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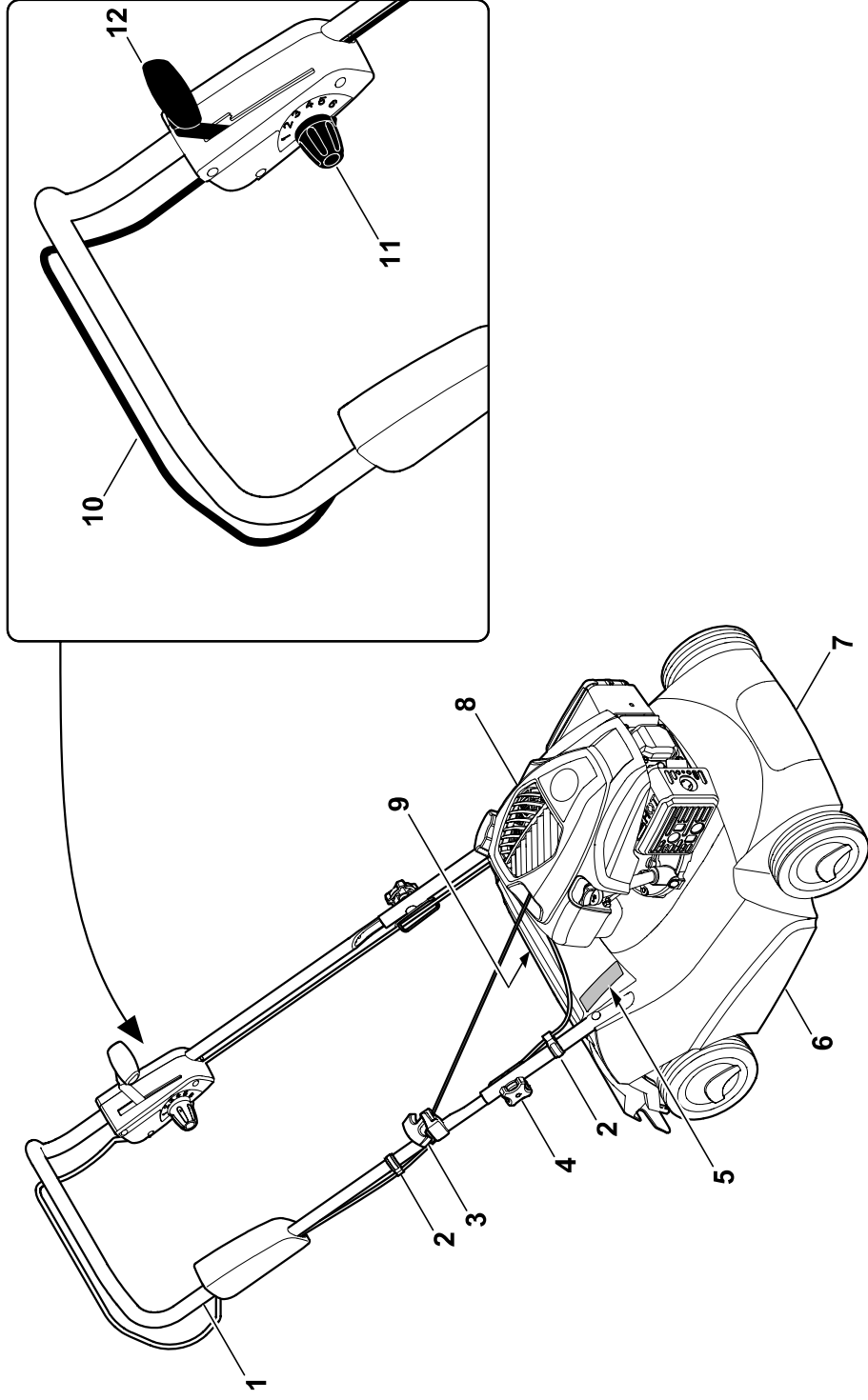
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DE	Gebrauchsanleitung
EN	Instruction manual
FR	Manuel d'utilisation
NL	Gebruiksaanwijzing
IT	Istruzioni per l'uso
ES	Manual de instrucciones
PT	Manual de utilização
NO	Bruksanvisning
SV	Bruksanvisning
FI	Käyttöopas
DA	Betjeningsvejledning
PL	Instrukcja obsługi
SL	Navodila za uporabo
SK	Návod na obsluhu
HU	Használati útmutató
SR	Uputstvo za upotrebu
HR	Upute za uporabu
CS	Návod k použití
LV	Lietošanas pamācība

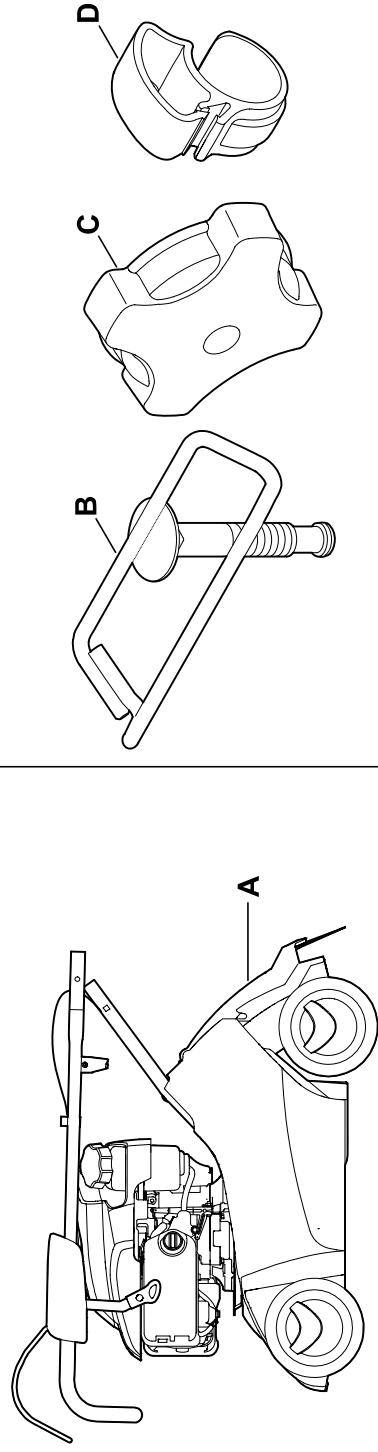
LT	Naudojimo instrukcija
RO	Instrucțiuni de utilizare
EL	Οδηγίες χρήσης
RU	Инструкция по эксплуатации
BG	Инструкция за експлоатация
UK	Посібник з експлуатації
ET	Kasutusjuhend
KK	Пайдаланушының нұсқаулығы



