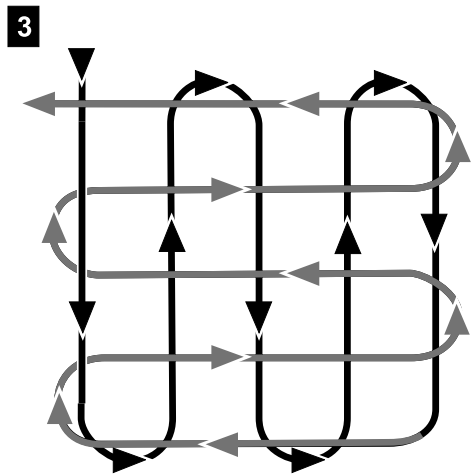
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**2** Typ 1
















**7**

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## Information on the identification plate

This information is very important for later identification of the unit if replacement parts have to be ordered, and for the customer service.

You will find the identification plate in the vicinity of the engine.

Enter all information indicated on the rating plate of your unit in the box (Fig. 7).

This and other information about the unit can be found on the separate CE declaration of conformity which is a component of these operating instructions.

## Illustrations



Fold out the illustrated pages at the start of the operating manual. Various models are described in these operating instructions. The graphical representations may differ in detail from the unit which you purchased. The models are designated as follows:



Type 1  
Working width  
up to 66 cm



Type 2  
Working width  
up to 40 cm

## For your safety

### Use the unit correctly

This machine is exclusively intended for use:

- as a tiller for turning over and loosening soil in the garden and allotment,
- in accordance with the specifications and safety notes provided in these operating instructions.

Any other use is not as intended. Improper use is not covered by the warranty and the manufacturer will reject any liability. The user is liable for any injuries to third parties and/or damage to their property.

Unauthorised changes to the unit exclude liability of the manufacturer for any resulting damage and/or injury.

### General safety notes

As the user of the machine, please read these operating instructions carefully before using the machine for the first time.

Handle it in accordance with the instructions and retain the instructions for later use or for a subsequent owner.

Never allow children or other people who do not know this operating manual to use the unit.

If the unit changes ownership, hand over the operating manual with the unit.

Persons using the appliance must not be under the influence of intoxicants, e.g. alcohol, narcotics, medication, etc.

Persons younger than 16 years of age must not use the unit or perform other work on the unit, such as maintenance, cleaning, adjusting, – local regulations can determine the minimum age of the users.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

Before starting work, familiarise yourself with all the equipment and controls as well as their functions.

Keep persons, especially children, and domestic animals well away from the danger area.

When working, wear gloves, goggles, hearing protection, solid footwear and tight-fitting clothing.

Never refuel the machine in closed rooms, or when the engine is running or is hot.

Never run the engine in closed rooms. Do not let any parts of the body or clothing come into the vicinity of rotating or hot parts of the machine.

Replace damaged exhausts, fuel tanks, or filler caps.

Do not operate the unit unless it is in perfect and safe working order. Operate the unit only in the technical condition stipulated and delivered by the manufacturer.

Never change the engine settings preset at the factory.

Before using the unit, always check whether the tiller blades, fastening bolts and safety equipment are worn or damaged.

Have a specialist company replace worn or damaged parts.

Spare parts and accessories must satisfy the requirements specified by the manufacturer.

Therefore use original spare parts and original accessories only or spare parts and accessories authorised by the manufacturer.

Turn off the engine and remove the spark plug terminal when

- you are not working with the machine or
- you move well away from it.

Store the machine and fuel in a safe location

- away from sources of fire (sparks, flames),
- inaccessible to children.

Allow the engine to cool down before you put the machine into a closed room.

Only have the machine repaired by a specialist workshop.

## Before all work on this machine

To avoid injury before doing any working on the machine (e.g. repair work and adjustments) and before transporting it (e.g. lifting or carrying):

- switch OFF the engine,
- wait until all moving parts have come to a complete stop and the engine has cooled down,
- remove the spark plug connector on the engine to prevent the engine from being accidentally started,
- follow the additional safety information in the engine manual.