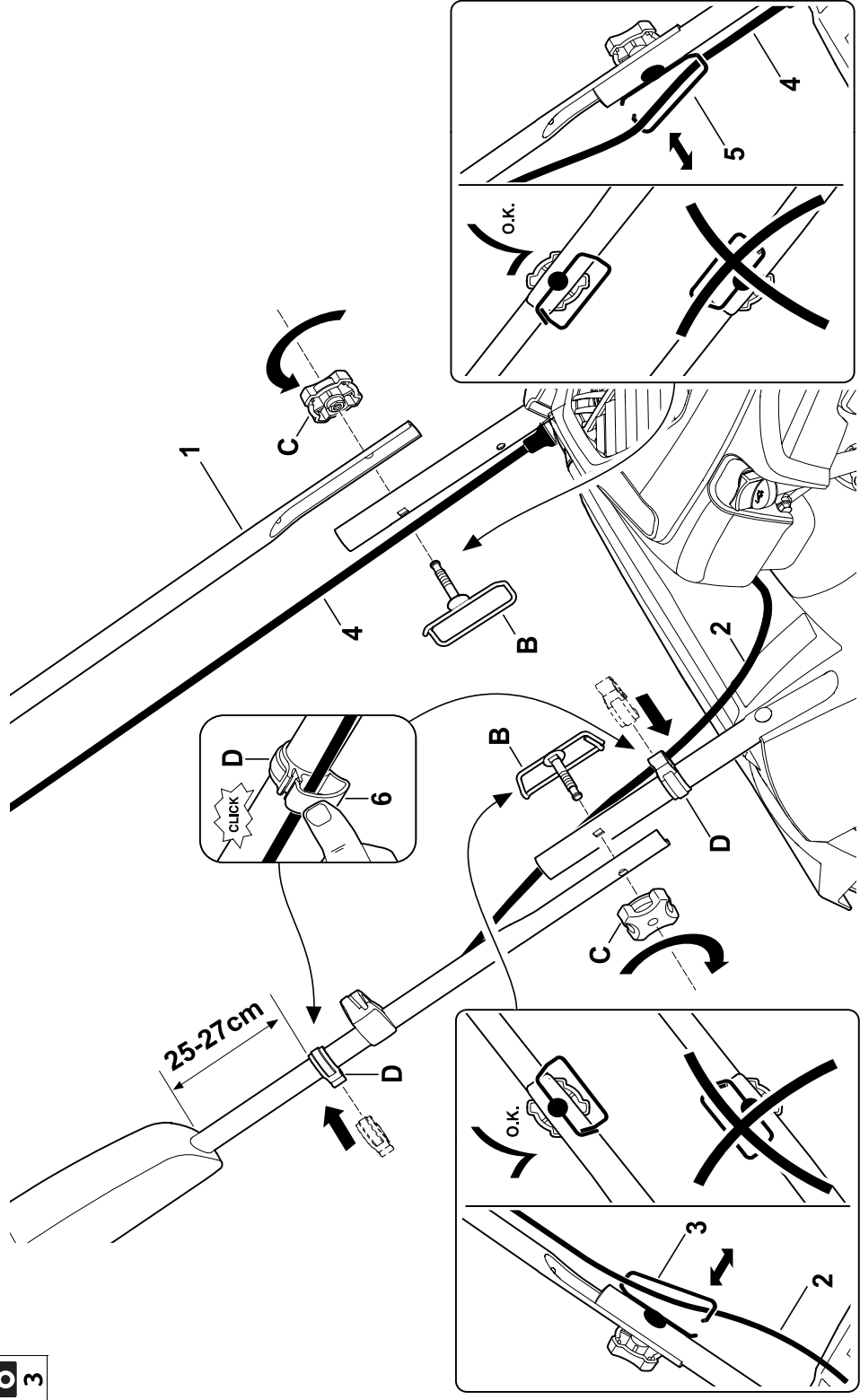
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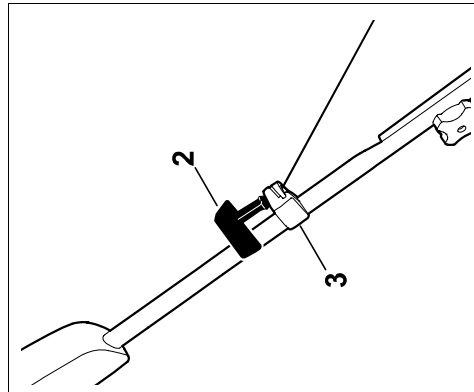
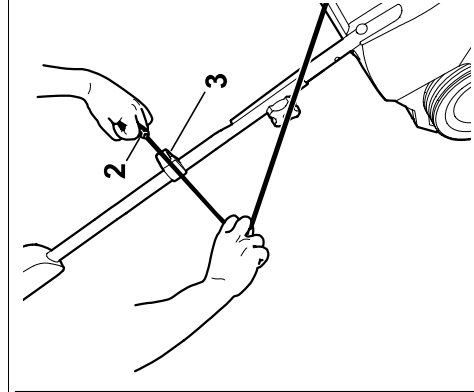
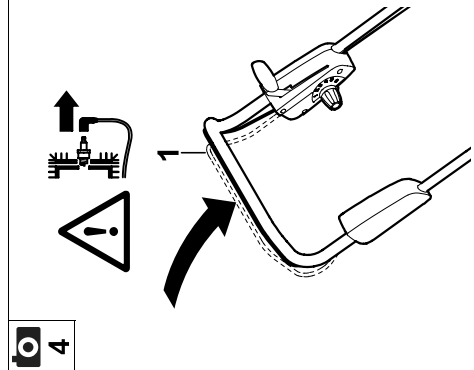
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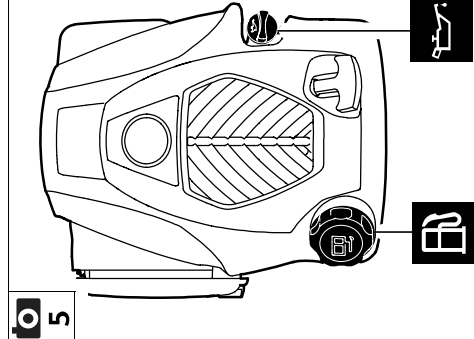
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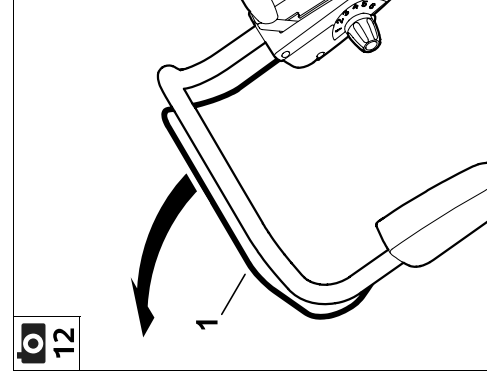
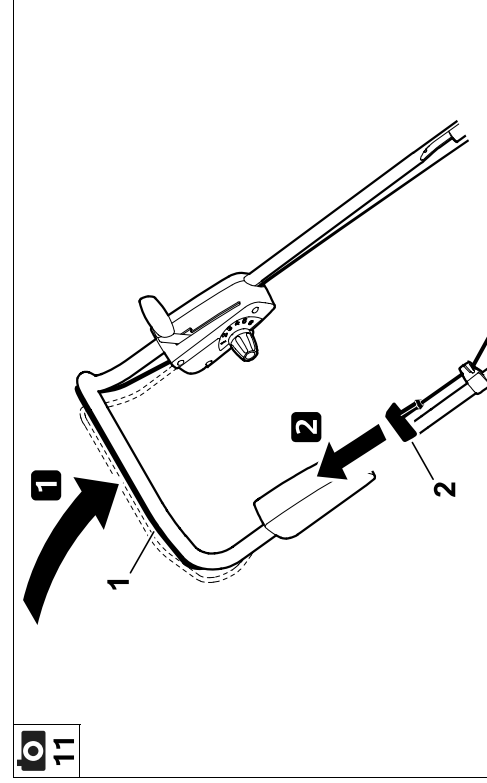
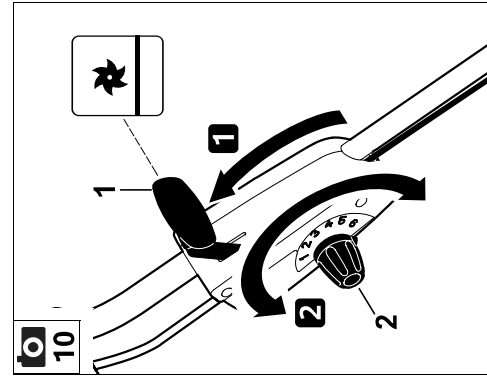
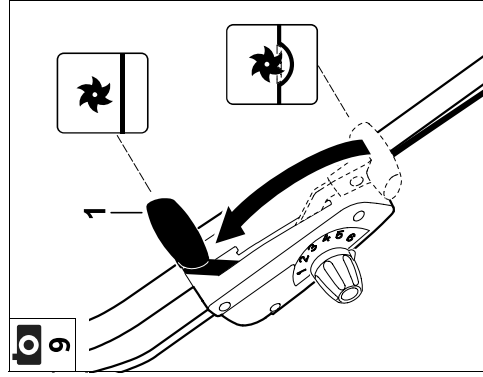
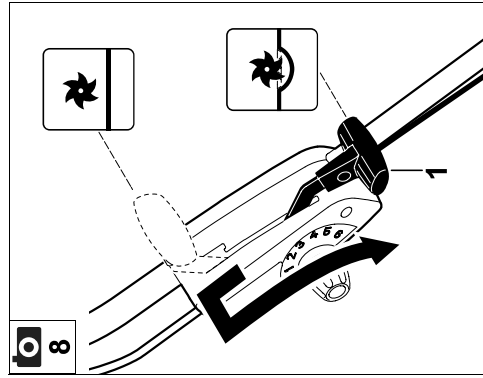
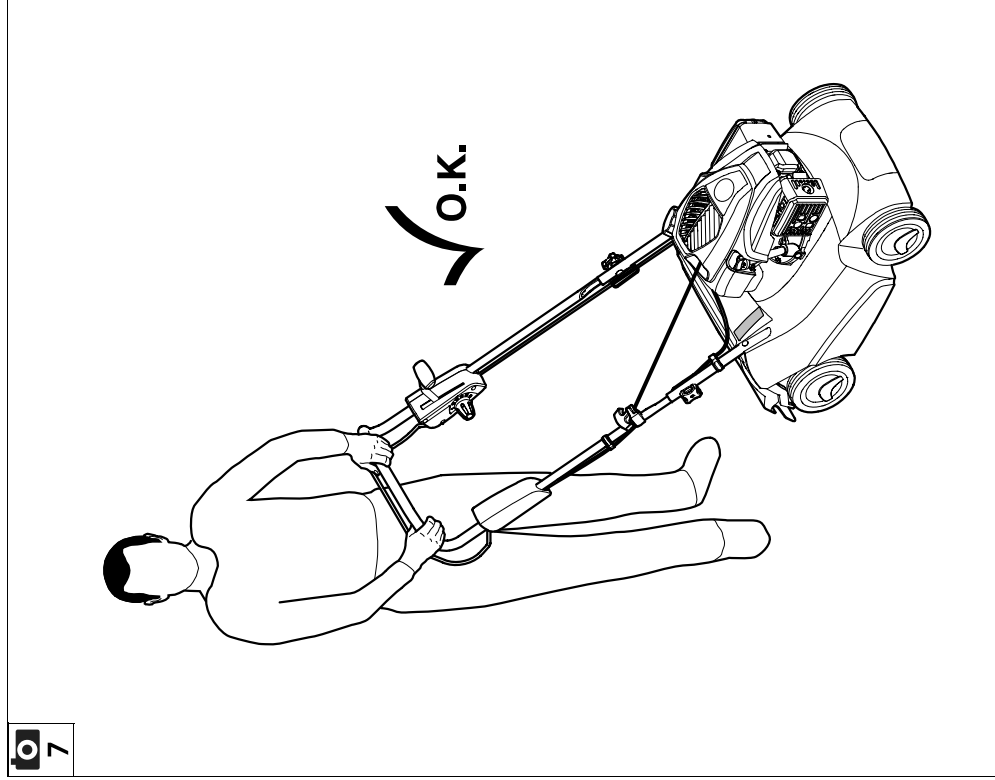
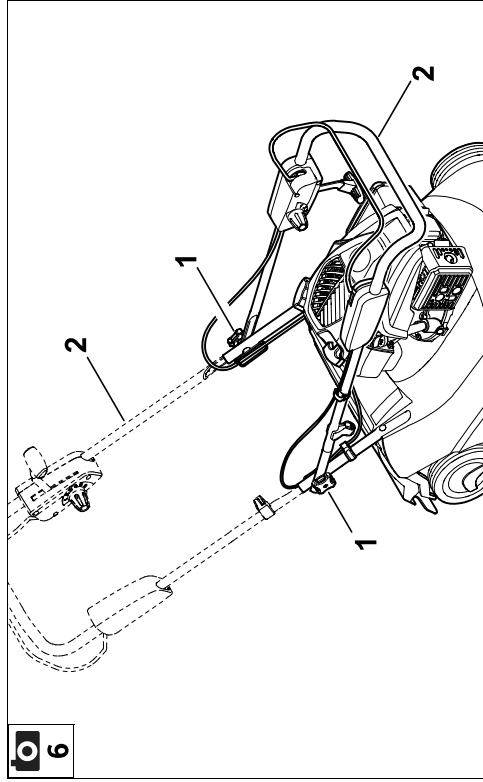


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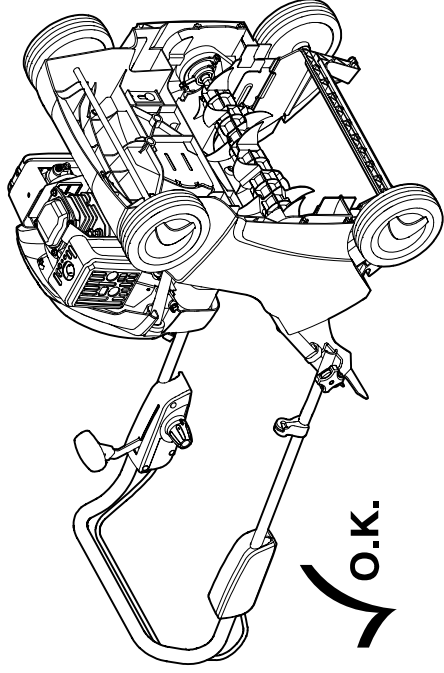
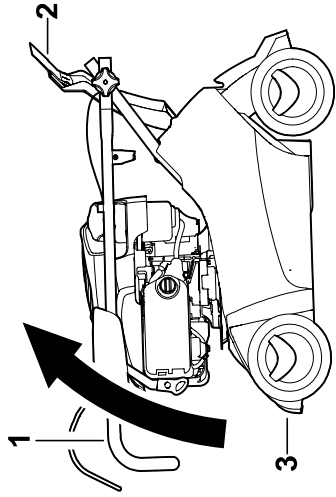
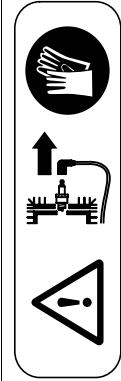


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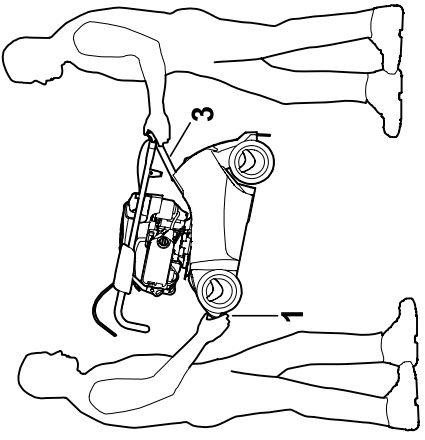
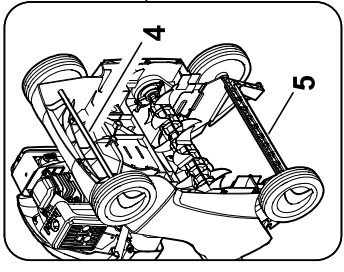
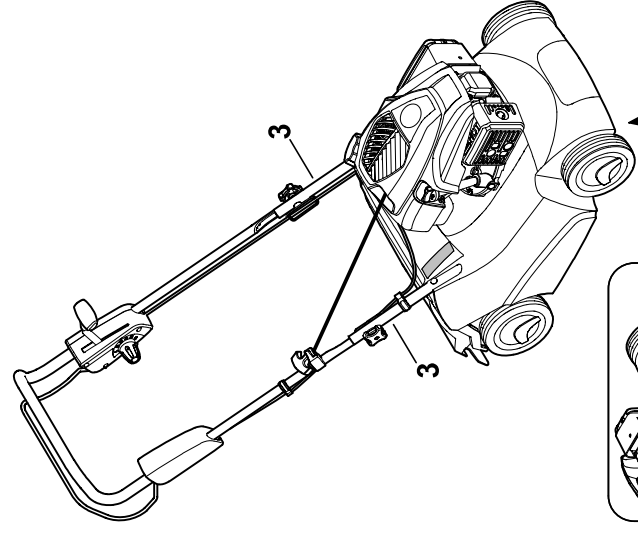
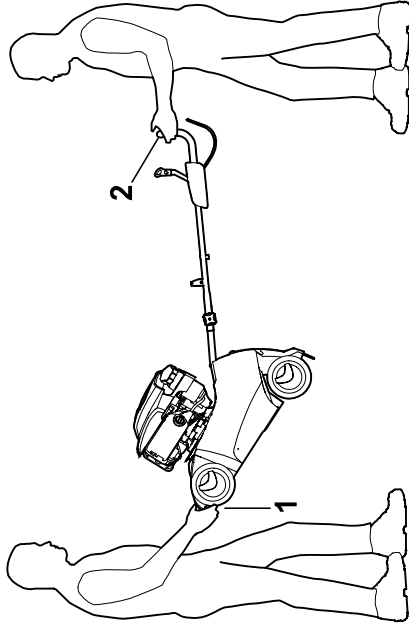




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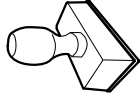


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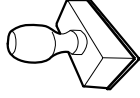
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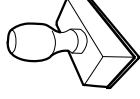
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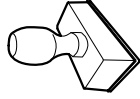
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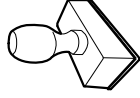
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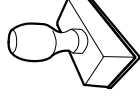
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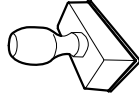
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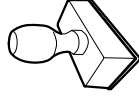
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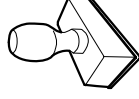
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Thank you for choosing STIHL. We develop and manufacture our quality products to meet our customers' requirements. The products are designed for reliability even under extreme conditions.

We thank you for your confidence in us and hope you will enjoy working with your STIHL product.

Dr. Nikolaus Stihl

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2. Notes on the instruction manual

2.1 General

This instruction manual is a **translation of the original manufacturer's instructions** in the sense of EC Directive 2006/42/EC.

STIHL is continually striving to further develop its range of products; we therefore reserve the right to make alterations to the form, technical specifications and equipment level of our standard equipment.