## Safety devices

### **Danger**

Safety devices serve for your protection and must always operate efficiently. They may not be removed, changed or by-passed.

Fig. 1

### Clutch lever (2)

The machine and the hoeing assembly immediately come to a halt if the operator releases this bow or lever (intentionally or not).

### Deflector (5)

Prevents the throwing out of objects such as stones or clods of earth.

## Symbols on the machine

At various places on the machine you will find safety and warning indications, represented by symbols or pictograms. The symbols have the following meanings:



Attention!  
Please read the operating instructions before putting appliance into operation!



Danger of injury from rotating parts.  
Keep hands and feet well away from rotating parts.

Always keep these symbols on the appliance in a legible state.

## Symbols in the user's guide

Symbols are employed in the user's guide to indicate hazards or draw attention to important information. They have the following specific meanings:

### **Danger**

*Draws your attention to sources of potential danger associated with the task you are undertaking at the time which constitute a danger to persons.*

### **Caution**

*Used to highlight hazards which are associated with the activity that is being described, whereby damage could occur to the appliance.*

### **Note**

This indicates important information and application tips.

## Specified positions

Specified positions on the unit (e.g. on the left, on the right) are always seen from the working direction of the unit (forwards).

## Disposal instructions

Dispose of packaging remnants, old units, etc., in accordance with local regulations.

## Unpacking/Assembly

### **Caution**

- Damaged cable sets can lead to faulty operation of the machine. When unpacking the machine be careful that these parts do not get buckled or squashed.
- Do not tilt the unit by more than 45°. Oil may run out of the unit.

When unpacking, check the supplied contents. At the end of the operating instructions or as a supplement the assembly of the appliance is presented in pictures.

## Before first use

### **Caution**

*For the purpose of transportation, the machine is supplied without engine oil. Before using the machine for the first time, fill up with engine oil (see separate engine instructions).*

## Operating

**Also follow the instructions in the engine manual.**

### Set the hoeing depth

Figure 4

The tilling depth can be set by adjusting the depth gauge. When you have reached the place of work, move the wheels from the transport position to the work position (wheels upwards).

### Set depth-controlling bar:

Figure 5

- Loosen spring connectors and pins.
- Set depth-controlling bar. The lower the bar, the deeper and slower the machine hoes.
- Secure depth-controlling bar with bolt and spring connector.

### Set guiding bar

#### Set the height (depending on the model)

Fig. 1

- Remove the nuts/bolts (3).
- Set guiding bar at required height.
- Re-install and tighten the bolts/nuts (3).

### Set hoeing width (Type 1 only)

Fig. 2

### **Danger of injury**

*Before making settings on the hoeing blades*

- switch OFF the engine,
  - wait until all moving parts have come to a complete stop and the engine has cooled down,
  - remove the spark plug connector on the engine in order to prevent the engine from accidentally being started.
- Work very carefully.*

By adjusting or dismounting the hoeing blades, three different hoeing widths can be set.

Hoeing width in cm	Purpose
61 (A)	Hoeing
66 (B)	
33 (C)	Cultivation

- Width 66 cm (B): undo spring connector (2) and bolt (3), pull out both outer blade pairs to the outer holes and secure with bolts and spring connectors.
- Width 33 cm (C): undo spring connector (2) and bolt (3), remove both outer blade pairs.

### **i** Note

On Type 2 the tilling width cannot be adjusted.

## Fill up with petrol and check oil level

**⚠ Danger of explosion and fire**  
Always fill up in the open air and with a switched-off and cold engine.

Never smoke when filling up.

Never fill up completely.

If fuel overflows, allow the overflow to evaporate before starting.

Always keep the fuel in suitable containers provided exclusively for fuel.