For this reason, the information and illustrations in this manual are subject to alterations.

This instruction manual may describe models that are not available in all countries.

This instruction manual is protected by copyright. All rights reserved, especially the right of reproduction, translation and processing using electronic systems.

2.2 Instructions for reading the instruction manual

Illustrations and texts describe specific operating steps.

All symbols which are affixed to the machine are explained in this instruction manual.

Viewing direction:

Viewing direction when "**left**" and "**right**" are used in the instruction manual: the user is standing behind the machine and is looking forwards in the direction of travel.

Section reference:

References to relevant sections and subsections for further descriptions are made using arrows. The following example shows a reference to a section: (⇒ 4.)

Designation of text passages:

The instructions described can be identified as in the following examples. Operating steps which require intervention on the part of the user:

- Release bolt (1) using a screwdriver, operate lever (2)...

General lists:

- Use of the product for sporting or competitive events

Texts with added significance:

Text passages with added significance are identified using the symbols described below in order to especially emphasise them in the instruction manual:



Danger

Risk of accident and severe injury to persons. A certain type of behaviour is necessary or must be avoided.



Warning

Risk of injury to persons. A certain type of behaviour prevents possible or probable injuries.



Caution

Minor injuries or material damage can be prevented by a certain type of behaviour.



Note

Information for better use of the machine and in order to avoid possible operating errors.

Texts relating to illustrations:

Illustrations relating to use of the machine can be found in the front of this instruction manual.



The camera symbol serves to link the figures on the illustration pages with the corresponding text passages in the instruction manual.

3. Machine overview



- 1 Upper handlebar with controls
- 2 Cable clip
- 3 Recoil starter rope
- 4 Rotary handle
- 5 Rating plate with machine number
- 6 Housing
- 7 Carrying handle
- 8 Combustion engine
- 9 Discharge flap
- 10 Motorstop lever
- 11 Working depth rotary handle
- 12 Scarifying unit lever

4. For your safety

4.1 General

These safety regulations must be observed when working with the machine.



Read the entire instruction manual before using the machine for the first time. Keep the instruction manual in a safe place for future reference.



Observe the operating and maintenance instructions contained in the separate engine instruction manual.

These safety precautions are essential for your safety, however the list is not exhaustive. Always use the machine in a reasonable and responsible manner and be aware that the user is responsible for accidents involving third parties or their property.

Make sure that you are familiar with the controls and use of the machine.

The machine must only be used by persons who have read the instruction manual and are familiar with operation of the machine. The user should seek expert and practical instruction prior to initial operation. The user must receive instruction on safe use of the machine from the vendor or another expert.

During this instruction, the user should be made aware that the utmost care and concentration are required for working with the machine.

Residual risks persist even if you operate this machine according to the instructions.

Risk of death from suffocation!

Packaging material is not a toy - danger of suffocation! Keep packaging material away from children.

Only give or lend the machine, including any accessories, to persons who are familiar with this model and how to operate it. The instruction manual forms part of the machine and must always be provided to persons borrowing it.

The machine must only be operated by persons who are well rested and in good physical and mental condition. If your health is impaired, you should consult your doctor to determine whether working with the machine is possible. The machine should not be operated after the consumption of alcohol, drugs or medications which impair reactions.

Make sure that the user is physically, sensorily and mentally capable of operating the machine and working with it. If the user is physically, sensorily or mentally impaired, the machine must only be used under supervision or following instruction by a responsible person.

Make sure that the user is of legal age or being trained under supervision in a profession in accordance with national regulations.

Intended use:

The machine is only intended for scarifying lawns. Its use for other purposes is not permitted and may be dangerous or result in damage to the machine.

The machine is intended for private use.

Caution – risk of accident!

Due to the physical danger to the user, the machine must not be used for the following applications (incomplete list):

- Trimming bushes, hedges and shrubs
- Cutting creepers
- Caring for lawn roofs and balcony boxes
- Shredding or chopping tree or hedge cuttings
- Clearing paths (vacuuming, blowing)
- Levelling earth mounds, e.g. mole hills
- Transporting scarified material, except in the grass catcher box (accessory – not included in standard equipment) intended for this purpose.

For safety reasons, any modification to the machine, except the proper installation of accessories approved by STIHL, is forbidden and results in voiding of the warranty cover. Information regarding approved accessories can be obtained from your STIHL specialist dealer.

In particular, any tampering with the machine which increases the power output or speed of the engine or motor is forbidden.

It is not permitted to transport objects, animals or persons, particularly children, on the machine.

Particular care is required during use in public green spaces, parks, sports fields, along roads and in agricultural and forestry businesses.



Caution! Danger to health due to vibrations. Excessive exposure to vibrations can result in damage to the

cardiovascular or nervous system, particularly in persons with cardiovascular problems. Please consult a physician if you experience symptoms that may have been caused by vibrational loads.

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Symptoms of this kind principally affect the fingers, hands or wrists and include (incomplete list):

- numbness,
- pain,
- muscular weakness,
- skin discolouration,
- unpleasant tingling sensation.

Hold the handlebar tightly, but not tensed, with both hands in the designated locations during operation.

Plan your working times so that more severe physical strains over a longer period are avoided.

Only release the machine if it is on a level surface and cannot roll away by itself.

4.2 Refilling the tank – handling petrol



Danger to life!

Petrol is poisonous and extremely inflammable.

Petrol must only be stored in appropriate, tested containers (canisters). Always screw on the fuel tank and canister caps properly and tightly. Defective caps must be replaced for safety reasons.

Never use beverage bottles or similar for disposal or storage of fuels and lubricants. Persons, particularly children, could be tempted to drink out of them.



Keep petrol away from sparks, naked flames, pilot lights, heat sources, and other ignition sources. Do not smoke!

Refill the tank out-of-doors and do not smoke during refilling.

Before refilling the tank, stop the engine and allow it to cool.

Refilling with petrol must be performed before the engine is started. When the engine is running or is hot, the tank cap must not be removed and the tank must not be refilled with petrol.

Do not overfill the fuel tank!

To give the fuel room to expand, never fill the fuel tank past the lower edge of the filler neck.

Observe the additional instructions in the engine instruction manual.

If petrol is spilled, the engine must only be started after the petrol-contaminated area has been cleaned. All attempts at starting must be avoided until the petrol fumes have dispersed (wipe dry).

Any spilt fuel must be wiped up immediately.

Clothing must be changed if it comes into contact with petrol.

Never store the machine with petrol in the tank inside a building. The resulting petrol fumes could come into contact with naked flames or sparks and could be ignited.

If it is necessary to drain the tank, this must be done out of doors.

4.3 Clothing and equipment



Always wear sturdy footwear with high-grip soles when working. Never work barefoot or, for example, in sandals.



Always wear hearing protection and safety glasses when working. Wear them at all times.



Also always wear sturdy gloves and tie up and secure long hair (headscarf, cap, etc.) when performing maintenance and cleaning work or when transporting the machine.



Always wear long trousers and tight-fitting clothing when operating the machine.

Never wear loose clothes which may become caught on moving parts (control levers) – do not wear jewellery, ties or scarves.

4.4 Transporting the machine

Always wear protective gloves (⇒ 4.3) in order to prevent injuries due to sharp-edged and hot components.

Do not transport the machine with the engine running.

Before transporting the machine

- stop the engine,
 - place the scarifying unit in the transport position,
 - allow the blades to come to a standstill and
 - detach the spark plug socket.
- Only transport the machine once the engine has cooled down and with an empty fuel tank.

Take the weight of the machine into account and use suitable loading aids (loading ramps, lifters) if necessary.

Secure the machine and any machine components being transported (e.g. the grass catcher box available as an accessory) on the load floor using adequately dimensioned fastening material (belts, ropes, etc.).

Avoid contact with the blades when lifting and carrying the machine.

Observe the information in the section "Transport". It describes how to lift and lash the machine. (⇒ 12.1)

When transporting the machine, always observe regional legislation, especially regarding load security and the transport of objects on load floors.

4.5 Before operation

Make sure that only persons who are familiar with the instruction manual are permitted to use the machine.

Remove the packaging material and transport locks before using the machine for the first time.

Check the fuel system (particularly visible parts such as e.g. tank, tank cap, hose connections) before operating the machine. In the event of any leaks or damage, do not start the engine – **fire hazard!**

Have the machine repaired by a specialist dealer prior to operation.

Observe the local regulations regarding permitted operating times for gardening power tools with combustion engines.

The machine must not be used on paved or gravelled surfaces where ejected material can cause injuries.

Carefully inspect the complete area on which the machine is to be used and remove any stones, sticks, wires, bones and other foreign objects which could be thrown up by the machine. Obstacles (e.g. tree stumps, roots) can be easily overlooked in long grass.