- Fill up with lead-free petrol (see engine manual).
- Fill fuel tank up to max. 2 cm below the lower edge of the inlet nozzle.
- Close fuel tank tightly.
- Check the oil level (see engine instructions).

## Starting the engine

Fig. 1

**Also follow the instructions in the engine manual.**

### **⚠ Danger**

Ensure that there is no one near the machine.


When starting the machine, ensure that you have a firm footing.




Start the engine outdoors only.

## Settings before starting the engine


- Check fuel and oil levels, if necessary fill up with oil and fuel (see engine instructions).
- Open the fuel tap (depending on model).
- Connect spark plug terminal (6) to spark plug.

## Before starting a cold engine

Units with choke :

- Set throttle (1) to **START**/ or
- set choke lever on the engine (depending on the engine type – see engine manual) to the **CHOKE**/ position and set throttle to /max.



Units without a choke (depending on engine type):

- Forcefully press primer (see engine manual) 3–5 times and set the throttle to /max.

## Before starting a warm engine


- Set throttle to /max.

## Starting the engine

- Support yourself with one hand on the guiding bar and slowly draw on the pull starter (4) until resistance is felt and then quickly and powerfully draw it further. Do not let it rebound, but guide it back slowly.
- When the engine is running
  - reset choke lever (depending on engine type – see engine manual).
  - set throttle (1) to the required speed:
    -  = fast engine speed
    -  = slow engine speed

## Stopping the engine

Fig. 1

- Set the throttle lever to /STOP.
- Turn off the petrol tap (depending on model).

## Working with the machine

### **⚠ Danger of injury**

Keep persons, especially children, well clear of the danger zone.

Only operate the machine if it is in a faultless state.

Avoid open fire, formation of sparks, and do not smoke whilst working with the machine.

Check the terrain on which the machine is to be used and remove all objects which could be thrown out by the machine.

Only work when there is sufficient light, and work slowly and carefully. Do not hoe in the vicinity of ditches and banks.

The working area of the operator is behind the steering handle during operation.

Always maintain a safe distance from the rotating tool by means of the guiding bar.

Never place your hands, feet, or other parts of the body near rotating parts.

Never lift or carry the appliance when the engine is running.

Switch off the engine and pull out the spark plug before checking, setting, cleaning or working on the unit.

Do not use the unit in adverse weather conditions, e.g. if there is a risk of rain or a storm.

### **⚠ Danger of injury from tipping over**

Always work slowly and carefully, particularly when you change the direction of movement.

Only guide the machine diagonally across the slope, never upwards or downwards.

Watch out for obstacles, do not hoe in the vicinity of rocks.

Do not use the machine on slopes with a gradient greater than 20%.

### **Danger of carbon monoxide asphyxiation.**

Leave the combustion engine running outdoors only.

### **Danger of explosion and fire**

Petrol vapours are explosive and petrol is highly flammable.

Fill with fuel before starting the engine. Keep the tank closed while the engine is running or still hot.

Before refuelling, switch off the engine and wait until it has cooled down. Avoid open fire, formation of sparks, and do not smoke.

Refuel the unit outdoors only.

If fuel has overflowed, do not start the engine. Remove unit from the fuel-contaminated area and wait until the fuel vapours have evaporated.

Keep the engine and exhaust free from plant debris and escaping oil.



## Operating times

Comply with the national/municipal regulations concerning the times when the mower may be used (if required, contact your local authority).

## Hoeing

### Caution

**Possible damage to the machine or in the area of use.**

*Do not work on any surfaces below which gas or power lines, or similar, are located.*

*Do not work close to trees otherwise the machine may cut through the roots.*

*Do not work on soggy ground; lumps of earth can be caught by the hoeing assembly and thrown out.*

*If foreign bodies, e.g. stones, are encountered by the hoeing device, stop the machine, switch it off and check it for damage.*

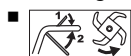
Repeated and progressive depth-hoeing gives the best results.

This allows previously-deposited compost to be absorbed into the soil.

A harvested field is recultivated with the remaining plantremains.

Fig. 1

- Adjust rotovating depth according to the condition of the ground. Hoe hard ground in progressive stages.
- Move the transportation wheel (7) into the tilling position (see "Set the hoeing depth").
- Start the engine (see "Starting the engine").



- Press and hold locking lever (8).
- Pull or press clutch lever (2) against the bar handle and grip it.
- Release locking lever (8).
- The hoeing depth and speed are influenced by lowering or raising the guiding bar or handle: lowered, to hoe deeper and more slowly, or raised for the opposite.
- Work the surface in a criss-cross pattern (see Fig. 3).


## Cultivation

- Set a shallow hoeing depth in order to protect the root system of cultivated plants.

## Switching off the unit

Fig. 1



- Release the clutch lever (2).
- Set the throttle lever to /STOP.
- Turn off the petrol tap (depending on model).

## Transportation

### Moving the machine

For manoeuvring or traversing short stretches.

- Move depth gauge/wheels into transport position (Fig. 6).
- Depress steering handle until rotovating tool is free of the ground.
- Move the machine carefully.

### Transportation with a suitable vehicle

#### Danger of injury

*Before transportation*

- switch OFF the engine,
- wait until all moving parts have come to a complete stop and the engine has cooled down,
- Remove the spark plug connector on the engine in order to prevent the engine from accidentally being started.

*Empty the fuel tank before transporting the unit. Filler cap must be closed tightly.*

- Transport the machine in a horizontal position in or on a vehicle.
- Ensure that the machine cannot roll or slip.

## Servicing/cleaning

#### Danger

*To protect against injury before all work on the appliance*

- switch OFF the engine,
- wait until all moving parts have come to a complete stop and the engine has cooled down,

- remove the spark plug connector on the engine in order to prevent the engine from accidentally being started,
- follow the additional safety information in the engine manual.

#### Caution

- Tilt the appliance in such a way that the spark plug is at the top so that the engine is not damaged due to petrol or oil.
- Do not tilt the unit by more than 45°. Oil may run out of the unit.

## Servicing

#### Caution

*Follow the maintenance instructions in the engine manual.*

*At the end of the grass-cutting season, have the appliance checked and serviced in a specialist workshop.*

#### Caution

**Environmental hazard caused by engine oil**

*After changing oil, give the waste oil you have drained to a centre authorised to dispose of waste oil or to another disposal company.*

## Maintenance work

### Before each use:

- Check the oil level, fill up if necessary.
- Check screw connections for firm seating, tighten if necessary.
- Check the safety devices.
- Check rotovating tool for tight fit, wear and damage.

### Lubricating

- Lubricate all moving and rotating parts with a light oil.

### Maintenance work on the engine

- See Engine instructions.

### Once per season:

- Have the machine tested and serviced in a specialist workshop.

#### Note

Other maintenance work according to the following maintenance plan.

Maintenance plan	After use	10 h	25 h	50 h	100 h	Each season	As required
Clean side shields and hoeing assembly	•						
Clean air filter <sup>1)</sup>		•					
Exchange air filter <sup>1)</sup>							•
Change oil <sup>3)</sup>				• <sup>4)</sup>			
Grease moving and rotating parts						•	
Clean spark plugs <sup>1)</sup>			•				
Have the spark plugs changed <sup>2)</sup>						•	
Clean air-cooling system and exhaust <sup>1)</sup>	•						•
Check clutch setting, if required have it re-adjusted <sup>2)</sup>							•
Have the carburettor setting checked <sup>2)</sup>							•
Sharpen the hoeing assembly or exchange it <sup>2)</sup>							•
Replace the petrol cap							•
Have the exhaust silencer replaced <sup>2)</sup>							•

<sup>1)</sup> See Engine instructions.

<sup>2)</sup> This work can only be executed by a specialist workshop.

<sup>3)</sup> First oil change after 5 hours of operation (h).