For this reason, mark all foreign objects (obstacles) which are hidden in the lawn and cannot be removed before commencing work with the machine.

All faulty, worn or damaged parts must be replaced before using the machine.

Replace any illegible or damaged danger signs and warnings on the machine. Your STIHL specialist has a supply of replacement stickers and all the other spare parts.



Risk of injury!

Worn or damaged parts (e.g. blunt blades) can affect the safety of the machine and result in injury to the user.

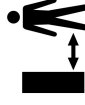
The machine must only be used in **good operating condition**. Therefore, before each use check whether

- The machine is properly assembled.
- The scarifying unit (blade shaft, blades, spacer bushings and fastening) are in perfect condition – in particular check for secure fastening, damage (notches or cracks) and wear.
- The safety devices (e.g. discharge flap with rubber sheet, housing, handlebar, motorstop lever) are in perfect condition and working properly.

- The grass catcher box (accessory – not included in standard equipment) is undamaged and correctly installed – a damaged grass catcher box must not be used.

Carry out any necessary work or consult a specialist dealer. STIHL recommends STIHL specialist dealers.

4.6 During operation



Keep other people out of the danger area. Never work when animals or people, particularly children, are in the danger area.

The switch and safety devices installed in the machine must not be removed or bypassed. In particular, never secure the motorstop lever to the handlebar (e.g. by tying it).

The handlebar must always be installed correctly and must not be modified. Never operate the machine with the handlebar folded down.

Never attach any objects to the handlebar (e.g. work clothing).

Do not operate the machine in the rain or during thunder storms, particularly when there is a risk of lightning strike.

Only work during the day or with good artificial light.

The risk of accidents is higher if the ground is damp due to increased danger of slipping.

Particular caution should be exercised during working in order to prevent slipping. If possible, avoid using the machine when the ground is damp.

Do not leave the machine in the rain.

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Exhaust gases:



Danger to life through poisoning!

In the case of nausea, headache, impaired vision (e.g. decreasing field of view) hearing disorder, dizziness, decreasing power of concentration, stop working immediately. These symptoms may be caused by excessively high exhaust gas concentrations.



The machine generates poisonous exhaust gases when the engine is running. The gases contain poisonous carbon monoxide, a colourless and odourless gas, as well as other pollutants. The engine must never be operated in closed or poorly ventilated spaces.

Starting:

Exercise care when starting the machine and observe the instructions contained in the section entitled "Operating the machine" (⇒ 10.1). Starting the machine in accordance with these instructions reduces the risk of injury.

Risk of injury!

If the starter rope recoils at speed, the hand and arm will be pulled towards the engine faster than the starter rope can be released. This kickback can result in broken bones, crush injuries and sprains. Keep your feet a safe distance from the blades when starting the machine.

The machine must not be tilted during start-up.

Do not start the engine if the discharge chute is not covered by the discharge flap or the grass catcher box (accessory – not included in standard equipment).

Working on slopes:

Always work across and back on slopes, never up and down.

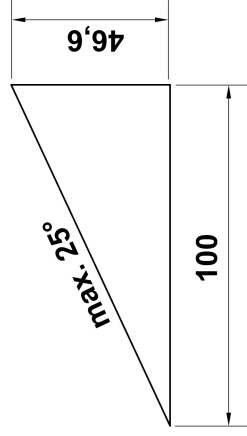
If the user loses control when working up and down, there is a risk of being run over by the machine.

Be particularly careful when changing direction on a slope.

Always ensure good stability on slopes and avoid mowing on excessively steep slopes.

For safety reasons, the machine must not be used on slopes with an inclination of more than 25° (46.6%). **Risk of injury!**

A slope inclination of 25° corresponds to a vertical height increase of 46.6 cm for a 100 cm horizontal distance.



In order to ensure an adequate oil supply for the engine, the information in the accompanying engine instruction manual must be additionally observed when using the machine on slopes.

Working:



Caution – risk of injury!

Never put hands or feet on or underneath rotating parts.

Never touch rotating blades.

Always keep away from the discharge opening. Always observe the safety distance provided by the handlebar.

Do not try to examine the scarifying unit while the machine is operating. Never open the discharge flap and/or remove the grass catcher box (accessory – not included in standard equipment) when the blades are running. Rotating blades can cause injury.

Do not lean on the machine and always maintain your balance and firm footing.

Only operate the machine at walking speed – never run when working with the machine. Working quickly with the machine increases the risk of injury due to stumbling, slipping, etc.

Note that the blades catch on the ground when scarifying in the lowered position or when running over bumps. If the blades are set too low, the scarifier could accelerate unexpectedly, possibly resulting in loss of control of the machine.

Always place the scarifying unit in the transport position before turning it around.

Be particularly careful when turning the machine around or pulling it towards you.

Risk of stumbling!

Objects hidden in the turf (lawn sprinkler systems, posts, water valves, foundations, electrical wires, etc.) must be avoided. Never run over any such foreign objects.

Use the machine with great care when working near slopes, terraces, ditches and embankments. In particular, ensure that you maintain sufficient distance to such danger areas.



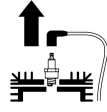
Beware of the blades running on for several seconds before coming to a standstill.

STOP

Stop the engine and place the scarifying unit in the transport

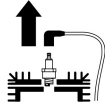
position

- before pushing the scarifier to and from the area to be worked,
- before pushing the scarifier onto an area not covered with grass,
- before the machine has to be tilted for transportation,
- before adjusting the working depth,
- before opening the discharge flap or removing the grass catcher box (special accessory – not included in standard equipment),
- before leaving the scarifier or if the machine is unattended,
- before re-filling the tank. Allow the engine to cool down before re-filling the tank. **Fire hazard!**



Stop the engine, place the scarifying unit in the transport position and detach the spark plug socket

- before folding down the handlebar,
 - before lifting or carrying the machine.
- Stop the engine, detach the spark plug socket and ensure that the blades have come to a complete standstill



- before checking, cleaning or working on the machine,
- before freeing a blocked scarifying unit or unblocking the discharge chute,
- if there has been a collision with an obstacle. Inspect the machine for damage and perform the necessary repairs before re-starting and using the machine,
- if the machine vibrates excessively. In this case the machine must be checked immediately.



Risk of injury through defective parts!

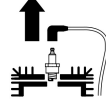
Strong vibration is normally an indication of a fault. In particular, the machine must not be operated with a damaged or bent scarifying unit (blade shaft, blades, spacer bushings and fastening).

In the event of excessive vibration or after a collision with an obstacle, check the machine, in particular the scarifying unit (blade shaft, blades, spacer bushings and fastening), the housing and the discharge flap for damage and loose parts and carry out the necessary repairs before re-starting and working with the machine. If you do not have the appropriate expertise, have the necessary repairs carried out by a specialist dealer (STIHL recommends STIHL specialist dealers).

4.7 Maintenance and repairs

Before beginning cleaning, adjustment, repair and maintenance operations:

- Park the machine on firm and level ground
- Stop the engine and allow it to cool down
- Detach the spark plug socket.



Caution – risk of injury!

Keep the spark plug socket away from the spark plug; an inadvertent ignition spark can result in fires or electric shocks.

Inadvertent contact between the spark plug and the spark plug socket can result in unwanted starting of the engine.



Risk of injury!

Pulling the recoil starter rope starts the blades rotating. Always ensure sufficient distance between the blades and your body, particularly your hands and feet, when you pull the recoil starter rope.

Allow the machine to cool down before working on or around the engine, exhaust manifold or muffler in particular.

Temperatures of 80° C and above can be reached. **Danger of burns!**

Direct contact with engine oil can be dangerous. Engine oil must not be spilled. STIHL recommends leaving the task of topping up engine oil or performing engine oil changes to a STIHL specialist dealer.

Cleaning:

The complete machine must be cleaned thoroughly following use. (⇒ 11.2)

Remove accumulated clipping deposits using a stick. Clean the underside of the machine with water and a brush.

Never use high-pressure cleaners and do not clean the machine under running water (e.g. using a garden hose).

Do not use aggressive cleaning agents. These can damage plastics and metals, impairing the safe operation of your STIHL machine.

In order to prevent fire hazards, keep the area around the air vents, cooling ribs and the area of the exhaust free from e.g. grass, straw, moss, leaves or escaping grease.

Maintenance operations:

Only maintenance operations described in this instruction manual may be carried out. Have all other work performed by a specialist dealer.

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If you do not have the necessary expertise or auxiliary equipment, please **always** contact a specialist dealer.

STIHL recommends that you have maintenance operations and repairs performed exclusively by a STIHL specialist dealer.

STIHL specialist dealers regularly attend training courses and are provided with technical information.

Only use tools, accessories or attachments approved for this machine by STIHL or technically identical parts.

Otherwise, there may be a risk of accidents resulting in personal injury or damage to the machine. If you have any questions, please consult a specialist dealer.

The characteristics of original STIHL tools, accessories and spare parts are optimally adapted to the machine and the user's requirements. Genuine STIHL spare parts can be recognised by the STIHL spare parts number, by the STIHL lettering and, if present, by the STIHL spare parts symbol. On smaller parts, only the symbol may be present.

Always keep warning and information stickers clean and readable. Damaged or missing stickers must be replaced by new, original plates from your STIHL specialist dealer. If a component is replaced with a new component, ensure that the new component is provided with the same stickers.

Wear thick work gloves and exercise extreme care when performing work on the scarifying unit.

For safety reasons, fuel-carrying components (fuel line, fuel cock, fuel tank, tank cap, connections, etc.) must be checked regularly for damage and leaks

and replaced by a technician if necessary (STIHL recommends STIHL specialist dealers).

Ensure that all nuts, pins and screws are securely tightened, so that the machine is in a safe operating condition at all times.

Check the complete machine and the grass catcher box (accessory – not included in standard equipment) for wear or damage on a regular basis, particularly before extended periods when the machine is not in use (e.g. over winter). For safety reasons, worn or damaged parts must be replaced immediately to ensure that the machine is always in a safe operating condition.

Replace damaged mufflers and guard plates. The scarifier must not be used with a defective muffler.

Never alter the basic setting of the engine or run at excessive engine speeds.

Components or guards that are removed for maintenance operations must be properly reinstalled immediately.

Store the machine in good operational condition.

Store the machine on a level surface so that it cannot unintentionally roll away.

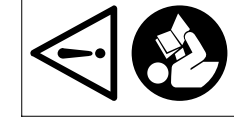
4.9 Disposal

Ensure that old machines and consumables (engine oil and fuel) are properly disposed of. Render the machine unusable prior to disposal. To prevent accidents, render the engine unusable prior to disposal. In particular, remove the ignition lead, empty the fuel tank and drain the engine oil.

Risk of injury caused by the scarifying unit!

Always store an old machine in a safe place prior to scrapping. Make sure that the machine and the blades are kept out of the reach of children.

5. Description of symbols



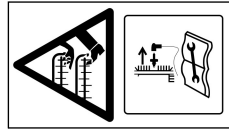
Attention!

Read the instruction manual and follow the safety instructions before initial use.



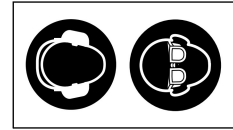
Risk of injury!

Keep other people out of the danger area.



Risk of injury!

Caution: sharp work tools. – Take care not to cut your fingers or toes. – The blades continue to rotate after the engine has been switched off. – Detach the spark plug socket before any maintenance.



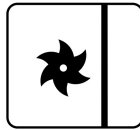
Wear hearing protection.
Wear safety glasses.



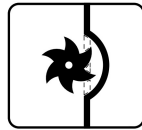
Start the engine.



Stop the engine.



Scarfing unit in transport position



Scarfing unit in operating position

6. Standard equipment



Item	Designation	Qty.
A	Basic unit	1
B	Flat head bolt with cable guide	2
C	Rotary handle	2
D	Cable clip	2
–	Instruction manual	1
–	Engine instruction manual	1

7. Preparing the machine for operation

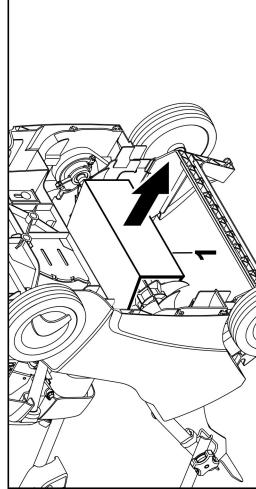


Risk of injury!

Observe the safety instructions in the section "For your safety". (⇒ 4.)

Follow the instructions in the section "Transporting the machine" when lifting the scarifier out of the packaging. In particular, wear gloves and avoid contact with the blades. (⇒ 4.4)

- Place the machine on level and firm ground when performing all the operations described.



- Remove the cardboard insert (1) from the underside of the machine.



7.1 Assembling the handlebar Installing the upper handlebar:

- Fit upper handlebar (1) onto both parts of the lower handlebar.
- Insert flat head bolts with cable guide (B) through the bores from the inside to the outside and tighten with rotary handles (C).
- Attach motorstop cable (2) to right-hand cable guide (3) and scarfing unit cable (4) to left-hand cable guide (5) as shown.

Installing the cable clips:

- Install the first cable clip (D) on the upper handlebar. Distance between the cable clip and switch:
25 - 27 cm
- Install the second cable clip (D) on the lower handlebar.
- Insert motorstop cable (2) into the two cable clips as shown. Close tab (6) and allow it to engage.



7.2 Attaching and detaching the recoil starter rope

- Detach the spark plug socket from the engine before attaching and detaching the recoil starter rope – replace afterwards if necessary.

Attaching:

- Press motorstop lever (1) to the handlebar and hold.
- Slowly pull out recoil starter rope (2) and hold. Release the motorstop lever.
- Attach recoil starter rope (2) in rope guide (3).

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Detaching:

- Detach recoil starter rope (2) from rope guide (3) and slowly return.

7.3 Fuel and engine oil



Avoid damage to the machine!

Top up engine oil before starting for the first time. Use a suitable filling aid when topping up the engine oil and when refuelling (e.g. funnel).

Engine oil:

Please consult the engine instruction manual for the type of engine oil to be used and the oil capacity. Check the oil filling level at regular intervals (see engine instruction manual). Avoid exceeding or falling below the correct oil level.

Screw on the oil tank cap properly prior to operating the engine.

Fuel:

Recommendation:
Fresh good quality fuels, unleaded petrol.
Please consult the engine instruction manual for details on the fuel quality (octane rating).



7.4 Folding down the handlebar



Danger of pinching!

The upper handlebar can be folded down when rotary handles (1) are released. For this reason, always hold upper handlebar (2) with one hand at its highest point when you loosen the rotary handles.



Transport position – for space-saving transport and storage:

- Detach the recoil starter rope. (⇒ 7.2)
- Unscrew rotary handles (1) until they turn freely, then fold down upper handlebar (2) forwards and allow it to rest on the machine.



The machined grooves in the threads of the flat head bolts prevent the rotary handles from becoming completely detached from the bolts (safeguard against loss).

Working position – for pushing the machine:

- Fold up upper handlebar (2) rearwards and hold with one hand.
- Tighten rotary handles (1).
- Attach the recoil starter rope. (⇒ 7.2)

7.5 Scarifying unit

Lowering the scarifying unit into the operating position:



Risk of injury!

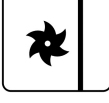
The scarifier moves forwards when the rotating scarifying unit is lowered.

- Place scarifying unit lever (1) in the operating position in the direction of the arrow as shown. The scarifying unit is lowered to the set working depth. (⇒ 7.6)



Raising the scarifying unit into the transport position:

- Place scarifying unit lever (1) in the transport position and allow it to engage.



7.6 Adjusting the working depth

Six different working depths can be set.

Level 1:

Shallowest working depth

Level 6:

Deepest working depth

Adjustment range: **25 mm**.

- **1** Place scarifying unit (1) in the transport position and allow it to engage. (⇒ 7.5)
- **2** Set the required working depth via working depth rotary handle (2).

Notes:

- Always begin the scarifying process at the shallowest working depth (**level 1**). If the scarifying result is insufficient, increase the working depth in steps.
- **Blade wear** can be compensated by selecting a deeper working depth.
- Levels 5 and 6 should not be selected with new blades as this can damage the grass roots during scarifying.



The working depth is dependent on blade wear and the ground. The scarifier is pressed against the surface of the lawn through the rotation of the blades and through its own weight: on softer ground, the scarifier cuts deeper into the ground than on a compact surface.

8. Notes on working with the machine

8.1 Notes on scarifying

Regular scarifying renders the lawn less sensitive to dryness, heat and cold. Aerating the lawn annually makes it less prone to diseases, the ground is also firmed up and bare patches (caused by ball games or parties) are repaired. – A green lawn with even growth is created.

Time:

The best time for annual scarifying is the early spring. If a lawn is scarified more often than once annually using a scarifier, this process should not be performed during midsummer or the middle of autumn.

After scarifying, the lawn needs to regenerate for a few weeks. Consequently, the ideal time for scarifying is the period of growth in the spring.

Heavily matted lawns should be scarified twice a year: first in the spring and again in the autumn.