<sup>4)</sup> Oil change every 25 operating hours (h) when used under heavy load or in circumstances of high ambient temperature.

## Cleaning

### **Danger of injury from the hoeing assembly**

*Wear work gloves when cleaning.*

### **Caution**

*Clean the appliance after every use. Failure to clean the appliance can damage the materials and cause malfunctions.*

### **Caution**

*Do not use high-pressure media for cleaning.*

- Park the machine on a firm, even and horizontal base.
- After each use, clean shields and hoeing assembly with water and then dry them.
- Clean the engine with rags and a brush.

## Immobilizing

### **Danger of explosion owing to ignition of fuel fumes**

*Before you immobilize the machine, empty the fuel tank into a suitable vessel in the open air (see "Engine instructions").*

If the machine will not be used for more than a month, e.g. when the season is over:

- Prepare the engine (see engine instructions).
- Clean machine.
- To protect against rust, wipe all metal parts with an oily rag or spray with oil.
- Store the machine in a clean and dry room.

## Guarantee

In each country, the guarantee conditions of our company or of the importer are applicable. Malfunctions in our machines are repaired free of charge, providing the cause is a material or manufacturing fault. If you wish to claim under the guarantee, please contact the vendor or the nearest of our branches.

## Engine

The manufacturer of the engine is liable for all engine-related problems with respect to output power, power measurement, specifications, warranties, and service. More detailed information can be found in the owner/operator handbook provided separately by the engine manufacturer.

## Troubleshooting aid

### **Danger of injury from inadvertent starting**

Before all work on this machine

- switch OFF the engine,
- wait until all moving parts have come to a complete stop and the engine has cooled down,
- remove the spark plug connector on the engine in order to prevent the engine from accidentally being started.

### **Caution**

Often, malfunctions in the operation of the machine have simple causes which you can remedy yourself.

If in any doubt, or if expressly instructed to do so, seek advice from a specialist workshop.

Only permit repairs to be made by a specialist workshop and using original spare parts.

Fault	Possible cause	Remedy
Engine does not start.	Fuel tank empty.	Fill up fuel tank.
	Stale fuel.	Drain off stale fuel into a suitable vessel in the open air <sup>1)</sup> . Fill tank with clean, fresh and lead-free fuel.
	Engine in cold state, choke not actuated.	Actuate choke.
	Throttle not at "START" or set to maximum speed.	Set throttle at "START" – maximum speed.
	Spark plug terminal not attached.	Attach spark plug terminal to spark plug.
	Spark plug contaminated or defective.	Clean spark plug <sup>1)</sup> . Have defective spark plug replaced <sup>2)</sup> .
	Primer not actuated for cold start.	Press primer.
Engine runs irregularly (stutters).	Choke lever still actuated.	Reset choke.
	Spark plug terminal loosely attached.	Firmly attach spark plug terminal.
	Stale fuel. Water or dirt in the fuel system.	Drain off stale fuel into a suitable vessel in the open air <sup>1)</sup> . Fill tank with clean, fresh and lead-free fuel.
	Fuel tank cap vent blocked.	Clean venting cap.
	Air filter contaminated.	Clean air filter <sup>1)</sup> .
Machine does not hoe.	Earth clods prevent rotation of the hoeing assembly.	Stop engine and remove spark plug terminal. Clean hoeing assembly.
	Bolts or screws have become loose.	Replace bolt or screw. Secure bolt with spring connector.
	Clutch cable badly adjusted.	Have the clutch cable adjusted <sup>2)</sup> .
	V-belt loose or torn.	Have the V-belt replaced <sup>2)</sup> .
Excessive vibration.	Hoeing assembly loose or bent.	Stop engine immediately and remove spark plug terminal. Replace damaged parts.
	Bolts or screws have become loose.	Stop engine immediately and remove spark plug terminal. Tighten screws or replace bolts.

<sup>1)</sup> See Engine instructions.

<sup>2)</sup> This work can only be executed by a specialist workshop.