Lawn preparation:

Before scarifying, mow the grass to a height of approx. 2 to 3 cm. The shorter the lawn is cut, the better the scarifying results.

The lawn must not be freshly seeded, wet or excessively dry.

Tips for optimum working results:

- The ground should only be scarified so as not to damage the grass roots. (⇒ 7.6)

- Guide the scarifier in straight parallel strips.
- Maintain an even working speed.
- Always place the scarifying unit in the transport position before turning it around. (⇒ 7.5)
- Avoid staying stationary in one place for any duration.
- In the case of heavily matted lawns, repeat the process perpendicular to the initial strips.

After scarifying:

- Free the lawn completely of scarified material.
- Fertilise the lawn and re-seed any bare patches that may have appeared.
- Water the lawn generously.

8.2 Working area for operator



- For safety reasons, the operator must stay within the working area behind the handlebar when starting the engine and when the engine is running. Always observe the safety distance provided by the handlebar.
- The scarifier must only be operated by one person. Other persons must keep out of the danger area. (⇒ 4.)

8.3 If the scarifying unit becomes blocked

- Stop the engine immediately and detach the spark plug socket.
- Then inspect the machine, in particular the scarifying unit, for damage and eliminate the cause of the fault.

9. Safety devices

The machine is equipped with several safety devices for safe operation and for the prevention of improper use.



Risk of injury!

If a safety device is found to be defective, the machine must not be operated. Consult a specialist dealer; STIHL recommends STIHL specialist dealers.

9.1 Safety devices

The scarifier is equipped with safety devices which prevent inadvertent contact with the blades and with ejected scarified material.

These include the housing, discharge flap and correctly installed handlebar.

9.2 Motorstop lever



The scarifier is equipped with a motorstop device.

The engine stops when motorstop lever (10) is released during running operation.

10. Operating the machine

10.1 Starting the engine



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Risk of injury!

Only start the engine when the scarifying unit is in the transport position.
Never tip the scarifier to start it.



Thanks to the fixed throttle setting, the engine always operates at the optimum working speed after starting.



- Check the oil and fuel levels. (⇒ 7.3)
- **1** Press motorstop lever (1) to the handlebar and hold.
- **2** Slowly pull out recoil starter rope (2) to the point of compression resistance. Then pull vigorously and quickly to arm's length. Slowly return recoil starter rope (2) so that it is rolled up again.
- Repeat the procedure until the engine starts.
- Then lower the scarifying unit into the operating position and scarify the lawn. (⇒ 7.5)

10.2 Stopping the engine



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- Place the scarifying unit in the transport position. (⇒ 7.5)
- Release motorstop lever (1). The engine and scarifying blades come to a stop after a short run-down time.

11. Maintenance

11.1 General



Risk of injury!

Observe the safety instructions in the section "For your safety" (⇒ 4.).

Annual service by the specialist dealer:

The scarifier should be inspected once annually by a specialist dealer. STIHL recommends STIHL specialist dealers.

11.2 Cleaning the machine



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Maintenance interval: After each use

Looking after your machine carefully will protect it against damage and extend its service life.

- Place the scarifier on firm, level and flat ground.
- Before tipping up the scarifier into the cleaning position, detach the grass catcher box (accessory – not included in standard equipment) and empty the fuel tank.
- **Cleaning position:**
Fold down upper handlebar (1) (⇒ 7.4) and lift discharge flap (2). Tilt the scarifier upwards at the front by raising it at carrying handle (3). Set down the scarifier as shown and allow the upper handlebar to rest on the ground.
- Clean the machine using a little water and a brush or with a cloth. Remove accumulated clipping deposits using a stick. If necessary, use a special cleaner (e.g. STIHL special cleaner).

- Never spray water or high-pressure cleaner onto engine components, V-belts, seals or bearing points.
- Clean the scarifying unit and engine cooling ribs.

11.3 Scarifying unit



Risk of injury!

Worn blades may break off and cause serious injuries. It is therefore essential that maintenance is always performed as described.

Maintenance interval: Before each use

- Tilt the scarifier upwards into the cleaning position. (⇒ 11.2)
- Check the scarifying unit (consisting of blade shaft, blades, nuts, washers and spacer bushings) for wear, secure seating, cracks or other damage.

Wear check:

The blades must be replaced when the ground is not scored, even at the deepest working depth (level 6). Blades must always be replaced as a complete set. **Never re-sharpen blades.**

Have defective or worn parts repaired or replaced by a specialist dealer. STIHL recommends STIHL specialist dealers.

11.4 Wheels

The wheel bearings are maintenance-free.

11.5 Engine

Maintenance interval:

See engine instruction manual.

General information:

Observe the operating and maintenance instructions in the attached engine instruction manual.

To achieve a long service life, it is always particularly important to maintain a sufficient level of oil and to change the oil and air filter regularly.

The recommended oil change intervals as well as information on engine oil and oil capacities can also be found in the engine instruction manual.

The cooling ribs must always be kept clean to ensure that the engine is adequately cooled.

11.6 Storage and winter break

- Store the scarifier in a dry and locked place that is generally free of dust. Make sure that the machine is kept out of the reach of children.
- Only store the scarifier in good operating condition, fold down the handlebar if necessary.
- Keep all nuts, pins and screws tightly fastened, replace danger signs and warnings on the machine that have become illegible, check the entire machine and grass catcher box (accessory – not included in standard equipment) for wear and damage. Replace all worn or damaged parts.
- Any machine faults must be completely remedied prior to storage.

Also note the following points when storing the scarifier for long periods (winter break):

- Carefully clean all external parts of the machine, in particular the cooling ribs.
- Thoroughly lubricate/grease all moving parts.
- Empty the fuel tank and carburettor (e.g. by running empty).
- Unscrew the spark plug and pour approx. 3 cm³ of engine oil into the engine via the spark plug hole. Turn the engine several times with the spark plug removed.



Fire hazard!

Keep the spark plug socket away from the spark plug hole (danger of ignition).

- Re-install the spark plug.
- Perform an oil change as per the engine instruction manual.
- Cover the engine well and store the machine in a dry, dust-free room in the normal position (upright on its 4 wheels).

12. Transport

12.1 Transporting



Risk of injury!

Observe the section "For your safety" before transporting. (⇒ 4.)
Carry the machine only with the help of a second person. Always wear suitable safety clothing (safety shoes, thick gloves).
Detach the spark plug socket before lifting or transporting.

Carrying the machine:

- The scarifier must always be carried by two people. Always ensure sufficient distance between the blades and your body, particularly your feet and legs. Lift or carry the machine at carrying handle (1) and at upper handlebar (2) or, when the upper handlebar is folded down, at the lower handlebar sections (3).

Securing the machine (lashing):

- Secure the scarifier and grass catcher box (accessory – not included in standard equipment) on the load floor using suitable fastening materials. Only transport the machine upright on its wheels.
- Fasten ropes or straps to lower handlebar sections (3), to front axle (4) and to the housing strut under discharge flap (5).

13. Minimising wear and preventing damage

Important information on maintenance and care of the product group

Manually operated scarifier with combustion engine (STIHL RL)

STIHL assumes no liability for material or personal damage caused by the non-observance of information contained in the operating instructions, in particular with regard to safety, operation and maintenance, or which arise through the use of unauthorised attachment or spare parts.

Please always observe the following important information for the prevention of damage or excessive wear to your STIHL machine:

1. Wearing parts

Some parts of the STIHL machine are subject to normal wear even when used properly and must be replaced in due time depending on type and duration of use.

These include:

- Blades
- V-belt
- Grass catcher box (accessory – not included in standard equipment)

2. Compliance with the information in this instruction manual

The STIHL machine must be used, maintained and stored with the care described in this instruction manual. Any damage caused by non-compliance with the safety, operating and maintenance instructions is the sole responsibility of the user.

This applies in particular to:

- Product modifications not approved by STIHL.
- Use of fuel and lubricants not approved by STIHL (lubricants, petrol and engine oil, see engine manufacturer's specifications).
- The use of tools or accessories which are not approved or suitable for the machine, or are of inferior quality.
- Improper use of the product.
- Use of the product for sporting or competitive events.
- Resultant damage due to continued use of the product with defective components.

3. Maintenance operations

All operations listed in the section "Maintenance" must be performed regularly.

If these maintenance operations cannot be carried out by the user, a specialist dealer must be commissioned to perform them.

STIHL recommends that you have maintenance operations and repairs performed exclusively by a STIHL specialist dealer.

STIHL specialist dealers regularly attend training courses and are provided with technical information.

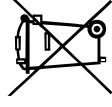
If these operations are neglected, faults may arise which are the responsibility of the user.

These include:

- Corrosive and other resultant damage caused by incorrect storage.
- Damage to the machine through the use of inferior-quality spare parts.

- Damage due to untimely or inadequate maintenance or damage due to maintenance or repair work not performed in the workshops of specialist dealers.

14. Environmental protection



Scarified material should be composted and not disposed of in household waste.

The machine, its packaging and accessories are all produced from recyclable materials and must be disposed of accordingly.

By disposing of materials separately and in an environmentally friendly manner, recyclable waste can be re-used. For this reason, the machine should be disposed of for recycling at the end of its useful life. Improper disposal may be harmful to health and pollute the environment. Pay particular attention to the information in the section "Disposal" during disposal. (⇒ 4.9)

Consult your recycling centre or your specialist dealer for information on the proper disposal of waste products.

15. Standard spare parts

Blade set:
6290 007 1000

16. Accessories

Grass catcher box **AFK 050**:
6910 700 9600

17. Declaration of conformity

17.1 EU declaration of conformity – STIHL RL 540.0 scarifier

STIHL Tirol GmbH
Hans Peter Stihl-Strasse 5
6336 Langkampfen
Austria

declares under our sole responsibility that

- design: scarifier
- manufacturer's brand: STIHL
- type: RL 540.0
- engine power: 2,2 kW
- serial number: 6290

complies with the relevant provisions of Directives 2000/14/EC, 2006/42/EC, 2014/30/EU and 2011/65/EU and has been developed and manufactured in accordance with the versions of the following standards valid on the date of manufacture: EN 13684 and EN 14982.

The measured and guaranteed sound power levels were determined in accordance with Directive 2000/14/EC, Appendix V.

- Measured sound power level:
92,0 dB(A)
- Guaranteed sound power level:
94 dB(A)

The technical documents are stored at STIHL Tirol GmbH.

The year of manufacture and machine number are indicated on the scarifier.

Langkampfen, 02.11.2020

STIHL Tirol GmbH

p.p.



Matthias Fleischer, Head of Research and Development Division

p.p.



Sven Zimmermann, Head of Quality Division

17.2 UKCA-Declaration of Conformity STIHL RL 540.0 Scarifier

STIHL Tirol GmbH
Hans Peter Stihl-Strasse 5
6336 Langkampfen
Austria

declares under our sole responsibility that

- design: scarifier
- manufacturer's brand: STIHL
- type: RL 540.0
- nominal output at nominal speed: 2.2 -
2800 kW - rpm
- serial number: 6290

complies with the relevant provisions of UK Regulations Noise Emission in the Environment by Equipment for use Outdoors Regulations 2001, Supply of Machinery (Safety) Regulations 2008, Electromagnetic Compatibility Regulations

2016 and The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 and has been developed and manufactured in accordance with the versions of the following standards valid on the date of manufacture: EN 13684 and EN 14982 (where applicable).

The measured and guaranteed sound power levels were determined in accordance with the Noise Emission in the Environment by Equipment for use Outdoors Regulations 2001, Schedule 8.

- Measured sound power level:
92.0 dB(A)
- Guaranteed sound power level:
94 dB(A)

The technical documents are stored at STIHL Tirol GmbH.

The year of manufacture and machine number are indicated on the lawn mower.

Langkampfen, 01.07.2022
STIHL Tirol GmbH
p.p.



Matthias Fleischer, Vice President Product Development

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Sven Zimmermann, Director Quality Management

Wheel diameter (rear)	180 mm
Length	131 cm
Width	54 cm
Height	111 cm
Weight	33 kg

Sound emissions:

In accordance with 2000/14/EG / S.I. 2001/1701:

Guaranteed sound power level $L_{WA,d}$	94 dB(A)
Uncertainty K_{WA}	2 dB(A)

In accordance with EN 13684:

Sound pressure level at workplace L_{pA}	81 dB(A)
Uncertainty K_{pA}	3 dB(A)

Hand-arm vibrations:

Specified vibration characteristic in accordance with EN 12096:	
Measured value a_{hw}	4,12 m/sec ²
Uncertainty K_{hw}	2,06 m/sec ²
Measurement in accordance with EN 20643, EN 13684	

18.1 REACH

REACH is an EC Directive for the registration, evaluation, authorisation and restriction of chemicals.

Information on compliance with the REACH Directive (EC) No. 1907/2006 is available from www.stihl.com/reach.

19. Troubleshooting

✖ If necessary, contact a specialist dealer; STIHL recommends STIHL specialist dealers.

 See engine instruction manual.

Fault:

Engine not starting

Possible cause:

- Motorstop lever not pressed
- No fuel in tank; blocked fuel line
- Scarifying unit not in transport position
- Inferior, dirty or old fuel in tank
- Dirty air filter
- Spark plug socket detached from spark plug; ignition lead not properly fastened to socket
- Dirty or damaged spark plug; incorrect electrode gap

Remedy:

- Press motorstop lever to handlebar and hold (⇒ 10.1)
- Top up fuel; clean fuel line (⇒ 7.3), () (✖)
- Place scarifying unit in transport position (⇒ 7.5)
- Always use fresh, good quality fuel, unleaded petrol; clean carburettor () (✖)
- Clean air filter () (✖)
- Connect spark plug socket; check connection between ignition lead and socket () (✖)
- Clean or replace spark plug; adjust electrode gap () (✖)

Fault:

Starting problems or deteriorating engine power

Possible cause:

- Scarifying unit not in transport position
- Blocked scarifier housing
- Mowing at an excessive working depth or excessively fast pushing speed
- Water in fuel tank and carburettor; blocked carburettor

18. Technical specifications

RL 540.0

Serial number	6290
Engine, design	4-stroke combustion engine Kohler HD675
Type	2,2 - 2800 kW - rpm
Nominal output at nominal speed	149 ccm
Displacement	1,4 l
Fuel tank	Rope start
Starter	14 fixed vertical blades
Scarifying device	Permanent
Scarifying blade drive	2800 rpm
Engine output speed	38 cm
Working width	6 levels, adjustment range
Working depth	25 mm
Wheel diameter (front)	180 mm

- Contaminated fuel tank
- Dirty air filter
- Dirty spark plug

Remedy:

- Place scarifying unit in transport position (⇒ 7.5)
- Clean scarifier housing (detach spark plug socket!) (⇒ 11.2)
- Set smaller working depth or reduce pushing speed (⇒ 7.6)
- Empty fuel tank, clean fuel line and carburettor (⚠), (✖)
- Clean fuel tank (⚠), (✖)
- Clean air filter (⚠), (✖)
- Clean spark plug (⚠), (✖)

Fault:

Engine overheating

Possible cause:

- Oil level in engine too low
- Dirty cooling ribs

Remedy:

- Check oil level and change engine oil if necessary (⇒ 7.3)
- Clean cooling ribs (⇒ 11.2)

Fault:

Excessive vibration during operation

Possible cause:

- Defective scarifying unit
- Loose engine mounting

Remedy:

- Check blades, blade shaft, spacer bushings, fastening and bearings of scarifying unit and repair if necessary (⇒ 11.3), (✖)
- Tighten engine mounts (✖)

Fault:

Poor working results

Possible cause:

- Blades set too deep (bare patches, high grass content in scarified material)
- Blade set too shallow (little or no lawn thatch is removed)
- Blades have reached wear limit
- V-belt defective, worn or insufficiently tensioned

Remedy:

- Reduce working depth (⇒ 7.6)
- Increase working depth (⇒ 7.6)
- Replace blades (⇒ 11.3), (✖)
- Replace V-belt (✖)

Fault:

Blades not turning freely

Possible cause:

- V-belt defective
- Scarifying unit defective

Remedy:

- Replace V-belt (✖)
- Repair scarifying unit (⇒ 11.3), (✖)

Fault:

Scarifying unit cannot be raised or lowered

Possible cause:

- Cable defective or detached

Remedy:

- Replace or repair cable (✖)

Fault:

Working depth cannot be set

Possible cause:

- Scarifying unit in operating position

- Rotary handle or adjustment element defective

Remedy:

- Place scarifying unit in transport position (⇒ 7.5)
- Repair rotary handle or adjustment element (✖)

20. Service schedule

20.1 Handover confirmation

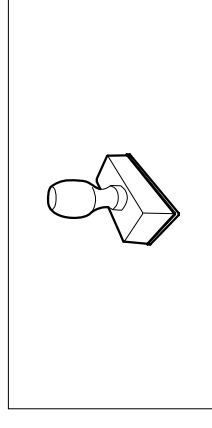
Model: _____

Serial number: _____

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Date: _____

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Next service _____

Date: _____

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20.2 Service confirmation



Please hand this instruction manual to your STIHL specialist dealer in the case of maintenance operations. He will confirm the service operations performed in the pre-printed boxes.



Service performed on _____

